

Cottonwood Creek Daylighting Project Boise, Idaho

From Underground Flume to Functioning Creek

February 15, 2017

Applicant: Boise River Enhancement Network

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Table of Contents

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D.2.2.4 Applicant Eligibility	1
Watershed Group	1
Meetings	1
Articles of Incorporation and Bylaws	1
Mission Statement	1
Vision Statement	1
Boise River Enhancement Plan	1
Technical Proposal and Evaluation Criteria	2
Executive Summary	2
Background Data	3
Project Description	6
Design Considerations and Features	8
Initial Design Approach: Alignment	8
Major Site Constraints	8
Initial Design Approach: Outer Channel Dimensions	9
Initial Design Approach: Inner Channel Dimensions	9
Construction Tasks	9
Construction Technique	10
Fill and Excavation at Total Construction	11
Activities and Milestones	12
Required Permits or Approvals	13
Evaluation Criteria	14
Evaluation Criterion A: Watershed Restoration Planning	14
Evaluation Criterion B: Project Benefits	15
Fish & Aquatic Habitat	15
Water Quality	16
Wetland and Riparian Habitat	17
Native Species Preservation	17
Resiliency	17
Strengthen BREN and Accelerate Enhancement Plan Implementation	17

Community Engagement & Education	18
Evaluation Criterion C: Stakeholder Support	18
Evaluation Criterion D: Project Implementation	20
Evaluation Criterion E. Performance Measures.....	20
Water Quality.....	21
Aquatic Organisms	21
Riparian Vegetation	21
Communication/Outreach/Engagement	22
Evaluation Criterion F: Nexus to Reclamation	22
Environmental and Cultural Resources Compliance.....	22
Project Environmental Impacts.....	22
Special Status Species	23
Wetlands and Waters of the United States	23
Impacts to Irrigation Systems	23
Historic and Archeological Sites.....	23
Project Impacts to Low Income or Minority Populations	23
Project Impacts to Native American Tribes	24
Proliferation of non-native and invasive species	24
Project Budget	24
Funding Plan and Letters of Commitment.....	24
Budget Proposal.....	26
Budget Narrative.....	29
Appendix A: BREN Membership List	30
Appendix B: BREN Governance & Operations Procedures	34
Appendix C: Letters of Support.....	39

D.2.2.4 Applicant Eligibility

Watershed Group

The Boise River Enhancement Network (BREN) meets the definition of a watershed group as defined in Section 6001(5) of the Cooperative Management Act. BREN is a grassroots, non-regulatory entity representing diverse stakeholders dedicated to promoting the ecological enhancement of the Boise River through partnerships and collaboration. BREN addresses water quality and availability issues and can promote sustainable use of water resources. BREN has 373 members (see Appendix A). BREN is governed by a Coordinating Team of seven to thirteen volunteers elected annually by the general members.

Meetings

The BREN Coordinating Team holds regular bi-monthly meetings open to all members and the public. All meeting agendas and minutes are posted at <http://www.boiseriverenhancement.org/about/coordinating-team/>.

Articles of Incorporation and Bylaws

BREN is not incorporated, but intends to incorporate prior to award of funding, at which time the Articles of Incorporation and Bylaws will be supplied. BREN's current Governance and Operations procedures are provided in Appendix B.

Mission Statement

We are a network of people that live, work and play in the Boise River watershed dedicated to promoting the ecological enhancement of the river.

Vision Statement

The Boise River is recognized as a valuable resource by all communities in the Treasure Valley. Boise River Enhancement Network participants envision a healthy Boise River that enriches the Valley's quality of life. Imagine a Boise River that:

- Helps meet our communities' desire for outdoor recreation and economic vitality;
- Provides irrigation and drinking water to communities;
- Flows through natural and restored fish and wildlife habitat;
- Offers clean water for swimming and fishing;
- Inspires people to better understand and appreciate the river and engage in stewardship efforts.

Boise River Enhancement Plan

The written Plan was submitted with the application.

Technical Proposal and Evaluation Criteria

Executive Summary

Date: February 15, 2017

Applicant: Boise River Enhancement Network

City, County, State: Boise, Ada County, Idaho

Project funds will be used to improve the ecological resilience of the Boise River by restoring the natural function of 440 feet of a large tributary, Cottonwood Creek, in downtown Boise, Idaho (Figure 1). An open stream channel and new confluence with the Boise River will be created in the City of Boise's Julia Davis Park, and Cottonwood Creek will be diverted out of its current underground flume into the new channel, known as "daylighting". The Boise River Enhancement Network is a diverse watershed group and many member organizations will collaborate on this long-awaited project. The new instream habitat will support spawning, rearing, and over-wintering fish habitat, all of which are limiting to the Boise River fishery. Native whitefish, native sculpin, and naturally spawning rainbow and brown trout will benefit. Completion of this project will also create 0.35 acres of riparian and wetland habitat providing new habitat for native wildlife and improving water quality through the capture, filter and removal of pollutants. Daylighting Cottonwood Creek has been in the master plan for the park as well as in the City's master plan for the Boise River for more than 15 years. Funds will be used in the first year to update

and revise the 2003 project plan developed by the Ted Trueblood Chapter of Trout Unlimited and in the second year to construct the channel and review performance. Estimated completion date is September 30, 2019. The project will improve the ecological resiliency of the Lower Boise River watershed by increasing habitat for fish and wildlife, enhancing floodplains and geomorphic

function, restoring vegetation and improving water quality. The project also includes robust engagement, education and outreach.

The project is not located on federal lands or a federal facility.

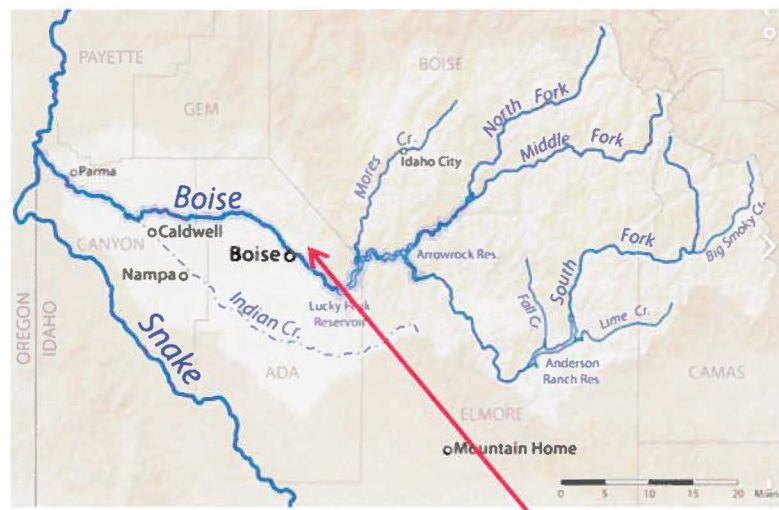


Figure 1. Boise River Watershed – Location of Cottonwood Creek

Background Data

Cottonwood Creek drains an 8,000-acre watershed of the Boise Front, north of downtown Boise. At the point where the Creek meets the valley floor, it enters a flume for approximately 1.5 miles to its terminus in the Boise River underneath Julia Davis Park near the intersection of Broadway Avenue and Myrtle Street in downtown Boise (Figures 2 and 3). Records indicate Cottonwood Creek flume has existed since 1910. The final 2,500 feet are buried. Of that, some 440 feet of the flume is feasible for daylighting because it is in a public park. Peak flows normally occur in early spring as the Cottonwood Creek watershed is a low elevation area. Average daily and monthly flows are shown in Tables 1 and 2, respectively.

Table 1. Average daily flows for Cottonwood Creek for each year since installation of flow gage.

Year	Average flow (cfs)	Year	Average flow (cfs)
2001	1.18	2009	1.33
2002	1.90	2010	1.44
2003	1.24	2011	3.09
2004	1.42	2012	1.63
2005	0.689	2013	0.501
2006	3.36	2014	1.08
2007	1.01	2015	0.732
2008	1.32	2016	1.20

Table 2. Average Monthly flows (cfs) at Cottonwood Creek gage.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.5	2.3	4.4	5.1	2.1	0.85	0.10	0.00	0.00	0.04	0.36	0.82

Location of the Cottonwood Creek gage:

Ada County, Idaho

Hydrologic Unit Code 17050114

Latitude 43°37'43", Longitude 116°06'39" NAD83

Drainage area 6.12 square miles

Gage datum 3,780 feet above NGVD29

The location of the gage is important, as it shows a calculated drainage area of 6.12 square miles (3,917 acres). This is for a gage at 3,780 mean sea level (MSL), or approximately 1,080 feet higher in elevation than Julia Davis Park (invert of flume is 2,696 MSL). The City of Boise Foothills Plan shows the entire Cottonwood Creek drainage area is 7,990 acres or 12.4 acres, which is double that of the stream gage. Most of the area outside the drainage area of the stream gage is lower elevation. Flows at the mouth of Cottonwood Creek should be higher than at the gage given the drainage area.

The Boise River is one of the few rivers within a major city to provide a naturally spawning rainbow and brown trout fishery in addition to put and take. Habitat studies of the Boise River

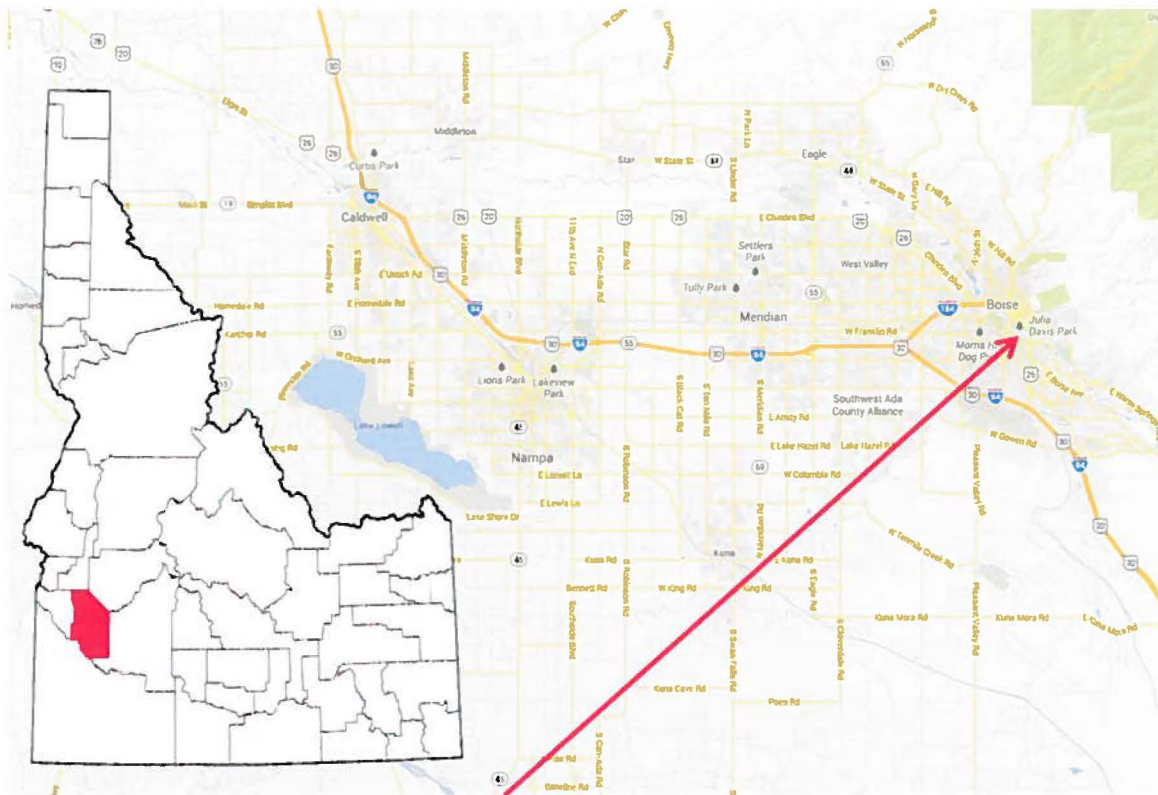


Figure 2. City of Boise with Julia Davis Park indicated, located in Ada County, Idaho (inset map).

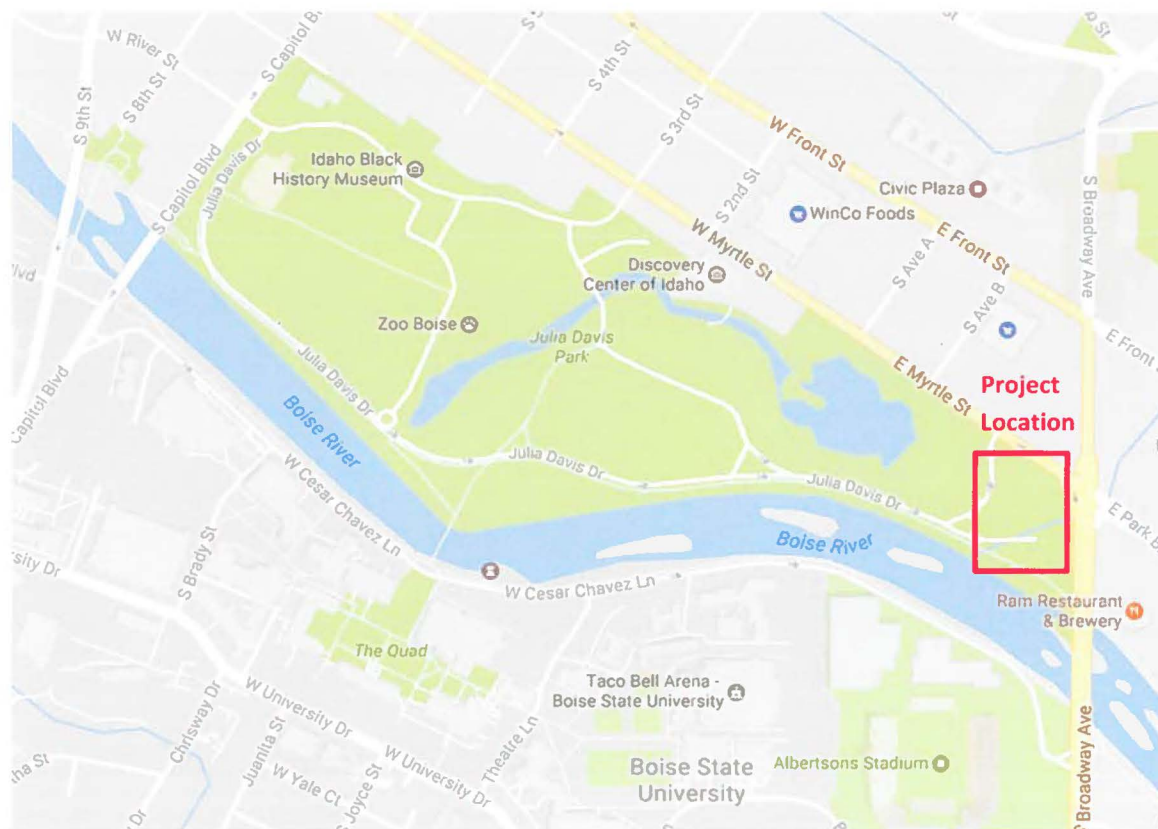


Figure 3. Julia Davis Park, Boise, Idaho.

have found the river lacks suitable spawning and rearing habitat. Aside from this limiting factor, the upper reaches of the Boise River support trout and whitefish populations with adequate water temperature.

The Boise River Enhancement Plan identifies channel confinement and simplification as the #1 issue affecting geomorphology and fisheries and aquatic habitat in the Boise River, with daylighting tributaries to create confluence areas and increase side-channel habitat complexity as the #2 enhancement recommendation (pages 18-21 in enclosed hard copy). The project will improve water quality through the interception and filtration of stormwater, the #1 issue affecting water quality in the Boise River, by reducing inputs of sediment, phosphorus and other pollutants (page 27). The removal of turf and establishment of native vegetation along the newly formed channel will help mitigate ongoing loss and impairment of riparian habitat along the River (pages 22-23 and 32).

The applicant, the Boise River Enhancement Network, was awarded a Phase 1 Bureau of Reclamation WaterSMART Cooperative Watershed Management Program Grant in 2013. This grant was used to form the cooperative watershed management group and to write the Boise River Enhancement Plan.

The project manager, Trout Unlimited, has a long history of working with the Bureau of Reclamation to complete restoration projects in Idaho's Salmon River:

- Upper Salmon Basin Habitat Improvement (\$383,720 awarded by BOR, 8/9/2011; Grant #: R10AC10001; TU Project: IDFYFP)
- Upper Salmon Habitat Improvement (\$245,086 awarded by BOR, 1/1/2012; Grant #: R13AC10026; TU Project: IDBOR2)
- Lemhi River Diversion Dam Elimination (\$321,837 awarded by BOR, 5/15/2013; Grant #: R12AC10027; TU Project: IDBOR3)
- Yankee Fork - Preachers, West Fork and Bonanza Projects (\$304,406 awarded by BOR, 3/1/2014; Grant #: R14AC0036; TU Project: IDBOR4)
- Lemhi Restoration Coordination & Development (\$132,536 awarded by BOR, 3/1/2014; Grant #: R14AC00046; TU Project IDBOR5)
- Yankee Fork - Pole Flat Habitat Enhancement & Adaptive Management (\$158,482 awarded by BOR, 7/1/2016; Grant #: R16AC00066; TU Project: IDBOR6)
- Trout Unlimited and the Bureau of Reclamation also have worked together on the Alta Harris Creek side channel to the Boise River Project. This is documented in a Memorandum of Agreement between Trout Unlimited and Bureau of Reclamation Pacific Northwest Region for the Barber Dam Fish Passage Appraisal Study in 2008. A document, *PreDesign Memorandum Barber Dam Fish Protection Facilities* was completed by Bureau of Reclamation in October 2008.

Project Description

The Cottonwood Creek Daylighting Project in Boise, Idaho, is a unique opportunity to complete habitat restoration in an urban setting. Cottonwood Creek is currently buried in a flume starting where it enters the city, and ending in a concrete and stone outlet that dumps into the Boise River (Figures 4 and 5). This project will restore the natural function of the last 440 feet of Cottonwood Creek where it enters the Boise River in Julia Davis Park in downtown Boise. Once 'daylighted,' Cottonwood Creek will provide an array of ecological, educational and aesthetic benefits in a high visible location in a popular city park across the river from Boise State University.

Daylighting Cottonwood Creek will add significant value to the Boise River. The creek has an ideal discharge for a small, productive stream. The creek has sufficient grade to produce velocities capable of providing spawning and rearing habitat. Given the existing flume and upstream flood management retention ponds, the creek should have an overall low sediment production which is attractive to producing quality pools.

MacCoy and Blew (2005)¹ suggest that the Boise River in its undisturbed state had frequent sloughs and side channels ideal for fish rearing. These channels over the years have been changed or dewatered resulting in a lower fish producing potential for the Boise River. Their work suggests that additional side channels would be consistent with providing a productive Boise River fishery.

Based on the limiting factors and potential of Cottonwood Creek, the following design goals are proposed:

- Create a small channel with potential spawning, rearing, and over-wintering habitat.
- Create an attractive stream with a deep channel, capable of moving fine sediments.
- Maintain flood conveyance.
- Use channel design and vegetation to capture, filter and remove pollutants.
- Provide interpretation and conservation education.
- Enhance Julia Davis Park values by bringing the Boise River corridor experience into the park
- Restore the long-lost stream and riparian environment to increase ecological resiliency.

These design goals will be incorporated into design geomorphology and stream hydraulics as modeled using HEC-RAS (2001) and successor versions. The result is a sinuous stream with a low width-depth ratio, quality pools, capable of moving fine sediments through potential spawning areas.

¹ MacCoy, D.E. and Blew, D. 2005. Impacts of land-use changes and hydrologic modification on the lower Boise River, Idaho, USA: Affects of Urbanization on Ecosystems, American Fisheries Society Symposium 47, p. 133-156



Figure 4. View into Julia Davis Park at ground level, standing near the sidewalk on Broadway Avenue and looking to the southwest. The Cottonwood Creek flume lies buried in the ground (indicated by dark line).

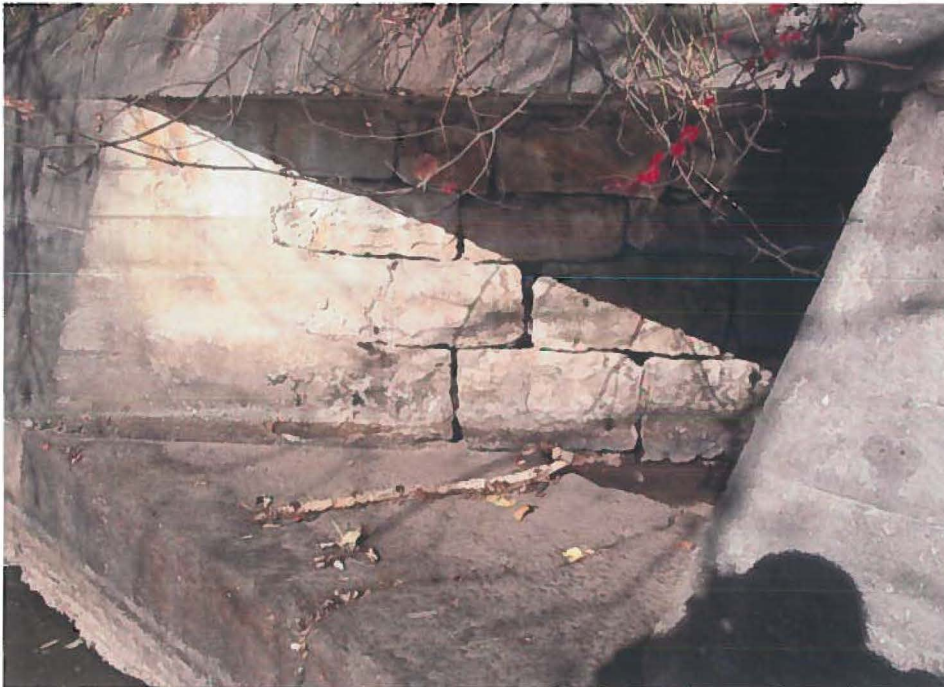


Figure 5. The concrete box “confluence” of Cottonwood Creek and the Boise River

Design Considerations and Features

1. Discharge from Cottonwood Creek will be variable between seasons with peak discharge in late winter and early spring. Stormwater input into Cottonwood Creek can sharply increase in the summer months during short duration thunderstorms. The retention ponds, 0.7 miles upstream, attenuate high flows.
2. During the fall and winter, the designed creek will provide limited over-wintering habitat, primarily in the confluence area.
3. The constructed stream banks and adjacent/riparian wetland area will be able to grow woody vegetation as well as sedges and rushes.
4. The narrow and deep channel will provide opportunity to place fish structure such as instream woody debris and undercuts.
5. Pools are incorporated into the design and will provide important over-wintering habitat and sediment and pollutant trapping.

Initial Design Approach: Alignment

- Create a stream channel as sinuous as possible given the existing constraints
- Link the channel with the Greenbelt
- Direct the channel away from the noise of Broadway Ave. as quickly as possible
- Reduce impacts to existing large trees
- Avoid existing utilities
- Eliminate impacts and costs of excavating buried cement section
- Maximize use of the existing open road and cul-de-sac area
- Connect the fixed upstream and downstream points
- Lower the elevation at the downstream end
 - Increase slope and flood conveyance
 - Reduce upstream flood elevations
 - Provide more elevation change to increase riffle and pool habitat diversity
 - Improve fish passage at lower Boise River flows

Major Site Constraints

- Irrigation: 10" main, 6" main, lines and sprinklers
- Greenbelt light pole
- Two drop inlets
- Greenbelt traffic flow
- Trees
- Assumed to not be constraints:
 - 36" drain pipe with unknown end points
 - ½" culinary water pipe

- Other
 - Exact position of flume
 - Composition of flume bed and underlying material
 - Quantity and quality of sandstone blocks

Initial Design Approach: Outer Channel Dimensions

- Optimize outer channel width (varies 30-40 feet)
 - Narrow enough to:
 - Avoid the perception of a large, deep canyon through the park
 - Reduce impacts to existing large trees and avoid existing utilities
 - Allow people to talk (and hear each other) from bank to bank
 - Be comparable in width to the existing road leading to the cul-de-sac but narrower than the cul-de-sac diameter
 - Public is accustomed to open area of this size in this area of the park
- Optimize outer channel width (varies 30-40 feet)
 - Wide enough to:
 - Convey 300 cfs
 - Allow the inner channel room to meander back and forth
 - Fit a footpath on one side
 - Fit 1-2 widths of riparian vegetation on each side of the inner channel
 - Accommodate stable side slope
 - Keep the mowers out, but invite kids in
 - Maximize use of existing sandstone

Initial Design Approach: Inner Channel Dimensions

- Optimize inner channel width (varies 4-8 feet)
 - Narrow enough to create sufficient flow depth at low flows (minimum flow: 1-2 cfs from groundwater pumping)
 - Variable enough to provide diversity of riffles and pools

Construction Tasks

- Site preparation – tree removal (if necessary), asphalt demolition and disposal, temporary relocation of irrigation main, relocation of power pole, adjustment of irrigation system, water diversion and control
- Excavation – existing flume, extent to be determined, reclaim sandstone blocks for use in project, disposal as required
- Excavation – new channel, bulk and fine grading, disposal as required
- Stone work on transition slopes from park grades to creek corridor
- Reconnection of greenbelt (possible bridge or culvert), re-install irrigation works, and

- possible footpath and kiosks
- Restoration planting & erosion control – seeding, shrub plantings, erosion control

Construction Technique

While subject to change as a final design is developed in the first year of the project, here is the general approach based on experience with the Julia Creek Daylighting Project from 2007.

Winter is the best time for construction. Park usage decreases markedly following the football season as Bronco Stadium is directly across the river and Julia Davis Park is a popular location for parking and tail gate activities. October or November construction may cause some disruption and timing will need to be coordinated with Boise Parks and Recreation.

The popular Boise Greenbelt paved bicycle pathway will be disrupted during the construction period. Fortunately, there are alternative routes in the immediate area. A chain link construction fence will probably be necessary as it was for the Julia Creek project.

In the first step following heavy equipment mobilization, the cul-de-sac section of Julia Davis Drive will be removed, starting with the asphalt road bed that will be disposed or recycled for future road material. The future channel and accompanying area would be excavated from the upstream end near Broadway Avenue near where the open channel will connect to the buried flume. This connection would not occur until all other construction is complete.

Additional excavation activities will include demolition and move of the irrigation infrastructure as well as other utilities. One or two light poles may need to be relocated. Tree removal will be limited to those trees that cannot be avoided by the channel alignment. Trees will be transplanted to a different location in the Boise Parks system where feasible (this is common and was done with the Julia Creek project).

Much of the existing buried flume will probably be left in situ unless it is determined desirable to use the sandstone blocks that were used in the original construction of the flume. This option exists because the proposed channel alignment is different than the existing flume location, except at the upstream end.

Channel bed material may need to be imported depending on conditions found at the invert of the excavated channel. The mile-long flume upstream prevents movement of bedload (gravels, cobble), so some additional material may be needed. Such material is widely available in the area and Trout Unlimited and City of Boise have experience in past cooperative projects adding spawning gravels to side channels in the Boise River. Banks and slopes will be planted with riparian vegetation.

Along the channel there will be a series of narrow width reaches leading to wider pools or run habitat. The reaches will have a little different hydraulic configuration to help cover the

expected range of flow (0.5 cfs to 12 cfs). These reaches will be designed to work at the full range of flow so the grade will be designed to stay within the optimum velocity range for rainbow trout spawning. In these reaches the stream bottom will be narrow, probably between a foot and a foot and a half.

Straw bales and silt fences will be used to filter the water from each pool area during construction where needed. Larger angular rock, wattles, and tree boles will be used to define the bank-water column interface. Fine-grained fill material will be placed behind the rock and wattles and would perhaps be held in place with fabric to provide a barrier between the soil and the water column. Woody vegetation cuttings will be driven through the fabric and bank material, at a depth that would intercept the ground water interface provided by the creek. Sedge and rush plantings would also be made along the banks.

Fine-grained material will be placed so its lower position will be slightly below the ground-water interface allowing capillary action to transmit water upwards in the soil column. This should provide adequate moisture for a good variety of wetland species, depending on the depth to water, soil texture, and vegetation planted. Most of the construction would be done by a hydraulic excavator. Vegetation planting and rock placement will be done by hand. Cuttings, seed, and stock from community-based native plant nurseries will be used to re-vegetate the banks with mostly native species to the maximum extent possible, with the help from volunteers.

Fill and Excavation at Total Construction

- Excavation is estimated at 5,500 to 6,500 cubic yards.
- Fill for channel/bank shaping 20-25 cubic yards (if entire bank uses rock), larger angular rock, about the size of a football or equivalent
- Fill (gravel) for spawning 1-5 cubic yards, 1 – 2 inch clean, round gravel
- Pond excavation is included in the above total.

The re-vegetation seed and plant list will be determined by the Land Trust of the Treasure Valley with input from the Intermountain Bird Observatory, but will likely include sedge (*Cyperaceae* sp.) and rush (*Juncus* sp.) at or below normal surface water; coyote willow (*Salix exigua*), pacific willow (*Salix lucida*), and cottonwood (*Populus* sp.) near the ground water/lowest annual floodplain; and willow (*Salix* sp.), cottonwood, Wood's rose (*Rosa woodsii*), bluebunch wheatgrass (*Pseudoroegneria spicata*), arrowleaf balsamroot (*Balsamorhiza sagittata*), and Thurber's needlegrass (*Achnatherum thurberianum*) at intermediate annual floodplain.

The Fisheries Structure includes constructed bank undercut, instream woody debris and rock.

Activities and Milestones

Table 3. Activities and milestones for the Cottonwood Creek Daylighting project.

Date(s)	Activity
Oct – Dec 2017	<ol style="list-style-type: none"> 1) Formalize partnerships with cooperators: City of Boise (both Boise Parks and Recreation and Public Works), Boise State University, US Forest Service, Idaho Department of Fish and Game, Army Corps of Engineers, Ada County Highway District, and Idaho Department of Water Resources. 2) Create Community Engagement Workplan that describes the kinds of community engagement and volunteers (professional, manual labor, skilled, etc.) needed, when needed, and who is responsible for recruitment including a calendar of planned community engagement opportunities (e.g open house, willow planting). The plan will also establish quantifiable goals for engagement. 3) Create a Community Engagement database and use it to track community engagement and volunteer activity. 4) Create a Public Relations Workplan that includes dates for press releases, media tours, public events, blogs, presentations, videos, project updates, describes the social media strategy, and assigns responsibilities. Goals for number of people reached will be established. 5) Create a Knowledge Transfer workplan that includes tasks and a timeline to ensure that knowledge of the project, including design, permitting, partnership creation, construction, community engagement and monitoring, is transferred to other stakeholders in the watershed to support Boise River enhancement. Goals for the number of stakeholders reached in Ada and in Canyon counties will be established. 6) Create a plant palate and planting plan: The Land Trust will work with the Intermountain Bird Observatory and local restoration and water quality experts to create the planting palate desired and a site plan to guide the planting effort. 7) Cottonwood seedlings will be grown from seed collected nearby which will help get a jump start on the enhancement effort. Volunteer effort will begin. 8) Additional plant material will be grown by the Land Trust and its partners over the course of the project, building an inventory for enhancement for this specific project.
Jan. - June 2018	<ol style="list-style-type: none"> 1) Update technical design and develop work plan and monitoring plan of daylighting project. 2) Provide opportunities for public input on design. 3) Seeds will be collected and riparian shrub cuttings will be prepared for planting.
April 2018	Develop RFPs for Contractors: clearing & grubbing; asphalt removal; irrigation demo, temporary supply, final repair; excavation of channel; plants; turf replacement; concrete & asphalt; park elements.
July 2018	Secure all necessary permits

July 2018	1) Promote the daylighting project in local media and with target audiences. 2) Secure balance of implementation funds needed.
July 2018	Selection of Contractors; Contracts Established
Sept 2018	1) Community Engagement Report that tracks numbers of volunteers, jobs accomplished, hours volunteered and basic demographic data. 2) Communication/Education Annual Report that describes public relations and knowledge transfer activities and results.
Oct 2018 – Feb 2019	Construction window:
	Day 1 Survey
	Day 2 -3 Turf Clearing & Grubbing; Irrigation Preparation
	Day 4 - 10 Earthwork – excavation of channel; grading; install gravels
	Day 7 – 9 Headwall & Railing at Daylighting point
	Day 11 – 14 Installations: interpretive kiosks, park elements, irrigation
	Day 15 – 16 Landscaping
3 months after up to 5 years	Assess Performance Measures: Water Quality, Fish presence, etc., as determined in monitoring plan
6 months after award	Semi-Annual Performance Report
9 months after award	270-day Performance Report
Sept 30, 2019	1) Final Performance Report 2) Community Engagement Report that tracks numbers of volunteers, jobs accomplished, hours volunteered and basic demographic data. 3) Communication/Education Annual Report that describes public relations and knowledge transfer activities and results.

Required Permits or Approvals

This project will require the following permits:

- U.S. Army Corps of Engineers 404 permit for the small areas at the bank of the river where we open a new channel;
- Idaho Department of Water Resources Stream Channel Alteration Permit (this is done jointly with the 404 permit above);
- Idaho Department of Environmental Quality 401 Certification;
- Boise River System Ordinance (BRSO) Permit - City of Boise Department of Planning and Zoning;
- Boise River floodplain review Permit - City of Boise (coincides with the BRSO permit);

Because the Ted Trueblood Chapter of Trout Unlimited successfully completed a similar project, the Julia Creek Daylighting Project, our team is familiar with the processes and timeframes required to obtain the necessary permits and approvals for this project.

Evaluation Criteria

Evaluation Criterion A: Watershed Restoration Planning

The Boise River Enhancement Plan (Enhancement Plan) was developed in 2014-2015 through an extensive literature review and stakeholder engagement process to meet stakeholder request for a watershed-scale integrated plan to address widely-recognized problems with river ecosystem function and stakeholder cooperation.

From the existing literature and research, reports were created for four ecological priorities identified by stakeholders at the From Vision to Reality workshop held in 2011: Geomorphology, Fisheries and Aquatic Habitat, Wetland and Riparian Habitat, and Water Quality. The reports were discussed with stakeholders at four workshops, posted online and reviewed by experts. The reports and attendant recommendations were revised and combined with significant background information to create the Enhancement Plan. The Enhancement Plan describes the current state of the river; the key issues and enhancement opportunities for Geomorphology, Fisheries and Aquatic Habitat, Wetland and Riparian Habitat, and Water Quality; priority enhancement concepts; and collaborative enhancement examples and approaches. The Boise River Enhancement Plan is an educational and practical resource and is widely supported by the numerous agencies and stakeholder groups.

The draft Enhancement Plan was reviewed at three open houses in Ada and Canyon Counties, 18 meetings with stakeholder groups, and to the public-at-large through five media events, to obtain additional feedback. The Enhancement Plan was adopted by consensus of the BREN Coordinating Team in September 2015.

The Boise River Enhancement Plan is truly a community-generated plan, involving a diverse group of stakeholders including but not limited to: elected officials from the 14 cities within the Lower Boise Watershed; parks, planning and public works departments from 6 major cities along the River; Parks departments, soil conservation districts and Commissioners from Ada and Canyon Counties; representatives from the Idaho Department of Environmental Quality, Idaho Department of Fish and Game, and the Idaho Department of Water Resources; representatives from the U.S. Army Corp of Engineers, U.S. Fish and Wildlife Service, U.S. Geologic Survey, and Natural Resources Conservation Service; Commissioners of the Upper Snake River Tribes Foundation; representatives from Ada County Highway District and Flood Control District #10; representatives from five canal companies and irrigation districts; professionals from Boise State University, University of Idaho and the College of Idaho; representatives of 19 development, engineering and environmental consulting firms; and representatives of non-profit groups including Golden Eagle Audubon Society, Boise River Trails Coalition, Boise Watershed, Ducks Unlimited, Foundation for Ada/Canyon Trail Systems, Fly Fishers of Idaho; Foothills Learning Center; Idaho Conservation League; Idaho Foundation for Parks & Lands,

Idaho Shakespeare Theater, Idaho Smart Growth, Idaho Water Association, Idaho Wildlife Federation, Idaho State Section of the American Water Resources Association, Intermountain Bird Observatory, Lower Boise Watershed Council; National Fish & Wildlife Foundation, Peregrine Fund, Trout Unlimited, and the Urban Land Institute.

Evaluation Criterion B: Project Benefits

Fish & Aquatic Habitat

The project will result in 440 feet of new instream habitat that will support spawning, rearing, and over-wintering fish habitat, all of which are limiting to the river fishery. Native whitefish, native sculpin, and naturally spawning rainbow and brown trout will benefit from this project.

Fish studies² on the Boise River found elevated summer discharge coupled with channel confinement, lack of instream cover, roughness elements, and complexity have led to stream velocities and habitat conditions that are not optimal for trout during much of the irrigation season (May – October), while decreased flows outside of the irrigation season (November – April) dewater near shore habitat leading to a loss of cover and habitat complexity for juvenile and adult fish, thus lowering fish survival. When discharges from Lucky Peak are at spring peak flow magnitudes (e.g. >4,430 cfs), most of the upper reaches are run habitat, with the exception of the North Channel and the lower end of Eagle Island to Star, where pool habitat dominates; this situation persists through much of the summer³. High velocities in the main channel are not optimal for salmonids during the irrigation season.

Recreating a confluence of Cottonwood Creek and the Boise River will provide habitat benefits of a low water velocity area that is more optimal for trout and whitefish rearing than the current summertime flows in the area, a historically channelized section of the Boise River. Planting and growth of riparian plants will provide cover habitat and protection from predators. Experience from the Julia Creek Daylighting Project in Julia Davis Park, some 0.25 downstream, shows the response of riparian planting to provide cover within a few years.

Habitat benefits will be important during flood and high water flows as the confluence area will be a harbor from the high velocities in the main river. While not a flood control benefit in the traditional definition, the off-channel habitat area will produce benefits for the aquatic species during higher flow or flood events.

² Asbridge, G., and Bjornn, T.C. 1988. Survey of potential and available salmonid habitat in the lower Boise River: Idaho Department of Fish and Game job completion report, project F-71-R-12, subproject 3, job no. 3, 71 p. Idaho Cooperative Research Project, Moscow.

MacCoy, D.E. 2006. Fish communities and related environmental conditions of the lower Boise River, southwestern Idaho, 1974–2004: U.S. Geological Survey Scientific Investigations Report 2006-5111, 36 p.

³ Asbridge, G., and Bjornn, T.C. 1988. Survey of potential and available salmonid habitat in the lower Boise River: Idaho Department of Fish and Game job completion report, project F-71-R-12, subproject 3, job no. 3, 71 p. Idaho Cooperative Research Project, Moscow.

Water Quality

This project will result in long-term improvement in water quality in the Boise River because Cottonwood Creek will be engineered and landscaped to capture, filter and remove pollutants, including sediment and nutrients, before the water enters the Boise River. The buried creek lacks the biological activity and geomorphic complexity to provide these important natural services.

The project is in the heart of the largest and fastest growing urban area in Idaho. Stormwater from both residential and commercial areas is discharged into Cottonwood Creek, combining with the natural flow of the 16.5 square mile watershed before discharging to the Boise River. Direct discharge of stormwater to the Boise River is not allowed from new development, but this is one of many old connections that, collectively, discharge significant pollution to this heavily recreated reach of river. The major pollutants found in urban runoff include sediment, nutrients, heavy metals, oil, grease, pesticides, and bacteria.

Downstream reaches of the Boise River violate water quality standards for sediment, phosphorus and bacteria, impairing beneficial uses that include recreation, cold water aquatic life, salmonid spawning, wildlife habitat and water supply. The U.S. Environmental Protection Agency-approved Lower Boise Total Maximum Daily Load requires this reach to deliver less of these pollutants downstream.

Re-establishing natural biological activity and stream channel complexity, including wetlands and floodplain, will allow the absorption of pollutants by in-stream and riparian vegetation, algae and microbes, resulting in improved water quality in the Boise River and farther downstream in the heavily-impaired Snake River. This project meets the goals of Idaho's Catalog of Stormwater Best Management Practices⁴ to mimic predevelopment conditions and to improve stormwater management at the local level to attain and maintain water quality standards. This daylighting compliments many other onsite and offsite strategies used by the City of Boise, Ada County Highway District, Boise State University, Drainage District 3 and Idaho Transportation Department to ensure new development and re-development reduces stormwater pollution of the Boise River.

Reducing stormwater pollution benefits the local and downriver communities and helps meet state clean water goals, but there is no plan or funding in place to remedy these stormwater legacy problems. Collaborative multi-purpose projects like this one provide a rare opportunity to implement a cost-effective and permanent strategy to clean up historic sources of pollution.

⁴ IDEQ. 2005. Catalog of Stormwater Best Management Practices for Idaho Cities and Counties. Idaho Department of Environmental Quality, Boise, Idaho. Accessed February 14, 2017 at <http://www.deq.idaho.gov/media/622263-Stormwater.pdf>

Wetland and Riparian Habitat

The project will result in the increase of approximately 0.35 acres of native wetland and riparian habitat. These native plants will provide nesting sites, shelter, and food resources for birds and wildlife, in addition to the water quality benefit mentioned above. Many neotropical migrant bird populations are declining within the Lower Boise River watershed; providing high quality native riparian habitats such as this is critical for conserving these species.

Native Species Preservation

Improvement of water quality in the Boise River resulting from this project will contribute to attainment of water quality standards in the lower Boise River directly benefiting cold water aquatic life including salmonids. Native coldwater species including trout and whitefish inhabit the lower Boise River between the City of Star and Lucky Peak Dam. From Star to the Snake River, the river supports a coldwater fishery only seasonally, but supports introduced sport fish year-round, including largemouth bass, smallmouth bass and channel catfish.

Functional riparian zones and wetlands adjacent to the Boise River will also provide additional habitat for birds and wildlife. More than 150 species of birds use the watershed, including a variety of waterfowl species and neotropical migrants. In 2016, three pairs of bald eagles were identified nesting in the lower Boise River watershed. At least 37 species of mammals occur in the lower Boise River watershed. Species like beaver and mink live in the river or side channels.

Resiliency

The project is in a rapidly growing urban city along the Boise River. As such, the Boise River is subject to continued land alteration resulting in loss of instream habitat, floodplain connectivity, and wetland and riparian habitat. Its urban setting also makes it subject to numerous pollutants. This project provides a rare opportunity to create new habitat, where it is often lost. The addition of quality spawning and rearing habitat, and growing native vegetation along the new channel, as well as reductions of pollution to the river, will help increase the capacity and resilience of the Boise River ecosystem to respond to ongoing impacts.

Strengthen BREN and Accelerate Enhancement Plan Implementation

This project will not only enhance the Boise River per the Boise River Enhancement Plan, it will strengthen BREN and increase enhancement actions throughout the watershed. The Boise River Enhancement Network (BREN) was formed in response to stakeholder concerns that the ability to enhance ecosystem function, water quality and other elements in the watershed was hindered by limited cooperation and planning. With support from the U.S. Bureau of Reclamation and the community, BREN is now a multi-stakeholder cooperative watershed group that aggregates and shares knowledge and resources to support enhancement of the Lower Boise River per our community-generated Boise River Enhancement Plan.

In 2016, BREN was supported by approximately \$30,000 in in-kind donations, primarily for administration, fundraising, communication and coordination. Our goal is to generate sustainable funding of \$40,000/year and hire staff to perform these duties, enabling the volunteers do the outreach, planning, education and partnership building needed to implement the Plan. This high-profile project will bring attention to BREN and the services we provide as well as to the Plan and increase community support for BREN.

The project will involve multiple jurisdictions including City of Boise Public Works and Parks and Recreation, Ada County Highway District, Boise City Canal Company, Ada City County Emergency Management, Idaho Transportation Department and many other stakeholders. The collaborative process will build trust, sow seeds of cooperation and reduce existing conflict. The project will also demonstrate the power of collaboration and the benefits of enhancement, inspiring and motivating other private and public entities to join the lower Boise River enhancement movement.

Community Engagement & Education

The project will provide opportunity for community engagement from traditional and nontraditional partners during planning and construction, and project success will be measured, in part, on the number and diversity of people involved. Of special note, the project is in an easily accessible location making it possible to engage underserved populations including Boise's large and diverse refugee community. Partnerships with agencies, including the Idaho Office of Refugees, will be developed to facilitate refugee participation in volunteer activities. Participating in stewardship activities increase people's sense of belonging and builds appreciation of nature in youth and adults. Diverse community engagement in this project will increase support for future Boise River enhancement projects.

Evaluation Criterion C: Stakeholder Support

The Cottonwood Creek Daylighting Project advances priority enhancement goals of the Boise River Enhancement Plan (as noted on page 5 of this proposal). In addition, this project will strengthen existing and build new relationships between watershed stakeholders and build local capacity to reduce conflict over water use meeting BREN's goal of increasing collaboration to produce meaningful and sustainable enhancement (pages 31 and 40 of Plan).

The daylighting of Cottonwood Creek is a long-desired project. Trout Unlimited got the ball rolling by funding preliminary design work in 2002. From this initial study, the City of Boise (Parks and Recreation, Public Works), Trout Unlimited and Boise Rotary Club completed a conceptual plan for daylighting Cottonwood Creek. The project was included in the Julia Davis

Park Master Plan (2002)⁵ for habitat rehabilitation and interpretive opportunities. The project is recommended in the City of Boise's 2011 Comprehensive Park and Recreation Plan⁶ and in the Boise River Resource Management and Master Plan (2014)⁷. In 2015, City of Boise citizens overwhelmingly passed the Levy for Clean Water and Open Space⁸, resulting in \$10 million of funding to be used in part to preserve and protect water quality, wildlife and native habitat along the Boise River. The Cottonwood Creek Project was used as an example of how Levy funds could be spent.

The daylighting of Cottonwood Creek compliments several efforts throughout the watershed to daylight creeks to improve water quality, provide habitat and create open space for residents in an urban setting. Previous projects include the daylighting of Julia Creek⁹ by Trout Unlimited in 2007 that led to the creation of 3,000 square feet of riparian/wetland habitat and enhancement of another 4,000 square feet of riparian habitat along the Boise River, and the daylighting of Indian Creek¹⁰, which began in 2003 and is being implemented in stages by the City of Caldwell.

The project also complements ongoing efforts to reduce stormwater pollution of the Boise River through use of green stormwater infrastructure (GSI), including street tree systems, bio-retention, permeable pavers, and bio-swales. Ada County Highway District (ACHD) operates the largest municipal separate stormwater system (MS4) in the lower Boise River watershed, including outfalls to Cottonwood Creek upstream of the project area. ACHD's Green Stormwater Infrastructure Guidance Manual (2014)¹¹ encourages use of practices that use or mimic natural processes to infiltrate, evapotranspire, and/or reuse stormwater runoff including use of GSI retrofits to treat runoff in older developed areas with existing storm drain systems. This project will provide a rare opportunity to treat runoff by restoring channel complexity and biologic activity and complement, not duplicate, other efforts.

⁵ City of Boise 2002. Julia Davis Park Master Plan. City of Boise Parks and Recreation, Boise, Idaho. Accessed February 6, 2017 at http://parks.cityofboise.org/media/4295/mp_julia_davis.pdf

⁶ City of Boise. 2011. 2011 Comprehensive Park and Recreation Plan. City of Boise, Idaho. Accessed February 14, 2017 at <https://parks.cityofboise.org/media/227501/2011-plan-with-2015-update.pdf>

⁷ City of Boise. 2014. Boise River Resource Management and Master Plan. City of Boise Parks and Recreation, Boise, Idaho. Accessed February 6, 2017 at http://parks.cityofboise.org/media/994797/boise-river-resource-management-and-master-plan_final-12-29-14.pdf

⁸ City of Boise. 2017. City of Boise Calls for Open Space and Clean Water Advisory Committee Applications, City of Boise, Idaho. Accessed February 6, 2017 at <http://mayor.cityofboise.org/news-releases/2016/02/city-of-boise-calls-for-open-space-and-clean-water-advisory-committee-applications/>

⁹ Ted Trueblood Chapter of Trout Unlimited. 2007. Julia Creek Daylighting Project. Accessed February 7, 2017 at <http://www.tedtruebloodtu.org/jdculvert.htm>

¹⁰ Gunderson, D. "Daylighting Caldwell: Urban renewal transforms an asphalt floodway". *The Blue Review* 2 July 2015. Accessed February 7, 2017 at <https://thebluereview.org/daylighting-caldwell-opening-indian-creek/>

¹¹ ACHD. 2014. Green Stormwater Infrastructure Guidance Manual. Ada County Highway District, Garden City, Idaho. Accessed February 8, 2017 at http://www.partnersforcleanwater.org/media/3050/Boise_GC%202014%20-%20Section%2002%20ACHD_App7.pdf

The Cottonwood Creek Daylighting Project is widely supported by a diverse set of stakeholders, including the Ted Trueblood Chapter of Trout Unlimited, Idaho Department of Fish and Game, Boise Valley Fly Fishers, City of Boise, Ada County Highway District, Intermountain Bird Observatory, Land Trust of the Treasure Valley, and the Boise River Enhancement Network, most of which are direct partners on this project, providing cash or in-kind contributions. BREN has received seven letters of support for this project (please see Appendix C).

It's consistent with policy of Ada County Highway District, City of Boise Public Works, City of Boise Parks and Recreation, and Idaho Department of Fish and Game, and will advance the Idaho Bird Conservation Plan (2000)¹² and State Wildlife Action Plan (2015)¹³ which both identify loss of native vegetation as a serious issue limiting bird and wildlife habitat.

Consultation with affected stakeholders found no opposition to the project.

Evaluation Criterion D: Project Implementation

The Boise River Enhancement Network along with the landowner, City of Boise, project manager, Trout Unlimited and other private and public partners, is capable of proceeding with the Cottonwood Creek Daylighting Project. Please refer to Table 3 Activities and Milestones (page 12) for an estimated project schedule and to Project Description (pages 6-13) for description of the design work performed specifically for the project. The detailed project budget starts on page 25.

The following permits will be required: U.S. Army Corps of Engineers 404 permit, Idaho Department of Water Resources Stream Channel Alteration Permit, Idaho Department of Environmental Quality 401 Certification, Boise River System Ordinance (BRSO) Permit - City of Boise Department of Planning and Zoning, and Boise River floodplain review Permit - City of Boise. The Ted Trueblood Chapter of Trout Unlimited successfully completed a similar project, the Julia Creek Daylighting Project, and is familiar with the people, processes and timeframes required to obtain the necessary permits and approvals for this project.

Evaluation Criterion E. Performance Measures

The daylighting of Cottonwood Creek in Julia Davis Park will have both immediate and long-term benefits to aquatic and riparian organisms, and these benefits will be documented through implementation of a post-project monitoring plan that contains several performance measures. The monitoring plan will be based on setting up permanent monitoring sites along the daylighted section of Cottonwood Creek for at least 3 years after project completion (years

¹² Idaho Partners in Flight. 2000. Idaho Bird Conservation Plan, version 1.0. Idaho Partners in Flight. Accessed February 8, 2017 at <https://fishandgame.idaho.gov/public/wildlife/nongame/brochureBirdConservePlan.pdf>

¹³ IDFG. 2015. Idaho State Wildlife Action Plan, draft. Idaho Department of Fish and Game, Boise, Idaho. Accessed February 8, 2017 at <https://idfg.idaho.gov/swap/2015-revision-draft>

2020 through 2022). Selected performance measures will represent water quality, aquatic organisms (macroinvertebrates and salmonid spawning and rearing), and riparian vegetation.

Water Quality

The benefits of this project to water quality will be measured by monitoring water quality parameters prior to project construction and after project completion. As the project is intended to allow interception and filtration of stormwater, water quality monitoring will focus on suspended sediment, nutrient concentrations (e.g., phosphorous), bacteria, and dissolved oxygen levels - parameters known to impact aquatic life. These parameters will be measured in accordance with Idaho water quality standards, and monitoring will be conducted in coordination with BREN partners such as Ada County Highway District.

Aquatic Organisms

Benefits to aquatic life will be measured by monitoring aquatic macroinvertebrates and fish. Aquatic macroinvertebrates are expected to colonize the daylighted reach from upstream, and adult brown and rainbow trout are expected to use the reach for spawning and juvenile rearing. Macroinvertebrates will be monitored after project completion using standard rapid bioassessment techniques to document colonization and concomitant increases in macroinvertebrate diversity. Use of Cottonwood Creek by brown and rainbow trout for spawning will be documented visually assessing the presence of redds during the spawning season. Brown trout are fall spawners and rainbow trout are spring spawners and each build redds (nests) in which they deposit eggs. Redds are often easily visible from the streambank and their presence is often used to monitor salmonid spawning activity. Spawning success and use of Cottonwood Creek for rearing by juvenile salmonids will also be assessed. The presence of juvenile salmonids can be determined using streamside visual surveys or by use of electrofishing surveys. Monitoring of aquatic life will be conducted in coordination with, and likely in conjunction with, Idaho Department of Fish and Game staff. Trout Unlimited staff and volunteers also have experience monitoring macroinvertebrates and fish.

Riparian Vegetation

Native riparian vegetation will be planted along the new channel to provide riparian habitat, and plantings will be photo-point monitored for survival after project completion. Riparian plantings are easily identified as such, and survival of individual plants can be determined directly. Plant survival monitoring will inform replanting needs after project completion. All riparian vegetation monitoring and replanting will be conducted by volunteers from BREN partner organizations, including the Land Trust of the Treasure Valley. Use of newly created riparian habitat by riparian birds may also be monitored by BREN partners and support organizations, such as the Intermountain Bird Observatory.

Communication/Outreach/Engagement

Benefits of communication/education, outreach and engagement will be determined by achieving major milestones and by reaching quantifiable goals established in the workplan. The results will be in the annual reports.

Evaluation Criterion F: Nexus to Reclamation

The project is located in the Lower Boise River watershed, where the Bureau of Reclamation's Boise Project is located.

The project will daylight a portion of Cottonwood Creek, which is a tributary of the lower Boise River in the City of Boise. The Bureau of Reclamation owns storage water right no. 63-03618 in Lucky Peak Reservoir, which is the third and farthest downstream of the three on-river reservoir of the Bureau's Boise Project. That right includes 152,300 acre feet of storage for streamflow maintenance in the lower Boise River, in precisely the same area where Cottonwood Creek enters the River. Reclamation manages this streamflow maintenance storage water with the advice of the Idaho Department of Fish and Game to preserve and enhance the mainstem Boise River fishery, including Rainbow and Brown trout. The daylighted Cottonwood Creek channel will be designed to provide spawning and rearing habitat for these same fish, and work in concert with the Bureau of Reclamation provided stream flows.

The project supports and implements relevant Department of Interior initiatives. The Cooperative Watershed Management Program is a Department-led initiative authorized in the Cooperative Watershed Management Act (Public Law 111-11). The Department's WaterSMART program includes the Cooperative Watershed Management Program as a key component. By implementing a type of project specifically identified in a collaborative, multi-stakeholder watershed plan, this project supports implementation of the Department's WaterSMART program.

The project will not help Reclamation meet trust responsibilities to any tribes.

Environmental and Cultural Resources Compliance

Project Environmental Impacts

There will be short term impacts during construction of dust, water quality and animal habitat, and long term improvements to water quality and animal habitat and no dust impact. There will be ground disturbance from excavating a new stream channel with dust and sediment run-off, which should be abated by typical construction measures required by the Stormwater Management Permit. Staging the construction of the new channel while the flume continues to bypass the stream will reduce any possible sediment in the water column. Animals that traverse and loaf on the current grass and driveway area where the stream channel will be built

(primarily Canadian geese and ground squirrels) will be disturbed, but abundant similar habitat exists throughout Julia Davis Park. The construction of the new channel will provide better habitat in the long term. As the riparian vegetation grows in the channel there should be no dust from disturbed earth. Some trees may be removed consistent with City of Boise Parks and Recreation Department plans.

Special Status Species

No federally listed threatened or endangered species or candidate species are reported by the Idaho Conservation Data Center, U.S. Fish and Wildlife Service, or NatureServe (2013) to be present within the lower Boise River and adjacent areas.

Wetlands and Waters of the United States

Cottonwood Creek and the Boise River are waters of the United States. Sediment abatement measures during construction should eliminate any impacts to these waters. The project should improve water quality in both streams and increase the amount of natural wetland in the area by approximately 0.35 acres. Cottonwood Creek was diverted into the current flume in approximately 1910. It is considered to be a natural stream and not a water delivery system.

Impacts to Irrigation Systems

The project will require the re-construction of a portion of a pressurized, underground turf sprinkler system in a Boise City park. An irrigation system was first installed in Julia Davis Park in the mid-1930s to bring more land under turf management, reduce dust and enhance the park experience. This system was upgraded and expanded in 1963, with continual adjustments since.

Historic and Archeological Sites

The proposed project is not located in an irrigation district. The only historic feature at the site is the historic Cottonwood Creek flume. Efforts to control flooding from Cottonwood Creek date to the establishment of Boise in the 1860s. Initial flumes were made of wood and in 1892 the City authorized \$9,000 for a permanent structure made of stone and concrete. Sections of this new flume washed out in March 1893. It has been rebuilt numerous times. The section of the buried flume in Julia Davis Park was modified in the 1930s to direct the flow to the Boise River and away from the Park's duck pond. In 1939 the City of Boise received approval of a Works Progress Administration project to continue the riprapping of Cottonwood Creek and covering it and planting the entire area to grass.

The proposed project area is within Julia Davis Park, which was the original location of the historic Davis farm in Boise. The Davis family gave the park area to the City of Boise. We are unaware of any archeological sites in the precise project area.

Project Impacts to Low Income or Minority Populations

The project does not have an adverse effect on low income or minority populations.

Project Impacts to Native American Tribes

The project is not located on tribal lands, nor does it limit access or ceremonial use of Indian sacred sites.

Proliferation of non-native and invasive species

Native riparian vegetation will be planted in the re-built stream channel. There will be an opportunity for noxious weeds or non-native species to germinate in the disturbed area, but because it is located within a City park, park personnel will be able to quickly remove any such species from the project site. The selection and timing of native vegetation planting will be employed to minimize the establishment of non-native and invasive species.

Project Budget

Funding Plan and Letters of Commitment

This multi-purpose collaborative project will be funded by a variety of non-Federal partner organizations, businesses and individuals in addition to the generous support of the U.S. Bureau of Reclamation. BREN, the Ted Trueblood Chapter of Trout Unlimited, the Land Trust of the Treasure Valley and other partners have had significant success obtaining in-kind contributions of time, equipment, supplies, and professional expertise for Boise River enhancement, and it's expected that this high-profile and long-desired project will be generously supported over and above the funding secured now. BREN is confident in our ability to meet the required non-Federal match and to secure funds and in-kind support for the complete and timely completion of the project.

BREN will contribute, in in-kind or cash match, \$5,950 worth of community engagement and communication/education services and \$1,050 for grant administration services. BREN will raise money as needed for the project, soliciting cash donations and grants from individuals, businesses, organizations and foundations as well as securing in-kind donations as we have in the past. BREN members and other volunteers will also provide \$10,000 of in-kind services and labor for project development and design, permitting, channel construction and planting, monitoring and partnership building. 300 hours of labor x \$15.00 = \$4,500 and 137.5 hours of professional consulting x \$40.00 = \$5,500.

The City of Boise has signed a letter of commitment to contribute funds from their \$10 million Open Space and Clean Water Fund Levy to the Cottonwood Creek Daylighting Project pending approval of the Boise City Council. We'll have confirmation of the size of that support later this spring and a better understanding of what portion will be allocated to their own staff to perform essential project tasks and how much will be used to purchase outside services, equipment and supplies. The project will be put on hold if sufficient support from City of Boise

doesn't materialize. The Land Trust of the Treasure Valley, Trout Unlimited and Intermountain Bird Observatory have provided letters of commitment for the support listed in Table 4. It's expected that the Ada County Highway District will also provide in-kind support by performing water quality monitoring and advising on pollutant-reducing design, but we ran out of time to work out the details. They've provided a letter of support. See Appendix C for all letters of support.

Table 4. Summary of Non-Federal and Federal Funding Sources

FUNDING SOURCES	Year 1	Year 2	TOTAL
Non Federal Entities			
City of Boise	\$100,000	\$100,000	200,000
Trout Unlimited - Trueblood Chapter	\$10,000		10,000
Trout Unlimited*	\$2,975	\$2,975	5,950
Land Trust of the Treasure Valley*	\$1,500	\$1,500	3,000
Volunteer In-Kind*	\$5,000	\$5,000	10,000
Boise River Enhancement Network*	\$3,500	\$3,500	7,000
Ada County Highway District*	TBD	TBD	TBD
Intermountain Bird Observatory*	\$500	\$500	1,000
Other		\$61,895	61,895
Non-Federal Subtotal	\$123,475	\$175,370	298,845
Other Federal Entities			
Other Federal Subtotal	\$0	\$0	\$0
REQUESTED RECLAMATION FUNDING	\$50,000	\$50,000	100,000
Total Funding Sources			398,845

*In-kind indicated by asterisk

Budget Proposal

Table 5. Budget Proposal

Budget Item Description	Computation		Quantity Type	TOTAL COST
	\$/Unit	Quantity		
Salaries and Wages				
Employee 1				\$
Employee 2				\$
Fringe Benefits				
Full-time Employees				\$
Part-time Employees				\$
Travel				
Trip 1				\$
Trip 2				\$
Equipment				
Item A				\$
Item B				\$
Supplies and Materials				
Item A				\$
Item B				\$
Contractual/Construction				
Construction (see construction budget)				\$356,070
Community engagement, communication and education	\$35.00	680	hours	\$23,800
Land Trust of the Treasure Valley, Nursery management	\$15.00	400	hours	\$6,000
Grant Administration	\$35.00	85	hours	\$2,975
Other				
Environmental Compliance & Permitting				\$10,000
TOTAL DIRECT COSTS				
Indirect Costs				
Type of rate	%	\$ base		\$
TOTAL ESTIMATED PROJECT COSTS				\$398,845

Table 6. Construction Sub Budget Proposal and Narrative

Description	Unit	Quantity	Unit Cost	Total Cost	Budget Narrative
1. Mobilization					
	LS	1	\$21,580	\$21,580	Includes dewatering and diversion as required
2. Site Preparation					
A. Tree Removal (5) / Tree Transplant (4)	LS	1	\$3,000	\$3,000	5 removed, could be placed in project, 4 direct transplants
B. Asphalt Removal and Disposal	LS	1	\$7,500	\$7,500	cut at road junction, 180 cy, Assume Disposal at landfill
C. Clearing and Grubbing	LS	1	\$2,000	\$2,000	<1 ac, minor, Strip grass, remove shrubs at bank
D. Irrigation Demo, Temporary Provisions for 6" & 10" Mains, reinstall and retrofit	LS	1	\$10,000	\$10,000	Placeholder. Ask Park & Rec for standard detail & cost est.
3. Earthwork					
A. Excavation for (E) Flume Removal	CY	500	\$8	\$4,000	Assume removal of full length, easy ex., assume double handling of excavated material
B. Demo existing flume, salvage sandstone, segregate and dispose concrete	LS	1	\$15,000	\$15,000	Assume removal of full length, 130 CY reinforced concrete, 410 CY stone
C. Excavation for (N) Channel (bulk & fine)	CY	5,300	\$10	\$53,000	Base on 25' width of outer channel at toes, profile from power point, design ex, assume double handle, 4:1 SS on one side, 2:1 SS on other
D. Disposal of excess soil	CY	4,800	\$6	\$28,800	Assume 1.0 hr roundtrip, semi end dumps, no disposal fee, 500 CY wasted in flume void

4. Planted Rock Bank Protection					
	LS	1	\$26,500	\$26,500	Assumes 100 LF of one bank on primary channel on two outside bends, 20 feet either bank at bridge, 25' both banks at confluence, 20 both banks at point of daylight, 2' embeddment, 4' above ground at erosion control locations, full height focused staircases at access points, pricing assumes stone available at site, 550 CY, brush mat could be substituted at roughly equal cost/LF at outside bends, sill at confluence for grade control
5. Erosion Control					
	LS	1	\$10,000	\$10,000	Includes seeding, mulch and tack of entire primary corridor (slopes & terraces) with mix for EC, including native riparian spec., 250 LF of primary channel stabilization w/ 12' dia coir logs, straw wattle at toe of 2:1/4:1 both sides entire length, and approx 5000 SF of coir ECF placement, volunteer labor except for seeding.
6. Site Restoration					
A. Restoration Planting	LS	1	\$10,000	\$10,000	Plant material est. of \$7,100 includes 900 10-cu in. herb seedlings & 900 1 gal woody shrubs planted 3 f.t oc over 0.32 ac, shipping/staging, assumes volunteer
B. Turf Replacement in Park Areas	LS	1	\$5,000	\$5,000	Nominal placeholder, assume 10,000 SF, over flume, adjacent to top of bank, much cheaper to hydroseed.
C. Headwall and Railing at daylight point	LS	1	\$5,000	\$5,000	Assume small reinforced concrete headwall at outlet, 4 CY concrete @ \$1,000 per CY + railing
D. Bridge / Culvert	LS	1	\$25,000	\$25,000	Placeholder. 50' span, prefab bridge capable of truck loading may be \$40-50,000+/-, bottomless arch culvert 12' high x 33' wide is on order of \$800-1,000/LF (est length=25')
E. Asphalt Repair on Greenbelt	LS	1	\$3,000	\$3,000	Assume 600 SF, 30' either side of bridge

F. Lightpole	LS	1	\$3,000	\$3,000	Placeholder. 1 remove & replace
7. Park Elements					
A. Path	LS	1	\$3,000	\$3,000	Assume 2" decomposed granite (DG), 200' long, 6' wide
B. Interpretive Kiosks	LS	1	\$2,000	\$2,000	Assume 2 @ \$1,000 each
Subtotal			\$237,380		
Conceptual-level Construct. Contingency (20%)				\$47,476	
Permitting (5%)				\$11,869	
Engineering (15%)				\$35,607	
Contract Administration (10%)				\$23,738	
Total Estimate Construction Budget				\$356,070	

Budget Narrative

Project management and administration: BREN does not currently have staff and doesn't plan to hire staff for this project; therefore there will be no salary/wage expenses. Trout Unlimited will be contracted to be the Project Manager and their staff and volunteers will perform those duties. Those are the Contract Administration costs (See Tables 5 and 6). Since BREN has no staff, BREN will contract for grant administration to distribute funding and to work with the BREN Treasurer and Coordinating Team to ensure compliance with funding agreement. The cost will be \$2,975 (85 hours x \$35.00). 30 hours will be funded by non-Federal sources.

Community engagement, communication and education: BREN will hire a contractor to help the partners write and implement plans for community engagement, public relations, and knowledge transfer, create required databases and tracking systems, evaluate results and write annual reports. The cost will be \$23,800 (680 hours x \$35.00). 340 hours will be funded by non-Federal sources.

BREN will contribute, in in-kind or cash match, \$5,950 worth of community engagement and communication/education services and \$1,050 for grant administration services. BREN will raise money for year two of the project, soliciting cash donations and grants from individuals, businesses, organizations and foundations. BREN members will also provide \$10,000 of in-kind volunteer services and labor for project development and design, permitting, channel construction and planting, monitoring and partnership building. 300 hours of labor x \$15.00 = \$4,500 and 137.5 hours of professional consulting x \$40.00 = \$5,500.

Environmental compliance and permitting costs are budgeted liberally. We don't foresee difficulty in obtaining permits or in compliance with applicable Federal laws. There aren't any ESA species, the project is in a city-owned park, water rights aren't involved, and no other unusual circumstances are present to the best of our knowledge.

Appendix A: BREN Membership List

- | | | |
|-------------------------|------------------------|-----------------------|
| 1. Jason Abbott | 39. Shannon Campbell | 79. MichaelDimmick |
| 2. Miranda Adams | 40. Mark Campbell | 80. Megan Dixon |
| 3. Mike Aho | 41. Kati Carberry | 81. Paul Drury |
| 4. Paige Aitchison | 42. Ryan Carnie | 82. Jonathan Drygas |
| 5. Edwina Allen | 43. Bill Carr | 83. Jenna Duffin |
| 6. Lindsay Alsup | 44. John Cassinelli | 84. Ryan Dummer |
| 7. Norman Anderson | 45. Suzy Cavanagh | 85. Sue Edwards |
| 8. Marcy Anderson | 46. Tom Chelstrom | 86. Austin Edwards |
| 9. Peter Anderson | 47. Catherine Chertudi | 87. Tina Elayer |
| 10. Hal Anderson | 48. Mac Christian | 88. Jason Elayer |
| 11. Ken Anderson | 49. Danyale Clay | 89. Rose Elkovich |
| 12. Erica Anderson | 50. Steve Clayton | 90. Lisa Eller |
| Maguire | 51. Jay Clouser | 91. James Eller |
| 13. Laurie Asahara | 52. Rick Collingwood | 92. John Ellsworth |
| 14. John Augsburg | 53. Carol Collins | 93. BarbaraErtter |
| 15. Nicole Baird Spence | 54. Leon Collins | 94. Larry Evans |
| 16. Nellie Baker | 55. Chris Colson | 95. Kathleen Fahey |
| 17. Phil Bandy | 56. Jen Compton | 96. Haley Falconer |
| 18. Cherie Barton | 57. Jim Conger | 97. Joanie Fauci |
| 19. Steve Bauer | 58. Lark Corbeil | 98. Jeff Fereday |
| 20. Jill Baum | 59. Bob Cort | 99. Robbin Finch |
| 21. Matt Bergstrom | 60. Amanda Couch | 100. Kira Finkler |
| 22. Tamsen Binggeli | 61. Cyndi Coulter | 101. Sean Finn |
| 23. Alayne Blickle | 62. Mike Crawford | 102. Katy Flanagan |
| 24. Dale Bolthouse | 63. Carmel Crock | 103. Gary Flanagan |
| 25. Julia Bond | 64. Alan Crockett | 104. Katherine |
| 26. Bill Bosworth | 65. Alice Crockett | Fleshman |
| 27. Belinda Boulter | 66. Eric Cronin | 105. Rebecca Flock |
| 28. Martha Brabec | 67. Lorena Croucher | 106. Leigh Ford |
| 29. Tim Breuer | 68. Patrick Culver | 107. Doug Fowler |
| 30. Jeff Brooks | 69. Kim Custer | 108. Michail Fragkias |
| 31. Sabrina Brown | 70. Dan Dauwalter | 109. Paul Frank |
| 32. Dreyson Henderson | 71. Lance Davisson | 110. Susie Frank |
| 33. Marita Brucker | 72. Jane Davlin | 111. Brady Frasier |
| 34. Andy Brunelle | 73. Paul Dawson | 112. Graham |
| 35. Cindy Busche | 74. Rocio Delgado | Freeman |
| 36. Dave Butzier | 75. Pete DeLuca | 113. Dick Frencer |
| 37. Whitney Byrd | 76. Rachel DenHartog | 114. Lynda Friesz- |
| 38. Marie Callaway | 77. Cari Dennis | Martin |
| Kellner | 78. John Dillman | 115. Vanessa Fry |

- | | | |
|-----------------------|------------------------|----------------------|
| 116. LeeAnn Garton | 158. Ben Jarvis | 198. Lisa Makin |
| 117. Lisa Gates | 159. Stephanie Jenkins | 199. Kathleen Malone |
| 118. Katie Gobble | 160. Sharon Johnson | 200. Nancy Maneck |
| 119. Todd Glindeman | 161. Alex Johnson | 201. Don Mansfield |
| 120. Sally Goodell | 162. Jennifer Johnson | 202. Bill Martin |
| 121. Michelle Gordon | 163. Joan Johnston | 203. Richard Martin |
| 122. Tom Governale | 164. Devon Jones | 204. Steve Martinez |
| 123. Seth Gowans | 165. Tony Jones | 205. Sarah Martz |
| 124. Given Gracia | 166. Chris Jones | 206. Crys Marye |
| 125. Dave Green | 167. Dick Jordan | 207. Ben Mathot |
| 126. Gary Grimm | 168. Jeni Jordan | 208. Matt Mayfield |
| 127. Gabriel Groff | 169. Christy Jordan | 209. Ann McClanahan |
| 128. Bob Gudmundsen | 170. Brian Jorgenson | 210. Mike McConnell |
| 129. Bangshuai Han | 171. Lydia Kading | 211. Ryan McDaniel |
| 130. Kenn Hardin | Primavera | 212. Brian McDevitt |
| 131. Stuart Harding | 172. Donna Kemper | 213. Mary McGown |
| 132. Jennifer Keck | 173. Lori Kent | 214. Bob McKellip |
| 133. Michael Harrison | 174. Scott Ki | 215. Dennis McLane |
| 134. Shavone Hasse | 175. David Kim | 216. Liz McWhorter |
| 135. Julie Heath | 176. Kriss Kirchhoff | 217. Cass Meissner |
| 136. John Heimer | 177. Patti Knox | 218. Joan Meitl |
| 137. Jesse Herndon | 178. Scott Koberg | 219. Tim Merrick |
| 138. Malcolm Heslin | 179. Martin Koenig | 220. Danie Merriman |
| 139. Brian Hess | 180. David Kordiyak | 221. Allyn Meuleman |
| 140. Mark Hill | 181. Jason Korn | 222. Christy Meyer |
| 141. Evan Hjerpe | 182. Wesley Koster | 223. Dave Miles |
| 142. Mark Hofflund | 183. Tom Kovalicky | 224. Jenna Miller |
| 143. Dana Hofstetter | 184. Joe Kozfkay | 225. Neeley Miller |
| 144. Emilie Hogg | 185. Darryl Kuhrt | 226. Nic Miller |
| 145. Elliot Hohn | 186. Wendy Larimore | 227. Evan Miller |
| 146. Justin Holt | 187. Ann Lefler | 228. Becca Miller |
| 147. Michael Homza | 188. Madonna | 229. Maria Minicucci |
| 148. Chad Hood | Lengerich | 230. Ken Miracle |
| 149. Lynne Hood | 189. Andrea Leonard | 231. Margie Miracle |
| 150. Gary Howard | 190. Eric Lindquist | 232. Lauri Monnot |
| 151. Debbie Hribik | 191. Kylie Lippert | 233. Jacob Monroe |
| 152. Aimee Hughes | 192. Tom Logan | 234. David Monsees |
| 153. Bryan Hurlbutt | 193. Scott Lowe | 235. Steve Montague |
| 154. Travis Irons | 194. Monica Lowe | 236. Megan Montague |
| 155. Traci Irons | 195. Mary Lucachick | 237. Mark Morehead |
| 156. Christine Isaacs | 196. Robin Maclay | 238. Jillian Moroney |
| 157. Marjie Jacobs | 197. Tim Maguire | 239. Mark Morris |

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|------------------------|-------------------------|------------------------|
| 240. Caroline Morris | 282. Jon Rocha | 324. Bob Swandby |
| 241. Jenna Narducci | 283. Jane Rohling | 325. Kaola Swanson |
| 242. Amber Nichols | 284. Gary Rohwer | 326. Mike Swartz |
| 243. Jerry Nielsen | 285. Daniel Roop | 327. Steve Sweet |
| 244. Sue Norton | 286. Roger Rosentreter | 328. Lucas Swope |
| 245. Jim Nunley | 287. Scott Ross | 329. Channing Syms |
| 246. Gary O. Grimm | 288. Jessica Ruehrwein | 330. Joyce Thompson |
| 247. Henry O'Brien | 289. Steve Rust | 331. Jim Thompson |
| 248. John Olden | 290. Breeann Sanders | 332. Rob Tiedemann |
| 249. Brent Orton | 291. Stephanie Sarchet | 333. John Tracy |
| 250. Julia Page | 292. Russell Sarchet | 334. Delwyne Trefz |
| 251. Terry Panhorst | 293. Brian Sauer | 335. Suzanne Troje |
| 252. Nicole Parks | 294. Julie Scanlin | 336. Toni Turner |
| 253. Riley Parr | 295. Vincent Schlageter | 337. Dave Tuthill |
| 254. Rick Parrott | 296. Jen Schneider | 338. Susie Vader |
| 255. Liz Paul | 297. Will Schrader | 339. Adam Van Patten |
| 256. Gary Payne | 298. Michael Schulz | 340. Shirley Van Zandt |
| 257. Dautis Pearson | 299. Moti Scotti | 341. Christoph Walser |
| 258. Mark Pemble | 300. Bill Sedivy | 342. David Walsh |
| 259. Scott Pemble | 301. Darcy Sharp | 343. Rick Ward |
| 260. Matthew Perkins | 302. Doug Shaw | 344. Heidi Ware |
| 261. Kathy Peter | 303. Tom Sheehan | 345. Katelyn Watson |
| 262. Kathy Pidgeon | 304. Pat Sheehan | 346. Ron Watters |
| 263. Jen Pierce | 305. Jessie Sherburne | 347. Lana Weber |
| 264. James Piotrowski | 306. Jim Shirey | 348. Tanya Welborn |
| 265. Bob Pitman | 307. Kaye Shirey | 349. Kerrie Weppner |
| 266. Walt Poole | 308. Rich Sims | 350. Sarah Wilkerson |
| 267. Valerie Porter | 309. Tige Skaar | 351. Brian Wilkinson |
| 268. John Price | 310. Troy Smith | 352. Harper Wilson |
| 269. Mike Procsal | 311. Wil Smoke | 353. Shawn Wilson |
| 270. David Proctor | 312. Jim Snow | 354. Brandy Wilson |
| 271. Stephanie Raddatz | 313. Judy Snow | 355. Kris Wilson |
| 272. Jan Reed | 314. Caroline Sobota | 356. Alan Winkle |
| 273. Brian Reese | 315. Michael Somerville | 357. Kristie Winslow |
| 274. Chris Reighn | 316. AJ Spillane | 358. James Woidt |
| 275. Kirk Richardson | 317. Ken Stamper | 359. Molly Wood |
| 276. Rob Richardson | 318. Amy Steimke | 360. Paul Woods |
| 277. Larry Ridenhour | 319. John C. Steiner | 361. Avery Worthington |
| 278. Derek Risso | 320. Lon Stewart | 362. Andrea Wurtz |
| 279. Stephen Ritter | 321. Hawk Stone | 363. Elowyn Yager |
| 280. Luke Roberts | 322. Tom Stuart | 364. Chris Yarbrough |
| 281. Art Robertson | 323. Kathleen Sullivan | 365. Joe Young |

366. Kim Young
367. Becky Yzaguirre
368. Erin Zaleski
369. Jim Zokan
370. Boise WaterShed

371. Idaho Chapter
American Water
Resources Assoc.

372. Idaho Dept. of
Environmental
Quality
373. Upper Snake River
Tribes Foundation

Appendix B: BREN Governance & Operations Procedures

BOISE RIVER ENHANCEMENT NETWORK

Governance and Operations

1. PURPOSE.

1.1 Mission Statement. We are a network of people that live, work and play in the Boise River watershed dedicated to promoting the ecological enhancement of the river.

1.2 Vision Statement. The Boise River is recognized as a valuable resource by all communities in the Treasure Valley. Boise River Enhancement Network participants envision a healthy Boise River that enriches the Valley's quality of life.

Imagine a Boise River that:

- Helps meet our communities' desire for outdoor recreation and economic vitality;
- Provides irrigation and drinking water to communities;
- Flows through natural and restored fish and wildlife habitat;
- Offers clean water for swimming and fishing;
- Inspires people to better understand and appreciate the river and engage in stewardship efforts.

2. GENERAL MEMBERS.

2.1 Membership Admission. All people, agencies and organizations that support the mission and vision of the Boise River Enhancement Network are eligible to become BREN general members. To become a general member join the BREN online group at <http://boiseriverenhancement.net/>. An alternate way to become a member is provide your name and contact information to the Coordinating Team.

2.2 Responsibilities. 1) General Members elect Coordinating Team members; 2) General Members will work together in support of the mission, vision and goals of BREN; 3) General Members will act respectfully and search for opportunities to develop group solutions; and 4) General members are invited to participate at all Coordinating Team meetings.

2.3 Official Communication. Official communication with general members will happen through the BREN online group.

2.4 Annual Meeting. The annual meeting of the members shall be held on the date and at such time as the Coordinating Team shall fix each year for the purpose of transacting such business as may come before the meeting.

2.5 Notice of Meetings. It shall be the duty of the Secretary/Treasurer to send a notice of each meeting of the Coordinating Team and any BREN general meeting, stating the purpose thereof as well as the day, hour and place where such meeting is to be held, to each Member at least fourteen (14) days prior to such meeting.

3. COORDINATING TEAM.

3.1 General Powers. The Coordinating Team is delegated the authority to act on behalf of the Boise River Enhancement Network. The Coordinating Team will be elected by the general members.

3.2 Responsibilities. 1) The Coordinating Team will provide direction to BREN in order to achieve BREN's vision, including setting goals, policies and procedures; 2) The Coordinating Team will hold at least 6 meetings per year; and 3) Each member of the Coordinating Team will participate in most

of the Coordinating Team meetings each year, demonstrate a commitment to BREN through involvement in BREN work and cooperate with others to fulfill BREN's vision.

3.3 Number of Coordinating Team Members. The Coordinating Team of the Boise River Enhancement Network shall consist of no fewer than seven (7) members and no more than thirteen (13) members.

3.4 Election and Qualifications of Coordinating Team.

3.4.1 Notice. No later than August 1st, notice of the expiration of a BREN Coordinating Team member's term of office and the opportunity to submit applications for the new term of office shall be published on the BREN website and sent by email to BREN members. The notice shall identify and/or describe: the incumbent Team member whose term is expiring, the process for application, and the process for election.

3.4.2 Team Member Qualification Requirements. Only persons who are members of BREN shall be qualified and eligible for election to the Coordinating Team. Incumbent Team members are qualified and eligible for re-election to the Team.

3.4.3 Submission of Applications. Applications shall be submitted no later than August 31st to the Chair of the Coordinating Team or to another person designated to receive nominations by the Coordinating Team. All applications shall be submitted on the form approved by the Coordinating Team. On the application form, the applicant shall: provide name and contact information, describe their affiliation, if any, describe their relevant experience or interest, describe the expertise they will contribute to achieving the vision of BREN, and state they are a member of BREN.

Incumbent Team members seeking re-election to the Coordinating Team shall so state on the application form, and may, but shall not be required to, submit additional information regarding their interest in continuing to serve on the BREN Coordinating Team.

3.4.4 Coordinating Team Election. The Coordinating Team election shall be held for seven days starting on the third Monday of September. The election will be held online. All BREN members are eligible to cast one vote for each of the vacant Team seats. If there are more candidates than Team seats, then the candidates with the most votes will be elected.

3.5 Term of Office. Each Coordinating Team member's term of office shall commence on October 1st. Terms are two (2) years, and Team members may be re-elected.

3.6 Vacancies. If any vacancy occurs in the Coordinating Team, the Chairperson shall submit name(s) to the Coordinating Team. The vacancy may be filled by the affirmative vote of two-thirds (2/3) of the remaining Coordinating Team. A Coordinating Team member elected to fill a vacancy shall be elected for the unexpired term of such Coordinating Team Member's predecessor in office.

3.7 Removal of Coordinating Team Members. At a meeting of the Coordinating Team called expressly for that purpose, any Coordinating Team member may be removed with cause by a vote of a majority of the Coordinating Team members then in office. Any Coordinating Team member may be removed at such a meeting without cause by a vote of two-thirds (2/3) of the Team members then in office.

3.8 Officers.

3.8.1 Number. The officers of the Boise River Enhancement Network shall consist of a Chair, Vice Chair, and Secretary/Treasurer, each of whom shall be members of and elected by the Coordinating Team. Such other officers and assistant officers as may be deemed necessary may be elected or appointed by the Coordinating Team.

3.8.2 Election and Term of Office. The officers of the Boise River Enhancement Network shall be elected annually by vote at the first meeting held after the Coordinating Team election. If the election of officers shall not be held at such meeting, such election shall be held as soon as practicable thereafter. Terms are one (1) year, and officers may be reelected once.

3.8.3 Removal. Any officer may be removed by the Coordinating Team whenever in its judgment the best interests of the Boise River Enhancement Network will be served thereby, using the same criteria for removal as in section 3.6 for Coordinating Team members.

3.8.4 Vacancies. A vacancy in any office because of death, resignation, removal, disqualification or otherwise, may be filled by the Coordinating Team for the unexpired portion of the term, using the same criteria for removal as in section 3.6 for Coordinating Team members.

3.8.5 Chair. The Chair will ensure meeting dates/times/places are determined and publicized, meeting agendas are prepared and published and meetings are facilitated. The Chair will lead the Team to accomplish its work and be willing to represent BREN.

3.8.6 Vice-Chair. The Vice-Chair will assist the Chair and act as Chair in the absence of the Chair.

3.8.7 Secretary/Treasurer. The Secretary/Treasurer will make sure Team meetings are noticed at least 2 weeks in advance and that Team agendas and minutes are posted on the website within 2 weeks of the meeting. In the event BREN collects or distributes money, the Secretary/Treasurer will keep records and report to the Coordinating Team.

3.9 Quorum and Consensus Decision-Making. A majority of the duly elected Coordinating Team members shall constitute a quorum for the transaction of business at meetings of the Coordinating Team. A majority of the number of subcommittee members shall constitute a quorum for the transaction of business at a meeting of such subcommittee. In all cases, decisions shall be made by consensus except as noted elsewhere in the Governance and Operations document. Consensus decision-making seeks the consent of all participants. Consensus is defined as an acceptable solution that can be supported by all even if not the "favorite" of an individual. See Appendix A for consensus process.

3.10 Compensation. No Coordinating Team member shall receive a salary or compensation for services in that capacity but may be reimbursed for actual expenses incurred in the performance of such services. This provision shall not preclude any Coordinating Team member from serving the Boise River Enhancement Network in any other capacity and receiving compensation for services rendered.

3.11 Conflicts of Interest. Any Coordinating Team member who has an interest in a contract or other transaction presented to the Coordinating Team or a committee thereof for authorization, approval, or ratification shall make a prompt and full disclosure of their interest to the Coordinating Team or subcommittee prior to its acting on such contract or transaction. Such disclosure shall include any relevant and material facts known to such a person about the contract or transaction that might reasonably be construed to be in conflict with the Boise River Enhancement Network's interest. No Coordinating Team member shall vote on any matter which has a direct bearing on services to be provided by that Coordinating Team member, or any organization which such Coordinating Team member represents or which such Coordinating Team member has an ownership interest or is otherwise interested or affiliated, which would directly or indirectly financially benefit such Coordinating Team member.

3.8 Subcommittees.

3.8.1 Membership. The Coordinating Team may designate and appoint one (1) or more subcommittees, each of which shall consist of one (1) or more Coordinating Team members.

3.8.2 Standing Committees. Standing Committees to be determined as needed.

4. MISCELLANEOUS.

4.1 Books and Records. At its designated place of business, the Boise River Enhancement Network shall keep: (a) correct and complete books and records of account; and (b) minutes of the proceedings of its members and Coordinating Team. Any books, records and minutes may be in written form or in any other form capable of being converted into written form within a reasonable time.

4.2 Loans. No loans shall be contracted on behalf of the Boise River Enhancement Network and no evidences of indebtedness shall be issued in its name unless authorized by a resolution of the Coordinating Team.

4.3 Contracts. The Coordinating Team may authorize any officer of the Boise River Enhancement Network to enter into any contract in the name of and on behalf of the Boise River Enhancement Network, and such authority may be general or confined to specific instances.

4.4 Checks, Drafts, Etc. All checks, drafts, or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Boise River Enhancement Network, shall be signed-by such officer of the Boise River Enhancement Network as determined by the Coordinating Team.

4.5 Purchasing. Coordinating Team Officers, with unanimous agreement, have authority to purchase goods and services directly with suppliers at a value below \$500.

4.6 Deposits. All funds of the Boise River Enhancement Network not otherwise employed shall be deposited from time to time to the credit of the Boise River Enhancement Network in such banks, trust companies or other depositories as the Coordinating Team may select.

4.7 Gifts. The Coordinating Team may accept or reject gifts on behalf of the Boise River Enhancement Network any contribution, gift, bequest or devise for the general purposes or for any special purpose of the Boise River Enhancement Network.

4.8 Annual Financial Statements. The officers of the Boise River Enhancement Network shall cause a balance sheet as of the closing date of the last fiscal year, together with a statement of income and expenditures for the year ending on that date, to be prepared and presented to the Coordinating Team within three months of the end of the fiscal year.

4.9 Fiscal Year. The fiscal year of the Boise River Enhancement Network shall begin on the first day of January and end on the last day of December in each year.

4.10 Amendments. The Coordinating Team may adopt, amend or repeal any part of this Governance and Operations at a meeting of the Coordinating Team provided the nature of the proposed changes are communicated to all general members at least 2 weeks prior to the meeting and approved by consensus.

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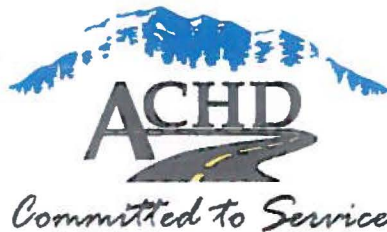
Appendix A – BREN Consensus Decision Making Process

Definition. Consensus decision-making seeks the consent of all participants. Consensus is defined as an acceptable solution that can be supported by all even if not the "favorite" of an individual.

Process.

1. **Clearly state the proposal.** It's best if people can see it in writing.
2. **Check for clarifications.** Does everyone fully understand what is being proposed?
3. **Ask whether anyone has reservations or objections.** With consensus there are several ways of expressing disagreement:
 - a. **Declaring reservations:** *I still have problems with the proposal, but I'll go along with it.* You are willing to let the proposal pass but want to register your concerns.
 - b. **Standing aside:** *I can't support this proposal because... but I don't want to stop the group, so I'll let the decision happen without me and I won't be part of implementing it.* The group may be happy to accept the stand aside(s) and go ahead. Or the group might decide to work on a new proposal, especially where there are several stand asides.
 - c. **Blocking:** *I have a fundamental disagreement with the core of the proposal that cannot be resolved. We need to look for a new proposal.* A block expresses a fundamental objection and always stops a proposal from being agreed. The group can either accept the block and immediately look for another proposal, or look for amendments to overcome the objection.
4. **Check for active agreement.** If there are no blocks, check for active agreement from everyone. People often show they agree by waving their hands, but watch out for silence or inaction and check for the reasons.

Appendix C: Letters of Support



Paul Woods, President
Rebecca W. Arnold, Vice President
Sara M. Baker, Commissioner
Jim D. Hansen, Commissioner
Kent Goldthorpe, Commissioner

February 13, 2017

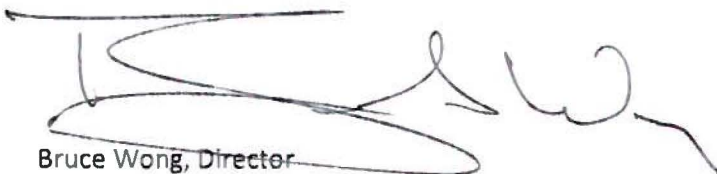
To whom it may concern,

Please consider this letter as support for the Boise River Enhancement Network's (BREN) U.S. Bureau of Reclamation's WaterSMART Cooperative Watershed Management Program grant proposal to complete a daylighting and stream restoration project on Cottonwood Creek in Julia Davis Park, Boise, Idaho.

As holder of two NPDES stormwater permits, the Ada County Highway District (ACHD) is very interested in addressing water quality issues within the lower Boise River watershed. Stormwater from roadways and commercial areas is discharged into Cottonwood Creek and combined with natural flow of the 16.5 sq. mile watershed before discharging to the Boise River. This project, in the heart of the largest and fastest growing urban area in Idaho, will result in long-term water quality improvement by capturing, filtering and removing pollutants, including sediment and nutrients, before the water enters the Boise River. The project compliments many other onsite and offsite strategies used by ACHD and other local NPDES permit holders to ensure new development and re-development activities reduce stormwater pollution discharged to the Boise River.

The Cottonwood Creek Daylighting Project, in the urbanized area near downtown Boise, will reduce the discharge of pollutants such as sediment, nutrients, and bacteria into the Boise River helping meet targets established in the lower Boise River Total Maximum Daily Loads. ACHD is supportive of collaborative multi-purpose projects, like this one, that provide an opportunity to implement a cost-effective and permanent strategy to clean up sources of water pollution.

Very Respectfully,



Bruce Wong, Director



Doug Holloway
Director

Parks & Recreation
1104 Royal Boulevard
Boise, Idaho 83706-2840

Phone
208/608-7600

Fax
208/608-7648

TDD/TTY
800/377-3529

Web
www.cityofboise.org/parks

Mayor
David H. Bieter

City Council
President
Elaine Clegg

Council Pro Tem
Lauren McLean

Maryanne Jordan
Scot Ludwig
Ben Quintana
TJ Thomson

Boise Parks & Recreation

February 13, 2017

Bureau of Reclamation
Acquisition Operations Branch
Attn: Ms. Irene Hoiby
Mail Code: 84-27852
P.O. Box 25007
Denver, Colorado 80225

RE: Cottonwood Creek Daylighting Project, Boise River; WaterSMART:
Cooperative Watershed Management Program (CWMP) Phase II Grants for
fiscal year (FY) 2017

Greetings,

The City of Boise has a long-standing interest in the daylighting of Cottonwood Creek and recreating its confluence with the Boise River in Julia Davis Park in downtown Boise. The project has long been identified as a desirable improvement to the park and to the habitat and function of the Boise River. To that end the project was first recognized in the 1999 Boise River Resource Management and Master Plan, subsequently updated and readopted in 2014, as well as the master plan for Julia Davis Park, which celebrated its centennial in 2008.

The City of Boise Parks and Recreation worked with the Ted Trueblood Chapter of Trout Unlimited and the Rotary Club of Boise in 2003 to develop a concept plan and cost estimate for daylighting the 400-foot section of Cottonwood Creek within Julia Davis Park. One outgrowth of that project was identification and implementation of a similar project – Julia Creek daylighting – constructed in 2007, which stands out as a successful project for enhancing and expanding aquatic and riparian habitat along its 240-foot length astride the Boise River. Meanwhile, Cottonwood Creek daylighting has awaited for the day when funding would be available.

In November 2015, 74 percent of Boise voters approved the creation of the Open Space and Clean Water fund through a temporary, two-year override levy. The \$10 million fund will be used to preserve and protect water

quality, wildlife and native plant habitat, and open space for recreation in the Boise Foothills and along the Boise River corridor.

In 2016 an advisory committee of Boise residents was appointed, and in early 2017 the committee and City Council are poised to approve the application process and call for project ideas.

We believe the WaterSMART cooperative grant is an excellent match for Boise's Open Space and Clean Water Fund, and we ask our letter of support for this Cottonwood Creek grant application be regarded as a letter of intent for contributing funds towards the project.

We understand the grant review and decision making process includes three important steps:

- Grant applications submitted mid February 2017;
- Bureau of Reclamation advises selected recipients by phone in May or June 2017;
- Grant agreement documents are created and signed by end of September 2017.

Based on the milestones noted above the City of Boise can carry a similar grant proposal through its new advisory committee process and match the timeline. It should be noted, however, that if the committee approves the project, the Boise City Council must still provide final approval for any funding.

Again, while we have recently stood up the advisory committee and the application process, we can have decisions completed in the May/June and September dates to align with the Bureau of Reclamation review timeline.

If you have any questions you may contact me at (208) 608-7600.

Sincerely,



Doug Holloway
Director



BOISE STATE UNIVERSITY

DEPARTMENT OF BIOLOGICAL SCIENCES
Intermountain Bird Observatory

February 3, 2017

To whom it may concern,

I am writing to express the Intermountain Bird Observatory's (IBO's) support for the proposed Cottonwood Creek restoration project.

IBO's mission is to work in Idaho and around the world to conserve birds through research and environmental outreach, which is why we are pleased to offer our in-kind support as a partner for this endeavor.

The daylighting of Cottonwood Creek and planting of native plants will provide nesting sites, shelter, and food resources for the birds that call Boise home. Many neotropical migrant bird populations are declining, and providing high quality native riparian habitats such as this is critical for conserving these species.

We at IBO believe strongly in educating Idaho citizens about the natural wonders in their own back yard. The visibility of this urban restoration site in the heart of Boise and the number of citizens reached through outreach related to this project will certainly be impactful in our community.

As a partner in this project, IBO will provide in-kind support in the form of expert advice on habitat enhancements that will benefit neotropical migrant songbirds. IBO will also assist with community outreach on this project through online and print educational materials, and bird-related education events. In all, IBO's estimated in-kind support will value at approximately \$1,000 in staff hours and advertising value contributed.

Regards,

Heidi Ware

[Intermountain Bird Observatory](#)
Education and Outreach Director



BOISE VALLEY FLY FISHERS

February 10, 2017

To Whom It May Concern:

On behalf of the Boise Valley Fly Fishers I would like to provide an enthusiastic endorsement for the proposed Cottonwood Creek Daylighting Project.

The Boise Valley Fly Fishers, founded in 1971, was established with the goals of promoting fishing education along with conservation of lakes, rivers, and streams to protect and enhance public fishing access. The proposed Cottonwood Creek Daylighting Project sponsored by the Boise River Enhancement Network certainly falls squarely within our organization's charter.

Through the devoted work of a number of conservation organizations, government agencies, and dedicated individuals the Boise River Network has evolved into a renowned outdoor environment that is enjoyed by sportsmen and other outdoor enthusiasts from all over the United States and the World. The Boise River is certainly one of the crown jewels for the City of Boise. Enhancement of the Cottonwood Creek drainage, which now runs through a culvert under a major public park located within the city, will most certainly create even more natural beauty for public enjoyment as well as potential additional fish spawning habitat.

The Boise River Enhancement Network is one of the many conservation focused organizations that the Boise Valley Fly Fishers have supported over the years. We are glad to see this organization taking the initiative to help launch the Cottonwood Creek Daylighting Project.

Sincerely,

Jim Shirey

Board Member, Boise Valley Fly Fishers

Enclosure: NA

BVFF PO Box 311 Boise, ID 83701 <http://www.bvff.com>

Boise Valley Fly Fishermen, Inc. is an IRS 501 (c) (3) Non Profit Organization ID# 82-0350521



IDAHO DEPARTMENT OF FISH AND GAME
SOUTHWEST REGION
3101 South Powerline Road
Nampa, Idaho 83686

C.L. "Butch" Otter / Governor
Virgil Moore / Director

To whom it may concern,

We have become aware that the Coordinating Team for the Boise River Enhancement Network is applying for grant funding through the U.S. Bureau of Reclamation's WaterSMART Cooperative Watershed Management Program. The funding is being solicited to complete a daylighting project on Cottonwood Creek in Julia Davis Park, Boise, Idaho. The project also proposes to restore stream and riparian habitats.

The Lower Boise River is a tremendously important recreational fishery that during 2011 supported an estimated 63,562 fishing trips (within Ada County) and \$2.9 million in fishing-trip related expenses. Most, if not nearly all, of this effort and expenditures were directed at cold-water obligate salmonids including rainbow and brown trout, as well as mountain whitefish.

The Lower Boise River has been extensively altered to allow development in close proximity to the river. Alterations have included straightening, channelization, and armoring, among others. Generally, these river management practices have had negative consequences for fish and wildlife populations as they reduce habitat diversity or preferred habitat types. According to recent and historical sampling data, salmonids in the Boise River preferentially select and utilize off-channel habitats for spawning and rearing. Habitat modifications have reduced the prevalence of this habitat type.

The proposed project would improve fish habitat by reconnecting a small, currently disconnected tributary of the lower Boise River. Completion of this project would benefit aquatic species especially trout. It is likely that trout would use the lower end of this tributary stream as a resting area during flood control release or otherwise high flows, and as spawning and rearing habitat. Furthermore, we believe this project would provide better habitat for a variety of other species that depend on floodplain or riparian habitats such as neo-tropical birds and other mammals.

Joe Kozfkay
Regional Fisheries Manager
Idaho Department of Fish and Game
3101 S. Powerline Rd, Nampa, ID 83686
Desk: (208) 475-2764
Cell: (208) 697-1117
Email: joe.kozfkay@idfg.idaho.gov

Keeping Idaho's Wildlife Heritage



Conserving nature close to home.

Boise River Enhancement Network
RE: Cottonwood Creek Daylighting Project

2/13/2017

Dear Boise River Enhancement Network:

The Land Trust of the Treasure Valley is pleased to offer our support of BREN's Cottonwood Creek Daylighting Project.

The concept of enhancement along the Boise River and of BREN's Boise River Enhancement Plan has been supported by numerous communities, organizations and agencies. It is exciting to see the Bureau of Reclamation supporting these kinds of projects that help communities assure clean water and fishery improvements. Those are values that help create a stronger economy for our community.

Cottonwood Creek has been a challenge for Boise since the late 1800's. Like many western cities, the solution was to confine and bury the creek. We want to change that with this project. And bring Cottonwood Creek to life within a park in the center of Idaho's Capitol and largest City.

We are pleased to offer in-kind support to the effort of \$3,500.

Best,

A handwritten signature in blue ink, appearing to read "Amy B." with a long, sweeping underline.

Executive Director



Ted Trueblood Chapter

TROUT UNLIMITED

P.O. Box 1971, Boise, Idaho 83701

www.tedtruebloodtu.org

February 12, 2017

Bureau of Reclamation
WATERSMART Cooperative Watershed Management Program
Mail Code: 84-27852
P.O. Box 25007
Denver, Colorado 80225

RE: Cottonwood Creek Daylighting Project

Greetings,

The Ted Trueblood Chapter of Trout Unlimited supports the application of the Boise River Enhancement Network for funding from the Bureau of Reclamation WATERSMART Cooperative Watershed Management Program for the Cottonwood Creek Daylighting Project.

Trout Unlimited led initial efforts to develop a conceptual design and cost estimate of this project in 2003 and has worked with the City of Boise on this and other projects over the years. Julia Creek Daylighting Project was constructed in 2007 and was a direct outgrowth of this initial work on Cottonwood Creek. We believe the City of Boise plans to join in to support this project.

Since we are the early champion of this project TU is pledging \$10,000 cash and \$5,950 of in-kind contribution, our experience and expertise, to this project.

If you have any questions, or would like to speak with us personally, please feel free to call Darryl Kuhrt at (208) 870-6628.

Sincerely,

Darryl Kuhrt, President
Ted Trueblood Chapter of Trout Unlimited

To conserve, protect and restore North America's coldwater fisheries and their watersheds.