COLORADO WATER CONSERVATION BOARD

WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

Henson Creek and Lake Fork Confluence Channel Improvement Project

Name of Water Activity/Project

Lake Fork Valley Conservancy

Name of Applicant

Gunnison Basin

Approving Basin Roundtable(s)
(If multiple basins specify amounts in parentheses.)

Amount from Statewide Account: $260,111

Amount from Basin Account(s): $28,975

Total WSRA Funds Requested: $289,746

Application Content

Required Exhibits

A. Statement of Work, Budget, and Schedule
B. Project Map
C. As Needed (i.e. letters of support, photos, maps, etc.)

Appendices – Reference Material

1. Program Information
2. Insurance Requirements
3. WSRA Standard Contract Information (Required for Projects Over $100,000)
4. W-9 Form (Required for All Projects Prior to Contracting)

Instructions

To receive funding from the Water Supply Reserve Account (WSRA), a proposed water activity must be approved by the local Basin Roundtable **AND** the Colorado Water Conservation Board (CWCB). The process for Basin Roundtable consideration and approval is outlined in materials in Appendix 1.

Once approved by the local Basin Roundtable, the applicant should submit this application **with a detailed statement of work including budget and schedule as Exhibit A** to CWCB staff by the application deadline.

WSRA applications are due with the roundtable letter of support 60 calendar days prior to the bi-monthly Board meeting at which it will be considered. Board meetings are held in January, March, May, July, September, and November. Meeting details, including scheduled dates, agendas, etc. are posted on the CWCB website at: http://cwcb.state.co.us Applications to the WSRA Basin Account are considered at every board meeting, while applications to the WSRA Statewide Account are only considered at the March and September board meetings.

When completing this application, the applicant should refer to the WSRA Criteria and Guidelines available at: http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Documents/WSRACriteriaGuidelines.pdf

The application, statement of work, budget, and schedule **must be submitted in electronic format** (Microsoft Word or text-enabled PDF are preferred) and can be emailed or mailed on a disk to:

Greg Johnson – WSRA Application
Colorado Water Conservation Board
1580 Logan Street, Suite 200
Denver, CO 80203
gregory.johnson@state.co.us

If you have questions or need additional assistance, please contact Greg Johnson at: 303-866-3441 x3249 or gregory.johnson@state.co.us.

Water Supply Reserve Account – Application Form
Revised December 2011

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

1. Applicant Name(s): Lake Fork Valley Conservancy

Mailing address:
LFVC
PO Box 123
Lake City, CO 81235

Taxpayer ID#: LFVC: 84-1487921

Primary Contact: Camille Richard Position/Title: Director, LFVC

Email: c.richard@lfvc.org

Phone Numbers: Cell: 970-209-5238 Office:

Alternate Contact: Nathan Henne Position/Title: Town Manager

Email: hennenathan@yahoo.com

Phone Numbers: Cell: 517-819-9370 Office: 970-944-2333

2. Eligible entities for WSRA funds include the following. What type of entity is the Applicant?

[x] Public (Government) – municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities and the local entity should be the grant recipient. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.

[ ] Public (Districts) – authorities, Title 32/special districts, (conservancy, conservation, and irrigation districts), and water activity enterprises.

[ ] Private Incorporated – mutual ditch companies, homeowners associations, corporations.

[ ] Private individuals, partnerships, and sole proprietors are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.

[x] Non-governmental organizations – broadly defined as any organization that is not part of the government.

3. Provide a brief description of your organization

The Lake Fork Valley Conservancy is a non-profit 501(c)3 organization with a mission to sustain and enhance the environmental and rural character of the Lake Fork of the Gunnison River valley through education, restoration, and stewardship. It is comprised of a board of directors and a technical advisory committee. The advisory committee, formerly known as the Lake Fork Watershed Stakeholders, is a partnership of citizens, private entities, local organizations, and government who came together in January of 2002 to better understand the resources and impacts within our valley and to initiate a collaborative, community effort to deal proactively with these issues. The LFVC will provide coordination for the project.

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

The Town of Lake City is a Statutory Town that is the county seat of and the only incorporated municipality in Hinsdale County, Colorado. Its mission is to protect, maintain and enhance a sense of community, historical heritage and mountain environment and provide economic, recreational and social opportunities through ethical and professional leadership. The Town is governed by a Board of Trustees composed of 6 Trustees and one mayor. The town is administered by the Town Manager, who oversees a small staff. The Town of Lake City will help coordinate project activities and serve as the fiscal agent.

5. Successful applicants will have to execute a contract with the CWCB prior to beginning work on the portion of the project funded by the WSRA grant. In order to expedite the contracting process the CWCB has established a standard contract with provisions the applicant must adhere to. A link to this standard contract is included in Appendix 3. Please review this contract and check the appropriate box.

[X] The Applicant will be able to contract with the CWCB using the Standard Contract

[ ] The Applicant has reviewed the standard contract and has some questions/issues/concerns. Please be aware that any deviation from the standard contract could result in a significant delay between grant approval and the funds being available.

6. The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant.

There are no relevant TABOR issues affecting this project.

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Part II. - Description of the Water Activity/Project

1. What is the primary purpose of this grant application? (Please check only one)

X	Nonconsumptive (Environmental or Recreational)
X	Agricultural
	Municipal/Industrial
	Needs Assessment
	Education
	Other Explain:

2. If you feel this project addresses multiple purposes please explain.

This project will help to improve river channel stability, riparian habitat, and irrigation to the Town of Lake City. Repair of the channel and stabilization of banks will protect the public trail from erosion and thereby protect the safety of recreational users and enhance the natural environment. The project also serves consumptive purposes by addressing the bank erosion occurring at the Town of Lake City's head-gate and along the river adjacent to the irrigation ditch. The project will repair the head-gate and ditch to improve intake at low flow and stabilize erosive river banks that threaten the ditch. The project also seeks to improve public river access at Memorial Park.

3. Is this project primarily a study or implementation of a water activity/project? (Please check only one)

	Study	X	Implementation

4. To catalog measurable results achieved with WSRA funds can you provide any of the following numbers?

N/A	New Storage Created (acre-feet)
N/A	New Annual Water Supplies Developed, Consumptive or Nonconsumptive (acre-feet)
N/A	Existing Storage Preserved or Enhanced (acre-feet)
2600	Length of Stream Restored or Protected (linear feet)
20	Length of Pipe/Canal Built or Improved (linear feet)
654	Efficiency Savings (acre-feet/year or 43% increase in flow)
6	Area of Restored or Preserved Habitat (acres)
50%	Other -- Explain: Increase in trout biomass after 2 years

4. To help us map WSRA projects please include a map (Exhibit B) and provide the general coordinates below:

Latitude: 38.025532 Longitude: -107.314362

5. Please provide an overview/summary of the proposed water activity (no more than one page). Include a description of the overall water activity and specifically what the WSRA funding will be used for. A full **Statement of Work** with a detailed budget and schedule is required as **Exhibit A** of this application.

Over the past 130 years the Lake Fork of the Gunnison and Henson Creek running through Lake City have been significantly modified by urbanization, channelization and catastrophic failure of large upstream tailings dams. The Lake Fork Valley Conservancy and the Town of Lake City are proposing river improvements along approximately a half mile stretch of lower Henson Creek and its confluence with the Lake Fork of the Gunnison, in and near the Town of Lake City. This is Phase I of a three phase project envisioned to enhance and protect the ecological health and recreational quality of the Lake Fork of the Gunnison and its main tributary, Henson Creek, in the vicinity of Lake City (See Figure 1). In addition, Phase I will improve irrigation capabilities for the Town of Lake City during times of low flow.

In the Phase I project area, 2040 feet of the project reach along Henson and the Lake Fork flows through the Town and 560 feet of Henson Creek is under BLM jurisdiction, but the Town leases the property along the river from the BLM for their trail system. The lower Henson has been impacted from historic mine tailings and impoundment failures, which have created a braided and unstable channel with high bed load movement.

The purpose of this project is to realign areas of the channel where the river is threatening the Town irrigation head-gate and ditch, stabilize banks to reduce erosion that are undermining public trails, repair riparian areas, enhance fisheries and increase public access to the river, providing an overall quality recreational experience along this reach.

Currently the river is eroding the bank upstream of the intake channel to the Town of Lake City irrigation ditch, threatening to undermine the canal leading to the head-gate (Figure 2). In addition, the water level at base flow is not adequate to feed the ditch through the gate, eliminating the possibility to extend the irrigation channels in town for late season watering. This area needs to be reworked to protect the intake canal and head-gate and to increase beneficial use so that the Town's water right can be fully utilized.

In addition, the river is threatening a popular trail system that also runs adjacent to the town ditch. This particular stretch of bank has been propped up with rock and rip rap on a number of occasions, but each year high flows continue to undermine the bank and trail, and create dangerous conditions for trail users. The river will be moved away from the trail and the steep slope reduced to favor river access.

The construction of the new CDOT highway bridge over Henson Creek resulted in excessive aggradation of cobbles and gravels downstream of the support structures. This area will be reworked to facilitate bedload movement

through the supports.

At the confluence of Henson and the Lake Fork, large amounts of gravel and cobble have accumulated, causing Henson Creek to aggrade behind it. This area is within the Town Memorial Park, and it is difficult to access the river here because of steep and unstable slopes (Figure 3). Also the old cross vane constructed at the handicap access fishing pier upstream of the confluence is eroding away and needs repair.

The project will involve construction of in-channel structures, new trail, and riparian revegetation, as described in the scope of work. The project involves construction of 6 cross vanes, 19 vanes, 16 sills and one rock wall terrace extended out into the river channel at the confluence. 500 feet of trail will be built on this terrace and landscaped (Figures 2 and 4).

WSRA funding will be used to cover most construction costs of all in-channel structures from the head-gate to the confluence. GOCO local government funds will cover construction of structures at Memorial Park and most revegetation and trail costs.

Part III. – Threshold and Evaluation Criteria

1. Describe how the water activity meets these **Threshold Criteria.** (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines.)

   a) The water activity is consistent with Section 37-75-102 Colorado Revised Statutes.[1]

   The project is not anticipated to impact any existing water rights. It is intended to allow the Town of Lake City to fully utilize their already existing water right, without injury to in-stream flow requirements for the Lake Fork of the Gunnison and the priority of downstream senior water rights holders.

   b) The water activity underwent an evaluation and approval process and was approved by the Basin

[1] 37-75-102. Water rights - protections. (1) It is the policy of the General Assembly that the current system of allocating water within Colorado shall not be superseded, abrogated, or otherwise impaired by this article. Nothing in this article shall be interpreted to repeal or in any manner amend the existing water rights adjudication system. The General Assembly affirms the state constitution's recognition of water rights as a private usufructuary property right, and this article is not intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law. (2) The General Assembly affirms the protections for contractual and property rights recognized by the contract and takings protections under the state constitution and related statutes. This article shall not be implemented in any way that would diminish, impair, or cause injury to any property or contractual right created by intergovernmental agreements, contracts, stipulations among parties to water cases, terms and conditions in water decrees, or any other similar document related to the allocation or use of water. This article shall not be construed to supersede, abrogate, or cause injury to vested water rights or decreed conditional water rights. The General Assembly affirms that this article does not impair, limit, or otherwise affect the rights of persons or entities to enter into agreements, contracts, or memoranda of understanding with other persons or entities relating to the appropriation, movement, or use of water under other provisions of law.

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.

This application was submitted to the Gunnison Basin Roundtable for consideration at their January 7, 2013, meeting. The Roundtable participants provided input as attached.

c) The water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes.[2] The Basin Roundtable Chairs shall include in their approval letters for particular WSRA grant applications a description of how the water activity will assist in meeting the water supply needs identified in the basin roundtable's consumptive and/or non-consumptive needs assessments.

d) Matching Requirement: <u>For requests from the **Statewide Fund**</u>, the applicants is required to demonstrate a **20 percent** (or greater) match of the request from the Statewide Account. Statewide requests must also include a minimum match of **5 percent** of the total grant amount from Basin Funds. Sources of matching funds include but are not limited to Basin Funds, in-kind services, funding from other sources, and/or direct cash match. Past expenditures directly related to the project may be considered as matching funds if the expenditures occurred within 9 months of the date the application was submitted to the CWCB. Please describe the source(s) of matching funds. (NOTE: These matching funds should also be reflected in your Detailed Budget in **Exhibit A** of this application)

Several funding sources exist for this project.

1) LFVC received grants from the CWCB Watershed Restoration Program and the Nonpoint Source 319 Program to cover costs for project feasibility and design (a total of $133,000). Within the nine months prior to project implementation it is expected that the LFVC Project Manager will spend 60 hours on revegetation design and coordination and the contractor (Black Creek Hydrology) will spend $31,941 to complete design and modeling work.
2) The LFVC is committed to raising $20,000 in local cash contribution for the purchase of rock through their "Build a Trout a Home" fundraising initiative. LFVC also has one VISTA who will work on the project. This is an in-kind contribution of $5,600 from OSM/VISTA program. LFVC will also provide 60 person hours of labor for sampling and planning inputs.

[2] 37-75-104 (2)(c). Using data and information from the Statewide Water Supply Initiative and other appropriate sources and in cooperation with the on-going Statewide Water Supply Initiative, develop a basin-wide consumptive and nonconsumptive water supply needs assessment, conduct an analysis of available unappropriated waters within the basin, and propose projects or methods, both structural and nonstructural, for meeting those needs and utilizing those unappropriated waters where appropriate. Basin Roundtables shall actively seek the input and advice of affected local governments, water providers, and other interested stakeholders and persons in establishing its needs assessment, and shall propose projects or methods for meeting those needs. Recommendations from this assessment shall be forwarded to the Interbasin Compact Committee and other basin roundtables for analysis and consideration after the General Assembly has approved the Interbasin Compact Charter.

3) The Town of Lake City will provide equipment and labor toward revegetation and trails estimated at $10,810. They will also serve as fiscal agent for the project.
4) Webco Excavation will contribute $10,000 of equipment time toward in-channel construction.
5) The Hinsdale County Trails Commission will provide 150 man hours of labor toward construction of the 500 feet of trail at Memorial Park. This group maintains all trail systems throughout Lake City and up Henson Creek.
6) The BLM and USGS will contribute $17,100 of in-kind technical assistance for NEPA documentation and monitoring. BLM has also already contributed $3,500 in rock to the project.
7) GOCO – The Town of Lake City is generating a proposal to the Great outdoors Colorado Local Government Parks and Outdoor Recreation grants program for submission in March 2013. This funding will cover construction of river improvement structures at Memorial Park and most costs associated with revegetation along the public trail system. Total grant amount is estimated to be $192,800. Even if we do not get this funding, WSRA funds will still allow us to complete most of the project with a 34% match (see Tier 2 below).
8) The Gunnison Basin Roundtable will commit 10% of the total WSRA grant amount, or $28,975.

2. For Applications that include a request for funds from the **Statewide Account**, describe how the water activity/project meets all applicable **Evaluation Criteria.** (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines and repeated below.) Projects will be assessed on how well they meet the Evaluation Criteria. **Please attach additional pages as necessary.**

Evaluation Criteria – the following criteria will be utilized to further evaluate the merits of the water activity proposed for funding from the Statewide Account. In evaluation of proposed water activities, preference will be given to projects that meet one or more criteria from each of the three "tiers" or categories. Each "tier" is grouped in level of importance. For instance, projects that meet Tier 1 criteria will outweigh projects that only meet Tier 3 criteria. WSRA grant requests for projects that may qualify for loans through the CWCB loan program will receive preference in the Statewide Evaluation Criteria if the grant request is part of a CWCB loan/WSRA grant package. For these CWCB loan/WSRA grant packages, the applicant must have a CWCB loan/WSRA grant ratio of 1:1 or higher. Preference will be given to those with a higher loan/grant ratio.

Tier 1: Promoting Collaboration/Cooperation and Meeting Water Management Goals and Identified Water Needs

a. The water activity addresses multiple needs or issues, including consumptive and/or non-consumptive needs, or the needs and issues of multiple interests or multiple basins. This can be demonstrated by obtaining letters of support from other basin roundtables (in addition to an approval letter from the sponsoring basin).
b. The number and types of entities represented in the application and the degree to which the activity will promote cooperation and collaboration among traditional consumptive water interests and/or non-consumptive interests, and if applicable, the degree to which the water activity is effective in addressing intrabasin or interbasin needs or issues.
c. The water activity helps implement projects and processes identified as helping meet Colorado's future water needs, and/or addresses the gap areas between available water supply and future need as identified in SWSI or a roundtable's basin-wide water needs assessment.

Henson Creek has been identified as a significant stream segment in the Gunnison Basin's Environmental and Recreational Non-Consumptive Needs Assessment, primarily for environmental criteria (Table 1 below). Henson is listed on the EPA's 303 (d) list of impaired streams for Cd and Zn (sculpin) and is recommended for environmental remediation, which is underway through cleanup of abandoned mines in the upper watershed. Cleanup of the Hough Mine in upper Henson is slated for summer of 2013, which will address the largest contributor of heavy metals to the watershed. To complement this work, river enhancement of lower Henson Creek as proposed addresses the physical impacts from tailings impoundment breaks in the 1960's and 1970's. The Lake Fork Valley Conservancy has prioritized both chemical and physical improvements to Henson as part of their ten year stewardship plan.

In addition, the Lake Fork of the Gunnison, which includes the segment through Lake City, is listed as significant for recreational purposes and is recommended for stream flow augmentation for fisheries (Table 1). Both rivers also offer boating opportunities. Improvement of lower Henson Creek and the confluence positively impacts the Lake Fork. While not actually augmenting flows to the Lake Fork as recommended in the needs assessment, the project will complement existing flows by improving the physical habitat for fisheries. Enhancement of the proposed segments and subsequent phases of restoration on the Lake Fork downstream will also help replace up to two miles of Gold Metal waters lost with the construction of Blue Mesa Reservoir.

Table 1. Summary of Non-consumptive Needs Assessment for Henson and the Lower Lake Fork.

	Henson Creek	Lake Fork of the Gunnison (in Town)
Attribute 2 - Aquatic-Dependent State Endangered, Threatened, and Species of Concern (including conservation agreement species)		
c. Flannelmouth Sucker	YES	YES
d. Bluehead Sucker		YES
Attribute 3 - Rare Aquatic-Dependent Plants and Significant Riparian/Wetland Plant Communities		
b. Significant Riparian/Wetland Plant Communities (B2 ranked Blue Spruce-Poplar-Alder)	YES	YES
Attribute 4 - Special Value Waters (CWCB instream flow waters, WQCD Outstanding Waters, Wilderness Area Waters, Eligible/Suitable Wild and Scenic)		
b. CWCB Instream Flows	YES	YES
Attribute 5 - Whitewater and Flat-water Boating		
a. Kayaking	YES	
b. Rafting and Kayaking		YES
Attribute 6 - Riparian/Wetland Wildlife Viewing and Waterfowl Hunting		
a. Wildlife Viewing and Waterfowl Hunting		YES
Attribute 7 - Significant Cold and Warm-Water Fishing		
b. River and Stream Fishing		YES

The project also addresses consumptive needs by addressing degradation at and lack of flow in to the Town of Lake City ditch. The Town benefits through improvements to its irrigation head-gate and stabilization of banks that threaten the ditch itself.

Primary beneficiaries are the residents of Lake City and visitors who enjoy the recreational amenities of the river through town and on BLM land. BLM and the Town benefit by reducing potential liability associated with injuries from the use of the currently degraded and unsafe trail system. CWCB and EPA also benefit by protecting an investment of $133,000 in project design.

Tier 2: Facilitating Water Activity Implementation

d. Funding from this Account will reduce the uncertainty that the water activity will be implemented. For this criterion the applicant should discuss how receiving funding from the Account will make a significant difference in the implementation of the water activity (i.e., how will receiving funding enable the water activity to move forward or the inability obtaining funding elsewhere).
e. The amount of matching funds provided by the applicant via direct contributions, demonstrable in-kind contributions, and/or other sources demonstrates a significant & appropriate commitment to the project.

Funding this project will make a significant difference for facilitating an important resource management action as identified in the LFVC's Ten Year Strategic Watershed Plan. This stretch of river has degraded steadily since tailing dam impoundment breaks in the 60's and 70's. This action, combined with LFVC's work to improved water quality in this impaired stream through abandoned mine cleanup, effectively addresses both the chemical and physical impacts to this river, thereby improving fisheries habitat.

WSRA funds would ensure construction of most of the in-channel improvements for the lower Henson. Even if we are unable to procure GOCO funding, we will still be able to complete the project from the head-gate to just above the confluence, ensuring stability of the channel and providing important over-wintering habitat for fish. This translates to a 34% committed match in funding, including the GBRT, out of the total WSRA request (or 46% of the total project cost). With GOCO and GBRT funds our match is 112% of the total WSRA request (or 55% of the total project cost).

WSRA funds will support the initial phase of the overall river project, and help the LFVC to demonstrate that river enhancement is of great value to the Lake City community. This in turn will leverage future fundraising efforts for subsequent phases of restoration work downstream on the Lake Fork.

Tier 3: The Water Activity Addresses Other Issues of Statewide Value and Maximizes Benefits

f. The water activity helps sustain agriculture & open space, or meets environmental or recreational needs.
g. The water activity assists in the administration of compact-entitled waters or addresses problems related to compact entitled waters and compact compliance and the degree to which the activity promotes maximum utilization of state waters.
h. The water activity assists in the recovery of threatened and endangered wildlife species or Colorado State species of concern.
i. The water activity provides a high level of benefit to Colorado in relationship to the amount of funds requested.
j. The water activity is complimentary to or assists in the implementation of other CWCB programs.

The project will significantly increase the environmental and recreational amenities for this stretch of river. Fisheries habitat will be improved resulting in greater fish biomass, public access to the river will be safer and of higher quality, boating opportunities will be expanded, and appreciation for our river assets will be promoted. In addition, the physical improvements of the river will complement the chemical remediation occuring in the upper reaches of the watershed by repairing a degraded stretch of river impacted by tailings impooundment breaks.

The riparian corridor of the Lower Henson Creek and the Lake Fork of the Gunnison through town has been identified as a riparian community of high global biodiversity significance by the Colorado Natural Hertitage Program (narrowleaf cottonwood - blue spruce / thinleaf alder riparian woodland (*Populus angustifolia - Picea pungens / Alnus incana* woodland). Restoration of the corridor along the project reach will help to restablish this native community vetatation type where previously it has been denuded in developed areas in and near Town.

The proposed activity promotes maximum utilization of the Town's water rights. Some could argue that this right pre-dates the 1922 Compact agreement, having first been recorded in 1872, a rather suspect value given that there was not a town at the time. Official appropriation date is May 9, 1973, decreed for irrigation, fire protection, commercial and domestic purposes.

The project also complements CWCB's in-stream flow right for the Lake Fork of the Gunnison. Construction of in-channel structures in lower Henson and the Lake Fork at the confluence will enhance pool development along the river, improving the ability for fish to overwinter and survive drought conditions. This combined with revegetation improves survivability of fish at current in-stream flow rights levels.

The project provides a high benefit to Colorado in relation to the amount of funds requested. Lake City is one of three signature tourist towns connected by the Alpine Loop, the core of the BLM's Alpine Triangle Recreational Management Zone, a 186,000 acre area that draws over 300,000 tourists per year. Consequently a significant portion of the income of local residents is derived from tourism and services to seasonal home owners. Henson Creek lies along CR20, part of the Loop. Improving the recreational value of the river through Town only enhances the visitor experience, translating into improved economic conditions for local residents and state coffers.

Part IV. – Required Supporting Material

1. **Water Rights, Availability, and Sustainability** – This information is needed to assess the viability of the water project or activity. Please provide a description of the water supply source to be utilized, or the water body to be affected by, the water activity. This should include a description of applicable water rights, and water rights issues, and the name/location of water bodies affected by the water activity.

The Lake Fork of the Gunnison watershed (HUC 14020002, stream segment COGUUG29)is located in southwestern Colorado, draining 432 square miles on the northeast side of the San Juan Mountains, and is wholly contained

within Hinsdale and Gunnison Counties. The Lake Fork is a subunit of the 7,930 square mile Upper Gunnison Watershed (HUC 14020001). The Lake Fork's principal tributary, Henson Creek (stream segment COGUUG30), joins at Lake City and creates a third order stream from this confluence to the river's terminus at Blue Mesa Reservoir, approximately 30 miles downstream. Stream flows in the watershed are seasonally high in May and June due to snowmelt runoff. Flows on the Lake Fork near its terminus range from less than 50 CFS in the winter months to a historic recorded high of 2,700 CFS in May 1984. Stream geomorphological types in the watershed range from A1 (Rosgen classification) in the headwater tributaries to C4 on the lower Lake Fork, with sections of braiding stream channel (D4) in relatively wide valleys. Stream stability ranges from high in entrenched reaches with a stable riparian community to low in reaches with high bed load deposition and/or active stream bank erosion. The majority of Henson Creek and the Lake Fork in the vicinity of Lake City have been channelized, but much remains undisturbed as water flows through relatively inaccessible shallow canyons in the lower watershed.

The Lake City Town Ditch has a decree for an absolute water right of 5.0 cfs with an adjudication date of May 9, 1973, later negotiated to run from 5/1 to 10/1. This equates to a total of 1,517 ac ft/yr. According to the Water Division engineer, water in the ditch was first appropriated for beneficial use on June 8, 1872, but this date is highly suspect due to the fact that Lake City and Hinsdale County were not even settled until 1874. This water right is the single largest right owned by the Town of Lake City and can serve as a source of augmentation water under certain circumstances. Currently it is not fully utilized due to restrictions at the head-gate at lower flows. In 2011 (an above average flow year) the Town used only 1,067 ac ft/yr and in 2012 (a drought year) the Town used only 863 ac ft/yr.

The CWCB has an in-stream flow right on the Lake Fork from its confluence with Henson Creek downstream to Blue Mesa Reservoir. The appropriation date is 3/17/1980 and the right ranges from 25 cfs from 10/1 to 4/30 for the winter, while the summer flow is 45 cfs from 5/1 to 9/30. The Town of Lake City's ditch right is senior to this one, but even so, it is not expected that full use of the ditch will adversely impact the CWCB in-stream right except maybe during extreme drought conditions. Channel and riparian improvements will in fact improve fisheries habitat, and thereby complement the existing in-stream flow right. The Town of Lake City is committed to controlling ditch intake during drought conditions so as not to adversely affect in-stream flow rights.

2. Please provide a brief narrative of any related studies or permitting issues.

A detailed topographic and cross section survey has been performed of the active channels of the Lake Fork and Henson Creek project reaches to identify bankfull channel geometry, slope, thalweg, pools, riffles, bank height and elevations and scour and deposition features. This topographic data is being used for channel enhancement design. In addition, LIDAR 2' contour and aerial photo data was captured to assist with 100-year floodplain modeling and mapping.

The geographic setting of the project reaches in the volcanic geology of

the San Juan Mountains creates conditions of high suspended and bedload sediment that substantially affect the character and behavior of the streams as well as their responses to impacts including historic channelization and proposed enhancements. In order to understand these sediment conditions and sediment transport study was performed over two runoff seasons during high flow conditions. Both suspended sediment and bedload materials were captured along with stream discharge in order to determine the size and quantity of materials that are transported through the river system at various discharges (Figures 5 and 6). This information is assisting in the enhancement design by helping to understand why certain river features have developed and in identifying the size of materials that must be transported through the system.

Bankfull and 100-year flows are being modeled for the project reaches using HEC-RAS. The current FEMA floodplain maps were created in the 1980's and there has been substantial development within the floodplain through Lake City as well as encroachment along the river. The modeling effort is assisting with enhancement design by identifying the impacts of the proposed features on flood levels as well as identifying the hydraulics of the system that affect sediment transport.

Channel and bedload surveys and HEC-RAS modeling are being done by Black Creek Hydrology out of Northglenn, CO.

Riparian surveys of Henson Creek and the Lake Fork were completed by the Colorado Natural Heritage Program in 2008 (Figure 7). The riparian corridor of lower Henson is identified as a site of high biodiversity significance, chosen for an excellent (A-ranked) occurrence of the globally vulnerable (G3/S3) thinleaf alder - Drummond's willow tall shrubland (*Alnus incana - Salix drummondiana* shrubland) and a good (B-ranked) occurrence of the globally vulnerable (G3/S3) narrowleaf cottonwood - blue spruce / thinleaf alder riparian woodland (*Populus angustifolia - Picea pungens / Alnus incana* woodland).

Baseline fish shock and macro-invertebrate data has also been collected but results are not yet available from the DPOW and BLM, respectively.

Several community outreach events have been held in town to educate residents about the project. One on one meetings with all land owners along the river have been held. We also completed a public survey and received over 100 responses (25% response rate). Overall opinion and support of the project is high, especially in regard to protecting banks and improving fisheries.

A NEPA will need to be completed for the project as part of the USACE permitting process. BLM staff have already committed to assisting with this over the winter, using data already collected. The wetland delineation will be completed in the early summer of 2013. We will then apply for Corps and County permits.

Suggested Format for Scope of Work

3. Statement of Work, Detailed Budget, and Project Schedule

The statement 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 statement of work and budget, and in return, the State of Colorado is receiving the deliverables/products specified. **Please note that costs incurred prior to execution of a contract or purchase order are not subject to reimbursement**. All WSRA funds are disbursed on a reimbursement basis after review invoices and appropriate backup material.

Please provide a detailed statement of work using the template in Exhibit A. Additional sections or modifications may be included as necessary. Please define all acronyms and include page numbers.

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

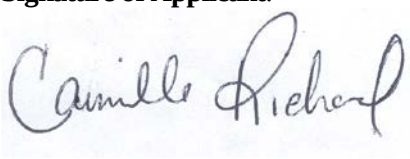
Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

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

Signature of Applicant:



Print Applicant's Name: Camille Richard

Project Title: Henson Creek and Lake Fork Confluence Channel Improvement Project

Date: December 14, 2012

Return an electronic version (hardcopy may also be submitted) of this application to:

Greg Johnson – WSRA Application
Colorado Water Conservation Board
1580 Logan Street, Suite 200
Denver, CO 80203
gregory.johnson@state.co.us

Exhibit A

Statement of Work

WATER ACTIVITY NAME – Henson Creek and Lake Fork Confluence Channel Improvement Project

GRANT RECIPIENT – Lake Fork Valley Conservancy

FUNDING SOURCE – CWCB Water Supply Reserve Account and Gunnison Basin Account

INTRODUCTION AND BACKGROUND

Provide a brief description of the project. (Please limit to **no more than 200 words**; this will be used to inform reviewers and the public about your proposal)

The Lake Fork Valley Conservancy is proposing river improvements along approximately a half mile stretch of lower Henson Creek and its confluence with the Lake Fork of the Gunnison, in and near the Town of Lake City. This is Phase I of a three phase project to improve the river through Town (Figure 1). In the Phase I project area, 2040 feet of the project reach along Henson flows through the Town and 560 feet of river is under BLM jurisdiction, but the Town leases the property along the river from the BLM for their trail system. The lower Henson has been impacted from historic mine tailing impoundment failures, creating a braided and unstable channel with high bed load movement.

The purpose of this project is to realign areas of the channel where the river is threatening the Town irrigation head-gate and ditch, stabilize banks to reduce erosion that are undermining public trails, repair riparian areas, enhance fisheries and increase public access to the river, providing an overall quality recreational experience along this reach. The project involves construction of 6 cross vanes, 19 vanes, 16 sills and one rock wall terrace extended out into the river channel at the confluence. Surrounding riparian areas will be revegetated. A trail extension will be built on this terrace and landscaped.

OBJECTIVES

The overall goal of the Project is to enhance and protect the utilization, ecological health and recreational quality of the Lake Fork of the Gunnison and its main tributary, Henson Creek, in the vicinity of Lake City.

There are 5 main objectives of the project:

1) Improve bank stability along the lower Henson and at the confluence with the Lake Fork of the Gunnison;
2) Enhance fisheries by increasing over-wintering and drought habitat;

3) Improve public recreation opportunities through safer access, better fisheries and boating, and extension of usable space at Memorial Park.
4) Facilitate full utilization of the Town of Lake City's Irrigation Ditch water right;
5) Improve organizational performance and accountability to manage restoration projects.

TASKS

TASK 1 – Project Design and HECRAS Flood Plain Analysis

Description of Task

A 30% design plan for river channel and riparian improvement will be completed for Phase I of the river project, utilizing survey data already collected during the feasibility and planning phase. This is currently being done by Black Creek Hydrology out of Northglenn, CO.

Method/Procedure

1) In-channel Schematic Design (30% Design), to include:
   a. Review of topographic, channel and bedload survey data
   b. Hydraulic Analysis modeling throughout the Project Area
   c. Preliminary Design Report and Drawings
2) Provide design and cost estimates for revegetation and trails construction.

Deliverables

Deliverables will include submittal of two hard copies of schematic report and drawings as well as an electronic copy, with maps delivered in AutoCAD format. Report includes initial estimate of construction costs.

TASK 2 - Construction Preparation

Description of Task

Prior to construction, we require land owner approval, completion of NEPA, and US Army Corps of Engineers permits to proceed with construction bidding. Other than the Town and BLM, there are four private land owners along this river segment, three of whom are willing to participate in the project.

It is recommended that final design details, construction drawings and construction work be combined into a design-build program for Henson Creek. The base components for a design-build effort that include topographic survey, proposed project design and hydraulic modeling for existing and proposed conditions have already been prepared. The design-build option will use these components to implement project construction. Design-build is preferable over the preparation of detailed

bid documents and construction-only bidding since it will reduce the amount of effort and cost required to produce documents, but will require more on-site supervision by the design consultant and Project Manager.

Method/Procedure

1) Land owner access agreements will be acquired prior to construction bidding document preparation.
2) A NEPA document will be completed during the winter and spring of 2013, using already collected data. BLM has already budgeted this work in their 2013 work plan.
3) A wetland delineation will be completed in early summer of 2013, followed by submission of the USACE permit application. USACE staff have twice visited the site during the planning phase and are supportive of the project.
4) A Hinsdale County Floodplain Development permits will be obtained upon completion of USACE permitting.
5) Construction Documents for Design/Build Approach will be prepared for earth moving contractors, including 60% design and material requirements and specifications for each river structure or bank stabilization feature to be placed on the river.
    a. Complete major design elements and construction drawings.
    b. Estimate volume of materials per in-channel structure that will be sized based upon actual flow and bedload conditions.
    c. Estimate cost of the rock and/or other materials to be used for each structure.
    d. Estimate the detailed costs for construction (hauling, placement, shaping, etc).

Deliverables

Deliverables will include: three private land owner access agreements; NEPA document, wetland delineation report, USACE and County Floodplain Development permits. Two hard copies of schematic report and drawings as well as an electronic copy, with maps delivered in AutoCAD format. Detailed cost estimate sheets will also be included in the package.

TASK 3 - Public outreach, monitoring and maintenance plan

Description of Task

As part of the current NPS 319 and CWCB planning grants, a monitoring and maintenance plan will be prepared for the project. This will detail post-construction monitoring methods to be used to measure project success.

Public outreach will be done to get feedback on final design. One on one meetings will be conducted with land owners to assess their interests for out of channel improvements such as type and placement of vegetation and perhaps signage, if trespass is an issue.

Method/Procedure

1) Meetings will be held with the Town of Lake City Town Manager and Public Works Director to work out long-term maintenance and liability issues.
2) A collaborative monitoring plan will be prepared partnering with BLM, USGS, and the Town to measure post-construction success.
3) A community meeting will be held early summer 2013 to discuss the design and get feedback.
4) Meetings with the three cooperative private land owners will be held and input incorporated into the design.

Deliverables

Deliverables include: one monitoring and maintenance plan, one community meeting held (meeting minutes), community input incorporated into design.

TASK 4 - In-Channel Construction

Description of Task

Figures 2 and 4 show proposed locations of in-channel structures along Henson Creek. Each segment is discussed separately.

1) Repair of irrigation ditch intake channel and replacement of head-gate.

   This area needs to be reworked to protect the head-gate and ditch and to increase beneficial use so that the Town's water right can be fully utilized. The rock structure at the irrigation diversion will be rebuilt to narrow-up the channel and to control bank erosion. The head-gate intake will be lowered and replaced, allowing full utilization of the Town of Lake City's water right.

2) Bank Stabilization along Henson Creek Trail

   The river will be moved away from the trail and the steep slope reduced to favor river access. The channel will be narrowed and moved toward the cliff, with vanes added to the existing riprap bank. The bank slope will be lowered to reduce hazards near the trail. A cross vane will be installed for pool development at the trail parking area.

3) Repair of channel from Silver Street to pedestrian bridge

   A cross vane will be added for pool and vanes for bank protection at Silver Street. A cross vane will also be constructed below the Highway bridge for pool development and to narrow-up the bankfull channel and create a low floodplain to facilitate bedload movement through the supports. The channel above and below the pedestrian bridge will be narrowed along with vanes, sills and a lowered floodplain.

4) Confluence Channel Improvements

   At the confluence where much accumulation of cobble and gravel has occurred, a large boulder terrace (approximately 500 feet) will be constructed into the channel (Figures 3 and 4) This will effectively increase usable public space and provide safe access to the river. It also reduces channel width and gravel deposition, and enhances aesthetics at Memorial Park.

   The eroded cross vane that is located at the fishing pier upstream of the confluence on the Lake Fork will be reconstructed to ensure good tie-in with banks and prevent future erosion.

Method/Procedure

1) Put project out to bid.
2) Mobilize equipment and labor.
3) Procure all materials for construction.
4) Oversee construction of channel structures.

Deliverables

Deliverables are 6 cross vanes, 19 vanes and 16 sills constructed. One 500 foot boulder terrace constructed at the confluence.

TASK 5 - Riparian Habitat Restoration and Trails

Description of Task

Areas previously denuded and those impacted from construction will be revegetated with native willows, poplars, alder and spruce, to bring back the natural riparian community that previously existed here and that is of high biodiversity significance in the state. Where appropriate we will work with the land owners to manage vegetation so that it provides bank stabilization without compromising their river front views.

In addition to revegetation, a 500 foot trail extension will be built on the extended rock terrace to facilitate visitor’s enjoyment of the river front (Figure 4). This area will be landscaped with native riparian vegetation as well, using larger trees.

1) Plant native riparian vegetation in areas previously denuded by bank erosion and those impacted by channel construction.
2) Construct approximately 500 feet of trail at the confluence to increase public access to the river.

Method/Procedure

1) Consult with Colorado State Forest Service on type and source of seedlings and planting methods.
2) Mobilize Town equipment and volunteer labor.
3) Procure all materials for construction.
4) Oversee revegetation and trail construction.

Deliverables

Deliverables will be 500 feet of new trail, 200 saplings planted along the river, 5 large trees planted at the confluence, localized areas seeded and mulched.

TASK 6 - Post construction Monitoring

Description of Task

The project area will be monitored late summer following construction. Channel configuration will again be surveyed, sapling survival rate will be assessed, and fish and macro-invertebrate sampling will be conducted.

Method/Procedure

1) Channel survey will be conducted by the USGS (contingent on funding in 2014) using their methodology developed as part of their Reconfigured Channel Monitoring and Assessment Program. USGS has already surveyed the reach prior to construction in addition to the channel surveys done by LFVC.
2) Sapling survival rate will simply be confirmed by checking sample locations and counting number of live saplings.
3) Fish shock data will be collected by the Department of Parks and Wildlife staff to compare to data collected in 2012 prior to construction.
4) Macro-invertebrate samples will be collected using the BLM/Utah State University Bug Lab protocols.

Deliverables

Deliverable will be: USGS publication, macro-invertebrate analysis report from USU; sapling survival update, and fish shock data results from CPW, which will all be summarized in the final CWCB project report.

TASK 7 - Project oversight and administration

Description of Task

This task involves the coordination of project activities and administration of grants. It includes fulfillment of reporting requirements and efficient

and timely financial reports.

Method/Procedure

1) Project Manager and Town Manager will familiarize themselves with all CWCB contracting requirements.
2) Completion of Project Implementation Plan and contract.
3) Project reports submitted semi-annually and one final project report.
4) Prepare quarterly reimbursement requests (or more frequent as needed)

Deliverables

Deliverables include: timely and effective reports and financials, which include two semi-annual reports and one final report. Reimbursement requests will be made quarterly, and more frequently during times of high expenditures.

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

BUDGET

Provide a detailed budget by task including number of hours and rates for labor and unit costs for other direct costs (i.e. mileage, $/unit of material for construction, etc.). A detailed and perfectly balanced budget that shows all costs is required for the State's contracting and purchase order processes. Sample budget tables are provided below. Please note that these budget tables are examples and will need to be adapted to fit each individual application. Tasks should correspond to the tasks described above.

TOTAL PROJECT COSTS

	Task Description	***Labor***	***Other Direct Costs***	***Total Cost***	***Consumptive Costs****	***WSRA funds***	***Cash Match (CWCB, NPS 319)***	***Cash Match (GOCO)***	***Cash Match (LFVC)***	***In-kind Match***
Task 1	Project Design and HECRAS flood plain modelling	$28,741	$0	$28,741	$5,748	$0	$27,941	$0	$0	$800
Task 2	Construction Preparation	$32,350	$2,500	$34,850	$6,970	$29,100	$400	$0	$0	$5,350
Task 3	Public outreach, monitoring and maintenance plan	$12,300	$750	$13,050	$2,610	$2,750	$2,000	$2,000	$0	$6,300
Task 4	In-Channel Construction	$40,800	$416,976	$457,776	$93,751	$238,976	$0	$184,500	$20,000	$14,300
Task 5	Riparian Habitat Restoration and Trails	$7,500	$13,020	$20,520	$4,104	$4,920	$0	$5,300	$0	$10,300
Task 6	Post construction Monitoring	$15,200	$50	$15,250	$3,050	$2,250	$0	$1,000	$0	$12,000
Task 7	Project oversite and administration	$15,260	$250	$15,510	$3,102	$11,750	$1,600	$0	$0	$2,160
	TOTAL COST	**$152,151**	**$433,546**	**$585,697**	**$119,335**	**$289,746**	**$31,941**	**$192,800**	**$20,000**	**$51,210**

*Consumptive portion of project includes construction of the head gate/pipe, two cross vanes, 5 vanes and 3 sills (approximately 1/5 of total project cost). See below for detailed construction costs.

PERSONNEL

Project Personnel:	**Project Manager**	**Design Consultant**	**VISTA volunteer**	**Administrative Assistance**	**Town Manager**	**Town Public Works**	**volunteers**	**BLM Hydrologist**	**Other BLM staff***	**USGS**	**Total Costs**
Hourly Rate:	*$40*	*$75*	*$20*	*$15*	*$30*	*$25*	*$20*	*$50*	*$50*	*$50*	
Task 1 - 30% Design and HECRAS flood plain modelling	$1,600	$26,341	$0	$0	$300	$0	$0	$500	$0	$0	$28,741
Task 2 - Construction Preparation (60% Design Build)	$2,800	$24,000	$200	$0	$600	$250	$0	$1,500	$3,000	$0	$30,350
Task 3 - Project outreach	$2,000	$0	$9,600	$0	$300	$0	$400	$0	$0	$0	$12,300
Task 4 - Channel construction	$4,000	$36,000	$0	$0	$300	$0	$0	$500	$0	$0	$40,800
Task 5 - Revegetation and Trail Construction	$2,000	$0	$800	$0	$300	$1,000	$3,000	$0	$400	$0	$7,600
Task 6 - Post Project Monitoring	$2,400	$0	$800	$0	$0	$0	$800	$1,200	$0	$10,000	$18,400
Task 7 - Project oversight and administration	$11,200	$0	$400	$1,500	$2,160	$0	$0	$0	$0	$0	$15,260
Total Hours:	*650*	*1,151*	*590*	*100*	*132*	*50*	*355*	*90*	*68*	*200*	
TOTAL	**$26,000**	**$86,341**	**$11,800**	**$1,500**	**$3,960**	**$1,250**	**$4,200**	**$3,700**	**$3,400**	**$10,000**	**$152,151**

* Archeology (16 hrs), Riparian/Fisheries (16), Lands (4), Wildlife (8), Recreation (8)

OTHER DIRECT COSTS

Task Description		mileage	lodging and per diem	office support*	permitting fees	rock and gravel	construction	trees, saplings, seed, mulch	TOTAL
	# Units:	*1000*	*60*	*lump sum*	*lump sum*	*see table below*	*equipment*	*see table below*	
	Unit Cost:	*$0.444*	*$100*			*see table below*	*see table below*	*see table below*	
Task 1	Project Design and HECRAS flood plain modeling	$0	$0	$0	$0	$0	$0	$0	**$0**
Task 2	Construction Preparation	$250	$1,500	$500	$250	$0	$0	$0	**$2,500**
Task 3	Public outreach, monitoring and maintenance plan	$0	$0	$750	$0	$0	$0	$0	**$750**
Task 4	In-Channel Construction	$750	$4,500	$750	$0	$174,976	$236,000	$0	**$416,976**
Task 5	Riparian Habitat Restoration and Trails	$0	$0	$0	$0	$500	$5,600	$6,920	**$13,020**
Task 6	Post construction Monitoring	$0	$0	$50	$0	$0	$0	$0	**$50**
Task 7	Project oversight and administration	$0	$0	$250	$0	$0	$0	$0	**$250**
	TOTAL	**$1,000**	**$6,000**	**$2,300**	**$250**	**$175,476**	**$241,600**	**$6,920**	**$433,546**

* office support includes copies, map printing, publications, phone, supplies

CONSTRUCTION COSTS

Item	Unit	Quantity	Cost/unit	Total
Rock and gravel				$174,976
new headgate/pipe	pc	1	$5,000	$5,000
Excavator (40 ton)	days	60	$1,400	$84,000
Loader (2 yard)	days	60	$1,320	$79,200
Articulated Truck	days	40	$1,320	$52,800
River Shaping	cu.yd.	1500	$10	$15,000
TOTAL				***$410,976***

Revegetation and Trails Construction

trail and planting labor	hour	150	$20	$3,000
gravel	ton	50	$10	$500
backhoe	hour	40	$140	$5,600
large trees	pc	5	$200	$1,000
200 saplings	pc	200	$10	$2,000
Weed barrier	ft	1000	$0.2	$200
seed and mulch				$1,000
fencing for saplings	pc	200		$2,720
TOTAL				***$16,020***

ROCK COSTS	**total number**	**total cu yd**	**total T***	**cost ($35/T)**
cross vanes (100 cu yd/structure)	6	550	1248.5	$43,698
vanes (30 cu yd/structure)	19	570	1293.9	$45,287
chinking rock - cross vanes (10 cu yd/structure)	6	60	83.4	$2,919
chinking rock - vanes (3 cu yd/structure)	19	57	79.23	$2,773
sills (3 cu yd/structure)	16	160	363.2	$12,712
rock terrace at confluence	1	750	1702.5	$59,588
excess gravel ($10/ton)		800		$8,000
TOTAL rock			***4770.73***	***$174,976***

*Solid Granite 2.27 T/cu yd; Broken Granite 1.39T/cu yd

Channel Construction Costs - Consumptive Portion (this covers headgate/pipe replacement and 500 feet of channel work to protect river bank adjacent to ditch)

Construction Costs	Unit	Quantity	Cost/unit	Total
Rock and gravel				$42,551
new headgate and pipe	pc	1	$5,000	$5,000
Excavator (40 ton)	days	12	$1,400	$16,800
Loader (2 yard)	days	12	$1,320	$15,840
Articulated Truck	days	8	$1,320	$10,560
River Shaping	cu.yd.	300	$10	$3,000
TOTAL				***$93,751***

ROCK	total number	total cu yd	total T*	cost ($35/T)
cross vanes (100 cu yd/structure)	2	184	417.68	$14,619
vanes (30 cu yd/structure)	5	150	340.5	$11,918
chinking rock - cross vanes (10 cu yd/structure)	2	20	27.8	$973
chinking rock - vanes (3 cu yd/structure)	5	15	20.85	$730
sills (3 cu yd/structure)	3	160	363.2	$12,712
excess gravel ($10/ton)		160		$1,600
TOTAL rock			***1170.03***	***$42,551***

IN-KIND CONTRIBUTION

		Town Manager	Town Public Works	OSM/ VISTA	volunteers	BLM Hydrologist	BLM NEPA specialist	USGS	Equipment	BLM rock	TOTAL
	unit cost:	*$30*	*$25*	*$20*	*$20*	*$50*	*$50*	*$50*	*See table above*	*$35/T*	
Task 1	Project Design and HECRAS flood plain modelling	$300	$0	$0	$0	$500	$0	$0	$0	$0	**$800**
Task 2	Construction Preparation	$600	$250	$0	$0	$1,500	$3,000	$0	$0	$0	**$5,350**
Task 3	Public outreach, monitoring and maintenance plan	$300	$0	$5,600	$400	$0	$0	$0	$0	$0	**$6,300**
Task 4	In-Channel Construction	$300	$0	$0	$0	$500	$0	$0	$10,000	$3,500	**$14,300**
Task 5	Riparian Habitat Restoration and Trails	$300	$1,000	$0	$3,000	$0	$400	$0	$5,600	$0	**$10,300**
Task 6	Post construction Monitoring	$0	$0	$0	$800	$1,200	$0	$10,000	$0	$0	**$12,000**
Task 7	Project oversight and administration	$2,160	$0	$0	$0	$0	$0	$0	$0	$0	**$2,160**
	TOTAL	**$3,960**	**$1,250**	**$5,600**	**$4,200**	**$3,700**	**$3,400**	**$10,000**	**$15,600**	**$3,500**	**$51,210**

SCHEDULE

Provide a project schedule including key milestones for each task and the completion dates or time period from the Notice to Proceed (NTP). This dating method allows flexibility in the event of potential delays from the procurement process. Sample schedules are provided below. Please note that these schedules are examples and will need to be adapted to fit each individual application.

Notice to Proceed is expected to begin May 1, 2013.

TASK DESCRIPTION	TIMEFRAME
Task 1: Project Design and HECRAS flood plain modeling	
a) 30% design	Sept 2012 – February 2013
b) revegetation and trails design	Feb - Apr 2013
Task 2: Construction Preparation:	
a) land owner agreements	Dec 2012 - Apr 2013
b) NEPA	Dec 2012 - May 2013
c) wetland delineation	May 2013
d) USACE and County permits	May - June 2013
e) 60% Design	June - July 2013
f) Project bid documents	July 2013
Task 3: Public outreach, monitoring and maintenance plan	
a) plan completed	Mar - May 2013
b) community meetings	June - July 2013
Task 4: In-Channel Construction	
a) Bid project	Aug 2013
b) acquire materials	Sept 2013
c) in-channel construction	Oct - Nov 2013
Task 5: Riparian Habitat Restoration and Trails	
a) ground preparation	Nov 2013
b) seeding and mulching	Nov 2013
c) sapling and tree plantings	May 2014
d) trail construction	May - June 2014
Task 6: Post construction Monitoring	
a) channel survey	Jul - Aug 2014
b) sapling survival count	Sept 2014
c) fish shock/macros	Sept 2014
Task 7: Project oversight and administration	
a) project coordination	Throughout Project
b) reimbursement requests	after end of every quarter
c) semi-annual reports	every 6 months
d) final report	end of project

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

Appendix 1
Reference Information

The following information is available via the internet. The reference information provides additional detail and background information.

- Water Supply Reserve Account main webpage:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/main.aspx
- Water Supply Reserve Account – Basin Fund Application Details:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/BasinWaterSupplyReserveAccountGrants.aspx
- Water Supply Reserve Account – Statewide Fund Application Details:
  - http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/StatewideWaterSupplyReserveAccountGrants.aspx
- Colorado Water Conservation Board main website:
  - http://cwcb.state.co.us/
- Interbasin Compact Committee and Basin Roundtables:
  - http://cwcb.state.co.us/about-us/about-the-ibcc-brts/Pages/main.aspx/Templates/BasinHome.aspx
- 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 2010:
  - http://cwcb.state.co.us/water-management/water-supply-planning/Pages/SWSI2010.aspx

Appendix 2
Insurance Requirements

NOTE: The following insurance requirements taken from the standard contract apply to WSRA projects that exceed $25,000 in accordance with the policies of the State Controller's Office. Proof of insurance as stated below is necessary prior to the execution of a contract.

13. INSURANCE

Grantee and its Sub-grantees shall obtain and maintain insurance as specified in this section at all times during the term of this Grant: All policies evidencing the insurance coverage required hereunder shall be issued by insurance companies satisfactory to Grantee and the State.

A. Grantee

i. Public Entities

If Grantee is a "public entity" within the meaning of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended (the "GIA"), then Grantee shall maintain at all times during the term of this Grant such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. Grantee shall show proof of such insurance satisfactory to the State, if requested by the State. Grantee shall require each Grant with Sub-grantees that are public entities, providing Goods or Services hereunder, to include the insurance requirements necessary to meet Sub-grantee's liabilities under the GIA.

ii. Non-Public Entities

If Grantee is not a "public entity" within the meaning of the GIA, Grantee shall obtain and maintain during the term of this Grant insurance coverage and policies meeting the same requirements set forth in **§13(B)** with respect to sub-Grantees that are not "public entities".

B. Sub-Grantees

Grantee shall require each Grant with Sub-grantees, other than those that are public entities, providing Goods or Services in connection with this Grant, to include insurance requirements substantially similar to the following:

i. Worker's Compensation

Worker's Compensation Insurance as required by State statute, and Employer's Liability Insurance covering all of Grantee and Sub-grantee employees acting within the course and scope of their employment.

ii. General Liability

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, fire damage, independent Grantees, products and completed operations, blanket Grantual liability, personal injury, and advertising liability with minimum limits as follows: **(a)**$1,000,000 each occurrence; **(b)** $1,000,000 general aggregate; **(c)** $1,000,000 products and completed operations aggregate; and **(d)** $50,000 any one fire. If any aggregate limit is reduced below $1,000,000 because of claims made or paid, Sub-grantee shall immediately obtain additional insurance to restore the full aggregate limit and furnish to Grantee a certificate or other document satisfactory to Grantee showing compliance with this provision.

iii. Automobile Liability

Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of $1,000,000 each accident combined single limit.

iv. Additional Insured

Grantee and the State shall be named as additional insured on the Commercial General Liability and Automobile Liability Insurance policies (leases and construction Grants require additional insured coverage for completed operations on endorsements CG 2010 11/85, CG 2037, or equivalent).

v. Primacy of Coverage

Coverage required of Grantee and Sub-grantees shall be primary over any insurance or self-insurance program carried by Grantee or the State.

vi. Cancellation

The above insurance policies shall include provisions preventing cancellation or non-renewal without at least 45 days prior notice to the Grantee and the State by certified mail.

vii. Subrogation Waiver

All insurance policies in any way related to this Grant and secured and maintained by Grantee or its Sub-grantees as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against Grantee or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

C. Certificates

Grantee and all Sub-grantees shall provide certificates showing insurance coverage required hereunder to the State within seven business days of the Effective Date of this Grant. No later than 15 days prior to the expiration date of any such coverage, Grantee and each Sub-grantee shall deliver to the State or Grantee certificates of insurance evidencing renewals thereof. In addition, upon request by the State at any other time during the term of this Grant or any sub-grant, Grantee and each Sub-grantee shall, within 10 days of such request, supply to the State evidence satisfactory to the State of compliance with the provisions of this **§13**.

Appendix 3
Water Supply Reserve Account Standard Contract Information

NOTE: The standard contract is required for WSRA projects that exceed $100,000. (Projects under this amount will normally be funded through a purchase order process.) Applicants are encouraged to review the standard contract to understand the terms and conditions required by the State in the event a WSRA grant is awarded. Significant changes to the standard contract require approval of the State Controller's Office and often prolong the contracting process.

It should also be noted that grant funds to be used for the purchase of real property (e.g. water rights, land, conservation easements, etc.) will require additional review and approval. In such cases applicants should expect the grant contracting process to take approximately 3 to 6 months from the date of CWCB approval.

The standard contract is available here under the header "Additional Resources" on the right side: http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/BasinWaterSupplyReserveAccountGrants.aspx

Appendix 4
W-9 Form

NOTE: A completed W-9 form is required for all WSRA projects prior execution of a contract or purchase order. Please submit this form with the completed application.

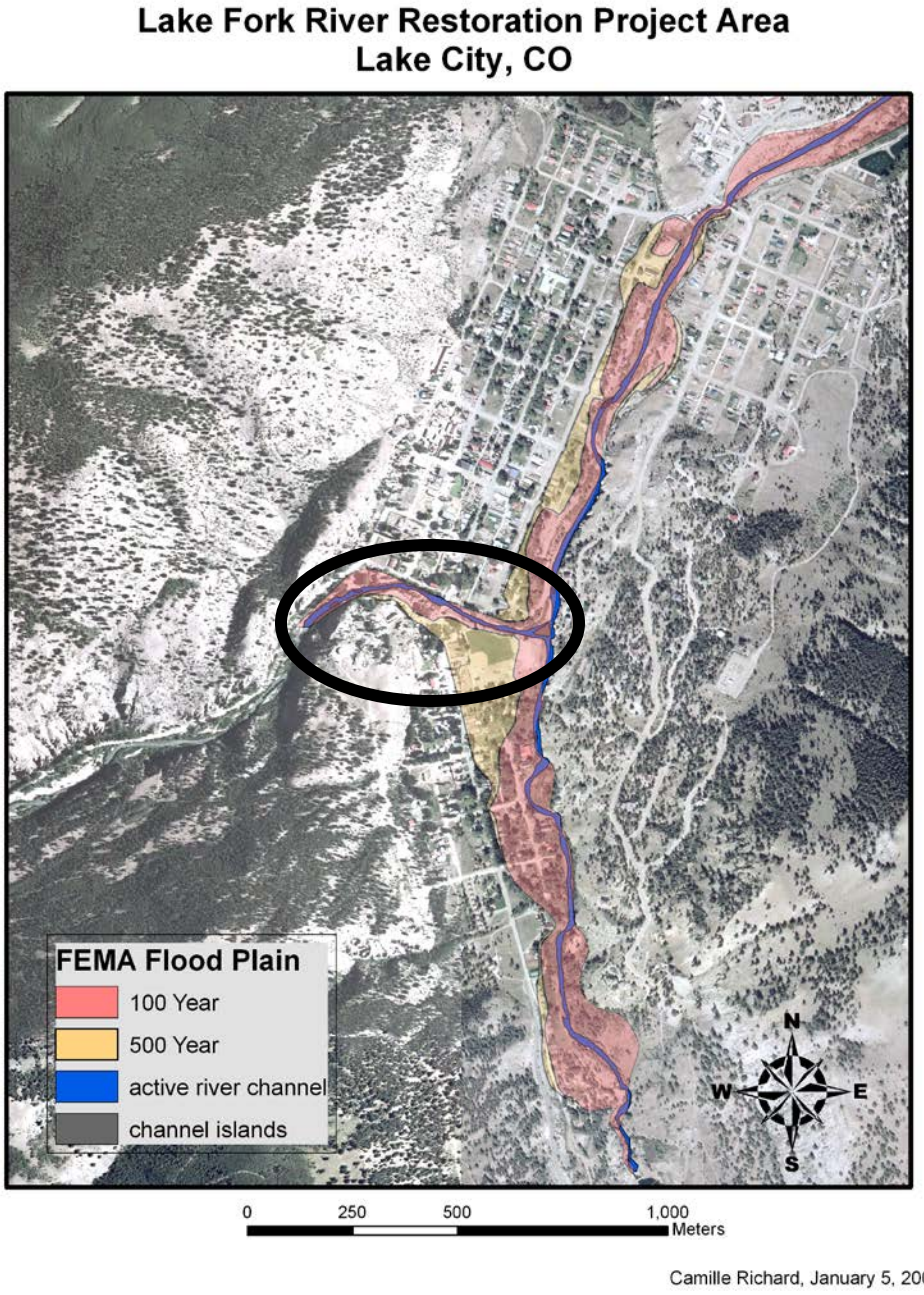


Figure 1. Comprehensive Project Area. Phase I is lower Henson Creek in oval.

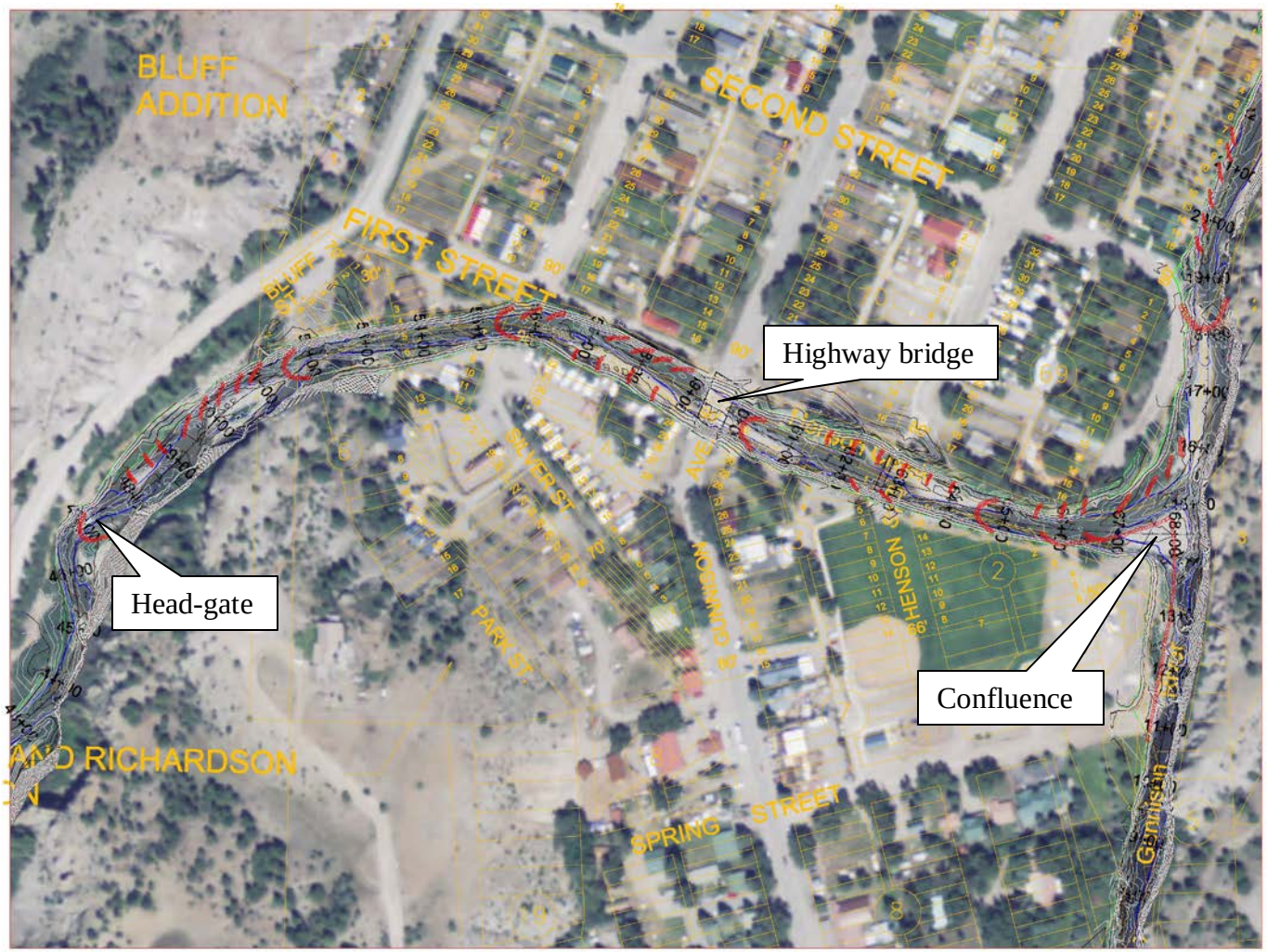
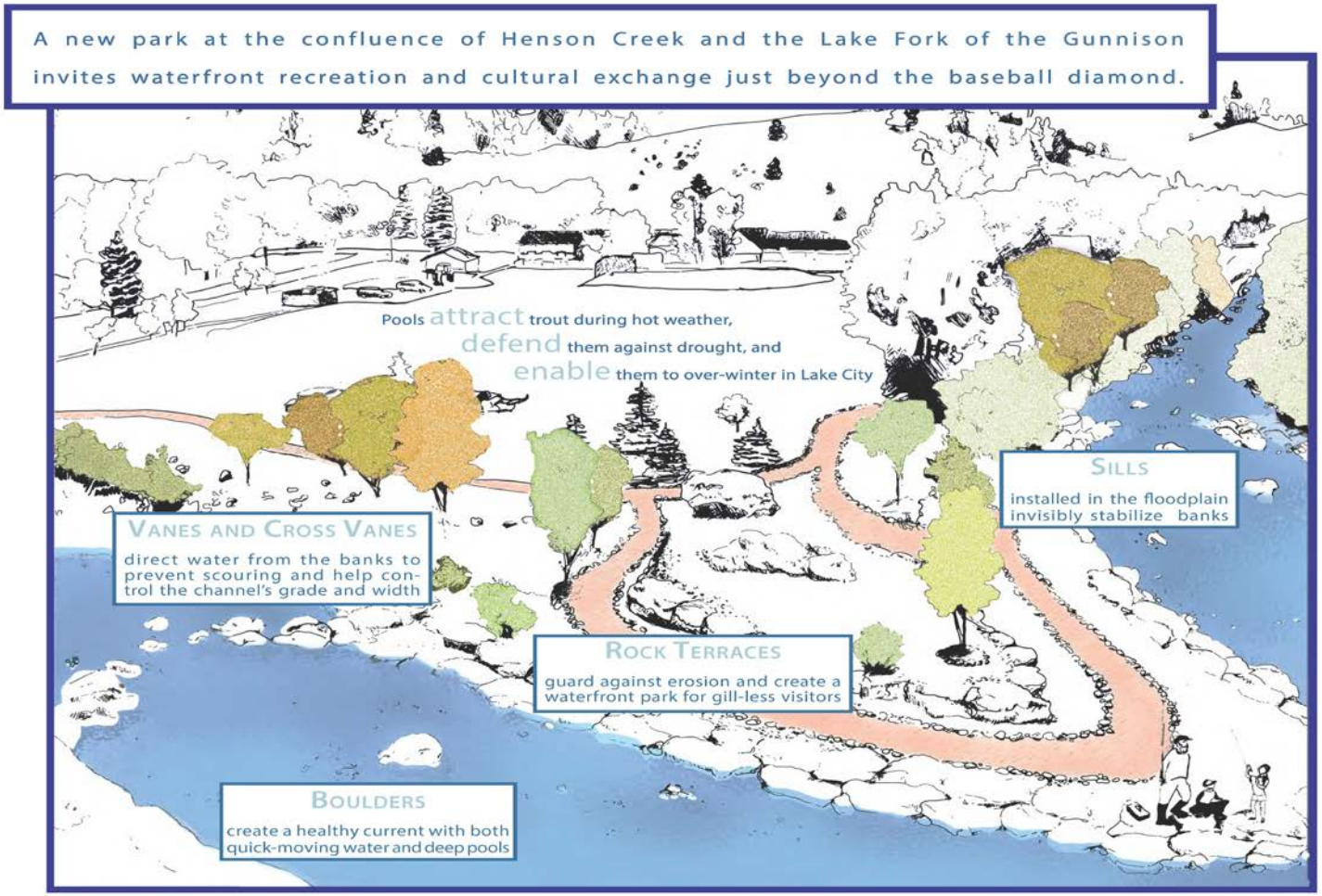


Figure 2. Locations of cross vanes (semi-circles), vanes (angular lines in channel) and sills (perpendicular lines on flood terraces).

Figure 3. Photo of existing condition at confluence. Note large amount of gravel and cobble deposition.

Figure 4. Graphical rendition of improvements at confluence.



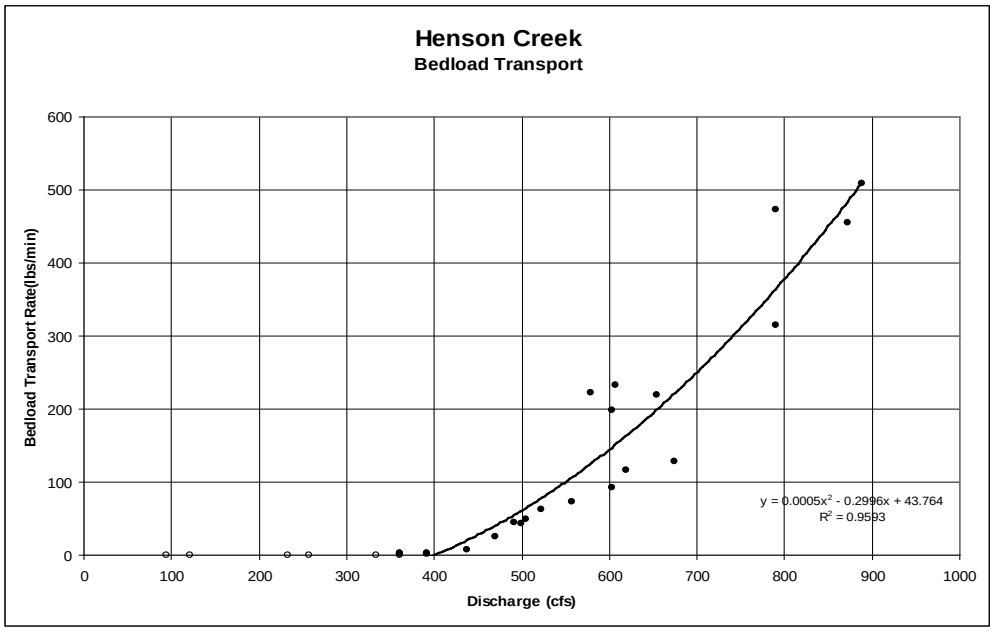


Figure 5. Bedload transport rate.

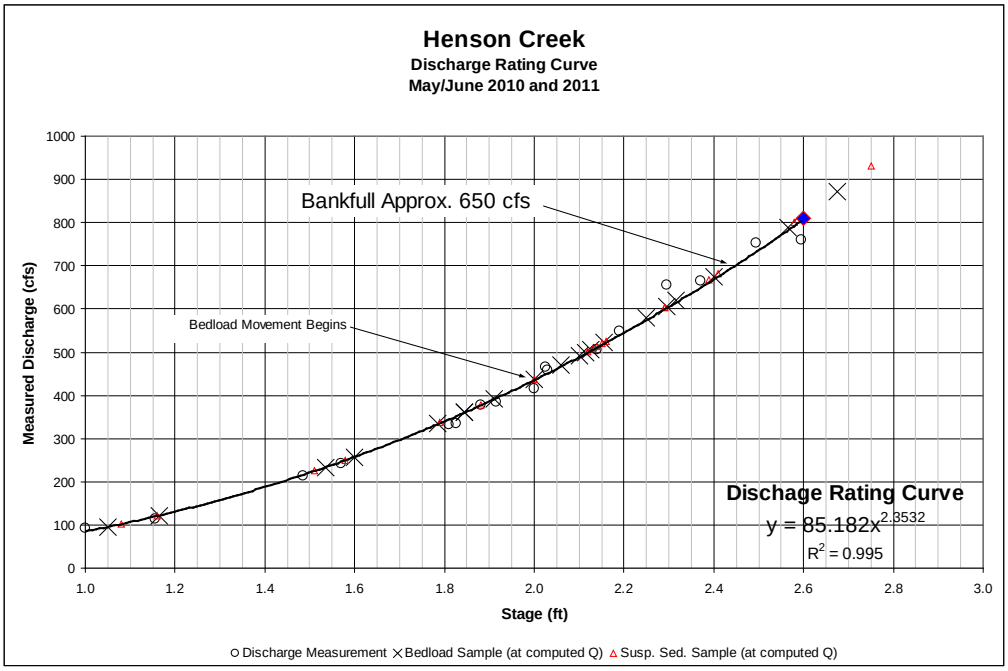


Figure 6. Discharge Rating Curve for Lower Henson.

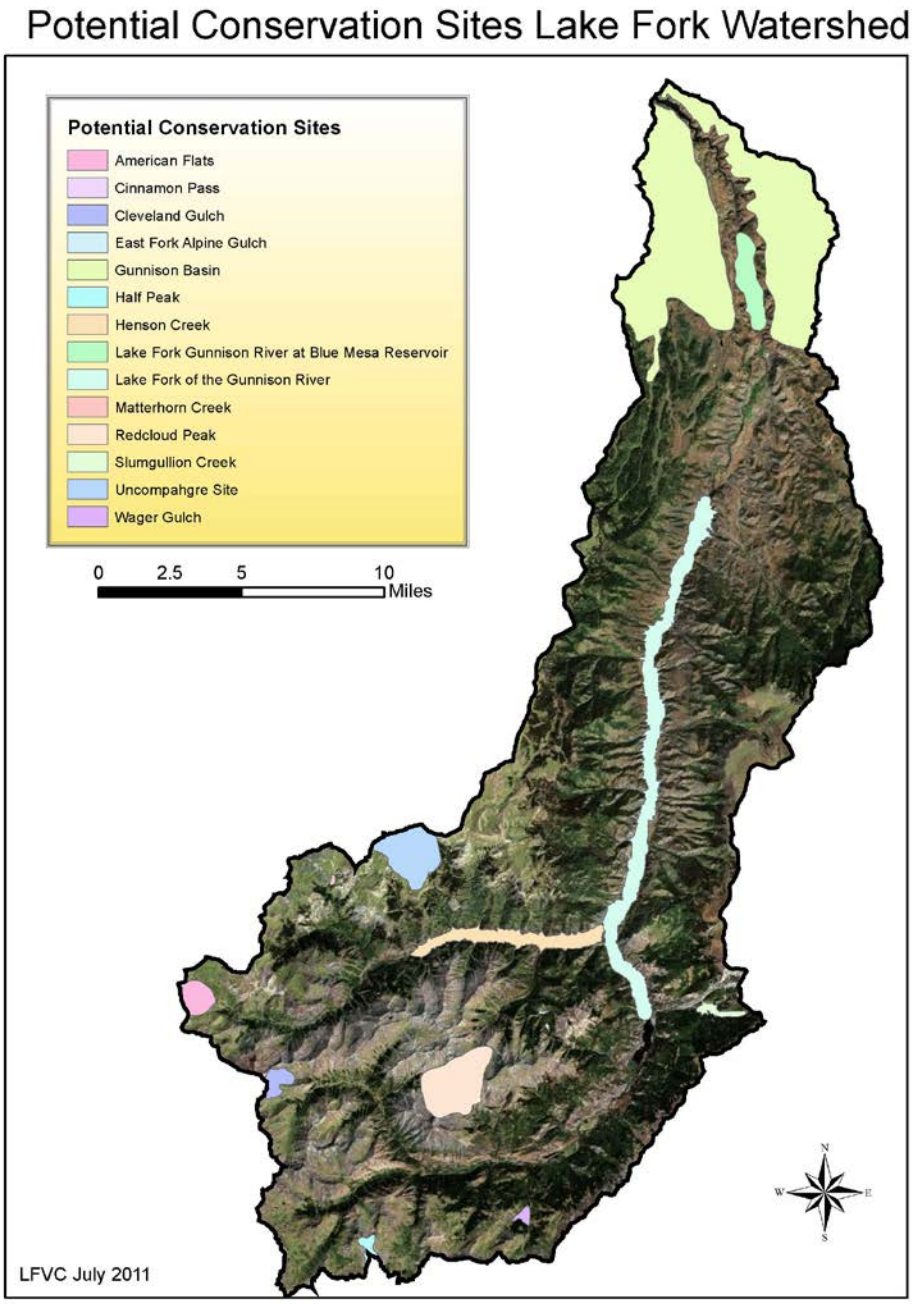


Figure 7. Potential Conservation Areas for the Lake Fork. Lower Henson Creek and the Lake Fork are noted for their riparian communities with high biodiversity significance (Source of data: Colorado Natural Heritage Program).

230 N. Bluff Street
PO Box 544 Lake City, CO 81235
970-944-2333
www.townoflakecity.us

TOWN OF
LAKE CITY

January 23, 2013

Greg Johnson
Colorado Water Conservation Board
Water Supply Planning Section
1580 Logan Street, Suite 200
Denver, CO 80203

Dear Mr. Johnson,

On behalf of the Board of Trustees of the Town of Lake City, I am very pleased to express our strong support for the application by the Lake Fork Valley Conservancy (LFVC) for the Henson Creek and Lake Fork Confluence Channel Improvement Project. In the past, several local residents have requested the Town to initiate such a project. When LFVC approached us four years ago to discuss areas for collaboration, we suggested they explore the potential for river improvements to enhance recreation and water supply. Since then the Town and its community have participated in planning and design of this project and we are happy to serve as an integral partner.

We are committed to the following roles in the project:

1. Serve as fiscal agent to the LFVC for the implementation of the CWCB grant.
2. Work with the LFVC to develop a long term maintenance plan for restoration structures and recreation sites.
3. Provide the public access points for river restoration work and recreational site development.
4. Provide in-kind support for project and grant management and equipment time for construction, as described in the proposal.

We see great value in a project that both improves our Town's natural resources and also increases public recreational opportunities. We hope that with CWCB financial assistance we can achieve the goals set forth through an engaged and supportive public process.

Sincerely,

Nathan Henne
Town Manager

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Gunnison Field Office
650 S 11th St.
Gunnison, CO 81230
970-642-4940

January 23, 2013

Town of Lake City
PO Box 544
Lake City, CO 81235

Dear Trustees:

The Bureau of Land Management (BLM) supports the Henson Creek and Lake Fork Confluence Channel Improvement Project that is being proposed by Lake Fork Valley Conservancy and its partners. The BLM manages lands along the Alpine Loop for multiple uses, including hunting, camping, ice climbing, fishing, and mining to name a few. Given the lack of resources available to manage these lands, the BLM depends on its partners. The BLM has an outstanding partnership with Lake Fork Valley Conservancy, whereby both entities along with Colorado Division of Reclamation Safety have been very successful at cleaning abandoned mine lands in the Henson Creek watershed within Hinsdale County. Approximately 540 feet of this project lies along a portion of Henson Creek, managed by the BLM on the outskirts of Lake City. This project will improve water quality; maintain and restore hydrologic function; and enhance riparian and fishery ecosystems of Henson Creek. Already, the BLM has donated approximately $3,500 in boulders and provided assistance to Black Creek Hydrology, the primary consultant on this project. In addition, the BLM will provide NEPA support and assist in monitoring.

The BLM looks forward to working with the Town of Lake City and the Lake Fork Valley Conservancy on this project and will be providing assistance to the project as our staffing and budget allow. If you have any questions, please contact me at 970-642-4940.

Sincerely,

Brian St. George
Field Office Manager

Hinsdale County
311 N. Henson Street
P.O. Box 277 • Lake City • Co 81235

Fax: (970) 944-2630
Email: hcadministrator@centurytel.net
www.hinsdalecountycolorado.us

HinsdaleCounty
COLORADO
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January 30, 2013

Greg Johnson
Colorado Water Conservation Board
Water Supply Planning Section
1580 Logan Street, Suite 200
Denver, CO 80203

Subject: Trails Commission Support for Henson Creek and Lake Fork Confluence Project

Dear Mr. Johnson,

The Hinsdale County Trails Commission (HCTC) fully supports the Town of Lake City and Lake Fork Valley Conservancy's proposal to improve Henson Creek and the Lake Fork Confluence channel area for the recreational use of our full-time and seasonal residents and visitors.

HCTC is the county commission charged with facilitating and coordinating the planning, promotion, implementation, and oversight of an integrated trails system in Hinsdale County, including the Town of Lake City. Each year the HCTC coordinates a large group of active volunteers to build and maintain trails in Lake City and Hinsdale County. An important part of our mission is to develop trails which are accessible to a broad range of users. The proposed trail that would be part of the project at Memorial Park certainly meets our criteria.

Once the project is underway, we plan to assist the Town of Lake City and the Lake Fork Valley Conservancy in a voluntary capacity (via volunteer hours) with the construction of the new 500 foot trail at Memorial Park at the confluence.

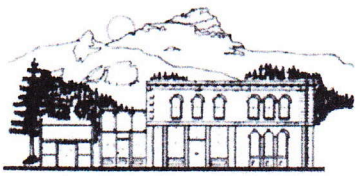
In summary, the Trails Commission enthusiastically supports the river improvement proposal. We hope that the proposal will be given favorable consideration by the Colorado Water Conservation Board.

Sincerely,

Karen M. McClatchie

Karen McClatchie
Hinsdale County Trails Commission
Telephone: 970-944-0303
E-mail: kg4hiw@gmail.com

LAKE CITY/HINSDALE COUNTY
CHAMBER OF COMMERCE



800 Gunnison Avenue
Lake City, Colorado 81235

970-944-2527
800-569-1874

chamber@lakecity.com
www.lakecity.com

The Mission of the LC/HC Chamber of Commerce is to promote tourism and economic development by assisting area businesses as well as serving as an information center.

January 29, 2013

Town Trustees
Town of Lake City
PO Box 277
Lake City, CO 81235

Dear Trustees:

The Lake City/Hinsdale County Chamber of Commerce enthusiastically endorses the grant applications submitted by the Town of Lake City and the Lake Fork Valley Conservancy to fund the construction of river improvements on lower Henson Creek and the Lake Fork of the Gunnison at Memorial Park. We have been an active partner in the planning phase for this project and see valuable outcomes for our community with its completion. The river through town is underappreciated and underutilized, yet such a valuable asset for our Town and County. This project will help increase public access to the river and improve recreational opportunities in town for its residents and visitors alike.

The Lake City/Hinsdale County Chamber of Commerce sees the river enhancement project as an excellent opportunity to draw more river enthusiasts to our Town and is smart development that improves and stabilizes a natural resource asset that we already have. As a side benefit to the habitat improvement of the river, the Town's irrigation system will benefit as well, which can ultimately result in more lawn irrigation from Town ditches instead of the potable water system.

It is our hope that this project will receive full funding. This river enhancement project supports our economy and showcases our river as one of Lake City's finest assets.

Thank you,

Jud Hollingsworth, President
Lake City/Hinsdale County Chamber of Commerce

HINSDALE COUNTY SCHOOL DISTRICT RE-1

P. O. Box 39 - 614 N. Silver Street
Lake City, Colorado 81235

Phone (970) 944-2314
Fax (970) 944-2662

January 29, 2013

Town Trustees
Town of Lake City
PO Box 277
Lake City, CO 81235

Dear Trustees,

The Lake City Community School strongly supports the grant applications submitted by the Town of Lake City and the Lake Fork Valley Conservancy to fund the construction of river improvements on lower Henson and the Lake Fork of the Gunnison at Memorial Park. The river through town is an underutilized asset due to restricted access and limited visibility in the community. This project will help improve the quality of the river for fisheries, recreation, and water supply in town. As the primary organization for learning in this community, we also see great opportunity to increase our students' knowledge of riverine systems and water conservation issues.

The school currently partners with the Lake Fork Valley Conservancy to monitor water quality on the Lake Fork. We have worked on various environmental education initiatives with the LFVC, and plan to develop more water focused curricula for our students once the project is completed.

I strongly encourage CWCB to consider this proposal favorably. Please feel free to contact me if you have further questions.

Sincerely,

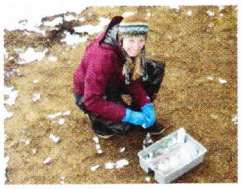
Karen Thormalen

Karen Thormalen, Ph.D.
Superintendent
Hinsdale County School District RE-1

Colorado River Watch

PO BOX 211729
Denver CO 80221




Real people doing real science, for a real purpose.

January 29, 2013

Greg Johnson
Colorado Water Conservation Board
Water Supply Planning Section
1580 Logan Street, Suite 200
Denver, CO 80203

Dear Mr. Johnson,

The Lake City branch of Colorado River Watch proudly supports the Henson Creek and Lake Fork Confluence Channel Improvement Project proposed by Lake Fork Valley Conservancy (LFVC) and the Town of Lake City. Our chapter of Colorado River Watch, a state-wide non-profit organization that trains and empowers citizen scientists to collect water quality data, has a long-standing partnership with the Conservancy that continues to grow.

Recently, our group updated its sampling sites to evaluate the health of Henson Creek (a 303(d) impaired water) and the Lake Fork, both of which flow through the Town of Lake City. These sites are within the reach of the proposed enhancements; we look forward to tracking and evaluating the projects effects. We expect a positive outcome, given the detrimental effects of channelization and sediment loading on riverine systems. Our monthly water samples will help to identify potential changes in dissolved oxygen, as well as changes in pH, hardness, alkalinity, temperature, and the presence of heavy metals resulting from improved water quality and hydrologic function. Collection of benthic macroinvertebrates will contribute to our knowledge of changes in substrate, and illustrate benefits to trout populations and the wider food web of the river system resultant from an increase in habitat and decrease in sediment loading.

River Watch looks forward to diligently monitoring and reporting on this project, and testing our hypothesis that these improvements will greatly benefit Henson Creek and the Lake Fork.

Sincerely,

Dan Scroggins
Lake City Community School Teacher

Kate Nichols
River Watch Student

Forrest Swift
River Watch Student

Brandon Nichols
River Watch