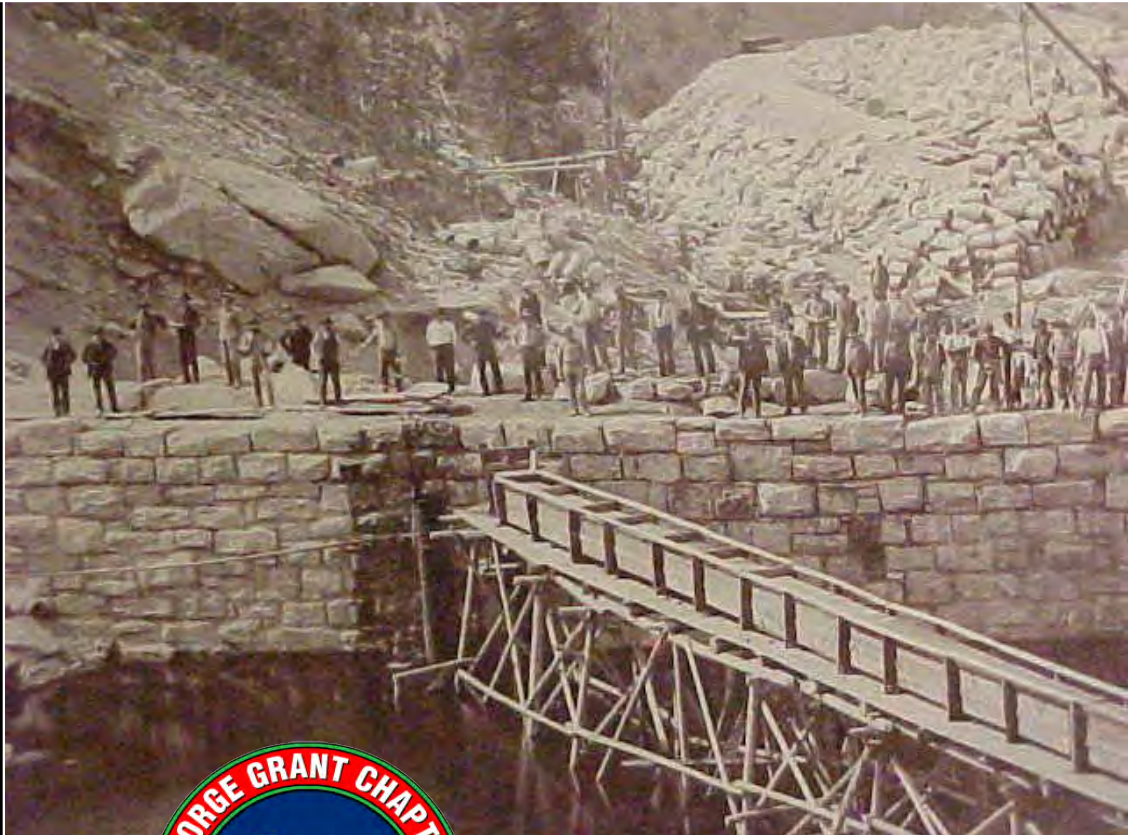


Basin Creek Reservoir Recreational Development Project

Montana Natural
Resource Damage
Program

Small Restoration
Project Grant
Proposal

November 2016



Project Sponsor:

George Grant Chapter of Trout Unlimited
P.O. Box 563
Butte, MT 59703



Submitted To:

Montana Natural Resource Damage Program
65 East Broadway
Butte, MT 59701

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Project Sponsor Contact Information

George Grant Chapter of Trout Unlimited
P.O. Box 563
Butte, MT 59703
Roy Morris, *President*
406-491-4255
president@ggtu.org

Project Summary and Maps

The George Grant Chapter of Trout Unlimited (GGTU) is pleased to present this NRDP Small Restoration Project Grant application for the Basin Creek Reservoir Recreational Development Project.

The Basin Creek Reservoirs have been one of Butte Silver-Bow's (BSB) main municipal water sources since the 1890's. Figures 1 through 3 show the location of the upper and lower reservoirs. The lower reservoir is controlled by a 101-ft high masonry dam that was originally completed in 1895, and then raised to 131-ft in 1913. The upper reservoir is controlled by a 40-ft earthen dam. The headwaters of Fish Creek are diverted across the Continental Divide into the upper reservoir via a pipe that replaced a wooden flume in 1911. Water from the lower reservoir is not currently filtered. As a result, a watershed closure exists to prevent water



source contamination. BSB is currently constructing a water treatment plant to treat Basin Creek Reservoir water, which is scheduled to be on-line in February 2017. Once the treatment plant is operational, GGTU and BSB proposes to lift the watershed closure and develop BSB land around the two reservoirs into a recreational area open for all to use.

The Basin Creek Reservoir and surrounding area is an outstanding resource that has the potential to provide recreational opportunities for the community such as fishing, hiking, biking, horseback riding, camping, hunting, non-motorized boating, and other non-motorized outdoor activities. The existing park below the reservoir already provides a site for outdoor recreation. Developing the area around the reservoirs will provide additional opportunities for the community currently unavailable due to the watershed closure and will replace recreational opportunities lost through mining past mining activities in the valley.

Project Goals & Objectives

The Basin Creek Reservoir Recreational Development project goal is to develop the Basin Creek Reservoir area into a public recreational area that will include walk-in access for fishing, hiking, biking, horseback riding, non-motorized boating, and other non-motorized activities. Montana Fish, Wildlife, and Parks (MFWP) has indicated

their goal is to develop a sustainable cutthroat trout fishery without stocking the reservoirs by restoring spawning habitat within the watershed.

GGTU has worked together with BSB, MFWP, and the US Forest Service (USFS) to determine the following project objectives that will fulfill the project goals:

- Provide walk-in access for residents that meets ADA compliance,
- Install safety and security measures on dams and other infrastructure that meets Homeland Security requirements,
- Provide camping areas,
- Construct a trail system that accesses both lower and upper reservoirs, complete with day use and overnight camping locations,
- Construct an aquatic organism passage (AOP) structure around the sediment basin at the head end of the lower reservoir to allow access critical spawning habitat. Figure 3 shows the sediment basin location,
- Restore impacted tributaries to enhance spawning habitat,
- Install restroom facilities,
- Construct a boat launch area for non-motorized boat use,
- Open adjacent USFS land for recreational use,
- Install historic points and signage to educate the public about the history of the area, and
- Complete restoration of impacted vegetation and other existing park infrastructure.

Project Benefits

The Basin Creek Recreational Area will provide recreational benefits to the community that were lost in the community from past mining activities such as fishing, hunting, horseback riding, hiking, camping, non-motorized boating, and increased access to public land. These benefits will be provided to the community without interruption to BSB's operation of the dam and water treatment plant.

Project Implementation

A development plan will be prepared to provide the road map to successfully design and build the recreational area that will fulfill the project goals. Development tasks will include:

- Detailed site evaluation
- Site survey,
- Permitting,
- Dam and area safety improvements that meet Homeland Security requirements,
- Isolation of operational infrastructure from the public,
- Trail construction to provide access to both the lower and upper reservoirs,
- Reclamation of the old quarry and borrow areas (see Figure 3),
- AOP construction at the sediment basin,
- Restroom installation,
- Americans with Disabilities Act (ADA) access construction,

- Boat launch installation,
- Picnic area construction,
- Boardwalk construction,
- Park gazebo restoration,
- ADA fishing dock installation, and
- Historical information sign installation.

Review of the development tasks, US Fish and Wildlife Service National Wetlands Inventory, Federal Emergency Management Agency (FEMA) National Flood Hazard Database, and applicable regulations indicate the project will need the following permits.

- Montana Natural Streambed and Land Preservation Act (310 Permit),
- Montana Short-Term Water Quality Standard for Turbidity (318 Authorization),
- US Army Corps of Engineers Wetland Permit (404 Permit),
- Montana Storm Water Pollution Prevention Plan (SWPPP) Permit, and
- BSB Storm Water Permit.

Implementation of the development tasks will require coordination between GGTU, BSB, MFWP, and USFS. GGTU has met with and received support from all the stakeholders. Project support letters are in Appendix A. The Montana Department of Environmental Quality (MDEQ) has indicated the Basin Creek watershed is an A-1 designated watershed. The A-1 designation allows recreational use of the watershed once the treatment plant is operational.



Once NRDP grant funds are secured, GGTU will hire an engineering firm to complete the development plan, secure necessary permits, prepare bid documents, put the project out to bid, and provide construction management. GGTU will involve all stakeholders and the public while developing the plan to ensure all stakeholder's requirements are fulfilled before finalizing the plan.

The USFS will start the watershed restriction removal process in a parallel path so the community may use USFS lands adjacent to BSB lands as well. The USFS will follow the National Environmental Policy Act (NEPA) review process to remove the restriction.

Project Budget



GGTU developed conceptual costs for completing the recreational area. The conceptual costs are based on limited site visits, historical review, and preliminary conversations with BSB, MFWP, and USFS. The conceptual costs only serve as a means to determine approximate construction costs and may change based upon further site evaluation and design. Input from project stakeholders and the public may also affect what amenities are

provided as part of the project. Costs will be refined once the site evaluation is complete and will be provided in the development plan. The following table summarizes the recreational area conceptual cost estimate.

Table 1. Conceptual Project Costs – Basin Creek Reservoir Recreational Development Project

Task	Estimated Quantity	Units	Unit Cost	Total Cost
Mob/Demob	1	LS	\$8,000	\$8,000
LIDAR Survey	1	LS	\$20,000	\$20,000
Focused GPS Surveys	1	LS	\$8,000	\$8,000
Development Plan and Engineering	1	LS	\$52,000	\$52,000
Chain Link Fence Installation	1,200	LFT	\$40	\$48,000
Dam Walkway Construction	2,300	SFT	\$8	\$18,400
Trail Construction	21,000	LFT	\$5	\$94,500
Channel Restoration	750	LFT	\$24	\$18,000
AOP Design	1	LS	\$15,000	\$15,000
AOP Installation	1	LS	\$25,000	\$25,000
Block Quarry and Borrow Area Grading	24,000	CYDS	\$2	\$48,000
Block Quarry and Borrow Area Seeding	5	ACRES	\$3,000	\$15,000
Riparian and Wetland Area Seeding	3	ACRES	\$3,800	\$9,500
Collecting and Hauling Site Debris to Landfill (loose)	120	CYDS	\$45	\$5,400
ADA Design	1	LS	\$15,000	\$15,000
Paved Trail Surfacing (ADA Standards)	2,200	SYDS	\$27	\$58,300
Paved Trail Base Construction (ADA Standards)	2,000	LFT	\$14	\$27,000
Boardwalk Installation	1,600	LFT	\$28	\$44,800
CXT Precast Bathroom	2	LS	\$29,500	\$59,000
Gazebo Restoration Design	1	LS	\$15,000	\$15,000
Gazebo Restoration	1	LS	\$40,000	\$40,000
Benches	6	EA	\$650	\$3,900
Picnic Tables	6	EA	\$1,300	\$7,800
Garbage Cans	6	EA	\$350	\$2,100
Bike Racks	1	EA	\$600	\$600
Dogipot	6	EA	\$480	\$2,880
Entrance Sign	1	LS	\$1,300	\$1,300
Historical Information Signs	6	LS	\$1,500	\$9,000
Fishing Dock Installation	1	LS	\$15,000	\$15,000
Wetland Delineation	1	LS	\$15,000	\$15,000
Permitting	1	LS	\$25,000	\$25,000
Total				\$726,480
Insurance and Bonding (5%)				\$36,324
Construction Management (10%)				\$72,648
Completion Total				\$762,804
Contingency (10%)				\$76,280
Grand Total				\$839,084

The total conceptual cost is approximately \$839K; as a result, multiple sources of funding must be secured in order to fully implement the project. The NRDP Small Projects Grant is the first grant GGTU is working to secure. GGTU has limited funds to provide as a match. Other sources of funding and grant programs that may be appropriate for the Basin Creek Recreational Development project are:

- BNRC restoration funds allocated to Recreational Development. 
- Interest earned on BNRC funds for the Basin Creek Water Treatment Plant 
- Superfund Advisory and Redevelopment Trust Authority (SARTA). This a \$50K maximum grant that GGTU may apply for in 2017 and funds will be available in 2018.
- Montana Department of Natural Resources (DNRC) Renewable Resource Grant and Loan (RRGL) Program. This a \$125 maximum grant. GGTU may apply in May 2018. Funds will be available July 2019. Only local government entities are eligible for this grant so BSB and GGTU would have to be joint applicants.
- Montana Department of Natural Resources (DNRC) Reclamation and Development Grants Program (RGDP). This a \$500K maximum grant. GGTU may apply in May 2018. Funds will be available July 2019. Only local government entities are eligible for this grant so BSB and GGTU would have to be joint applicants.
- MFWP Future Fisheries Improvement Program grant. There is no maximum for this grant; however, funding awards are subject to the funds available and total project requests. Typical grants range from \$10K to \$75K. GGTU will apply for grant funds in December 2016. Funds may be available in 2017. These funds would be used to provide fish passage through the installation of an AOP structure.
- Federal ADA Grant Programs. Additional funding from federal ADA grant programs will be identified during the project development phase.
- Other funding sources will be investigated and identified during the development phase as well.

GGTU will use the NRDP Small Restoration Projects Grant to complete site evaluation, the development plan, and to move forward securing additional funding through other grant applications. Any remaining BAO grant funds will be used for construction. GGTU is willing to donate \$5K and BSB has indicated a willingness to contribute to the project.

In the event that full funding is not secured, the scope of work may be adjusted so that work can be completed in multiple phases. However, there are minimum tasks that must be completed prior to allowing public access, most notably dam safety features, restroom facilities, and designated picnic and camping areas.

Project Schedule

The schedule will be driven primarily by the available grant cycles and securing additional funding for construction. The RRGL and RGDP grant programs are biennial programs, so funding will not be available until July 2019 and construction won't be complete until fall 2019 or summer 2020. The maximum grant values are not guaranteed, so if grant funding is less than expected project tasks would have to be adjusted, removed, or additional delays may be necessary.

GGTU feels the Basin Creek Recreational Development project is one of the most significant public access projects ever proposed in the Butte area; as such, the ability to fully fund and construct the project would be a huge public benefit. In order to complete the construction process in a timely manner that will be more

acceptable to the community, GGTU proposes the NRDP consider using other NDRP funding sources to fund the complete construction, as identified above. Use of these funds would allow construction to start in 2017 and be completed in 2018, which would allow more immediate public access to the area.

Monitoring Activities

Monitoring activities will include regular operational and maintenance (O&M) inspections by BSB personnel. MFWP will also regularly monitor reservoir fish populations to determine how they will manage the reservoir in a sustainable manner.

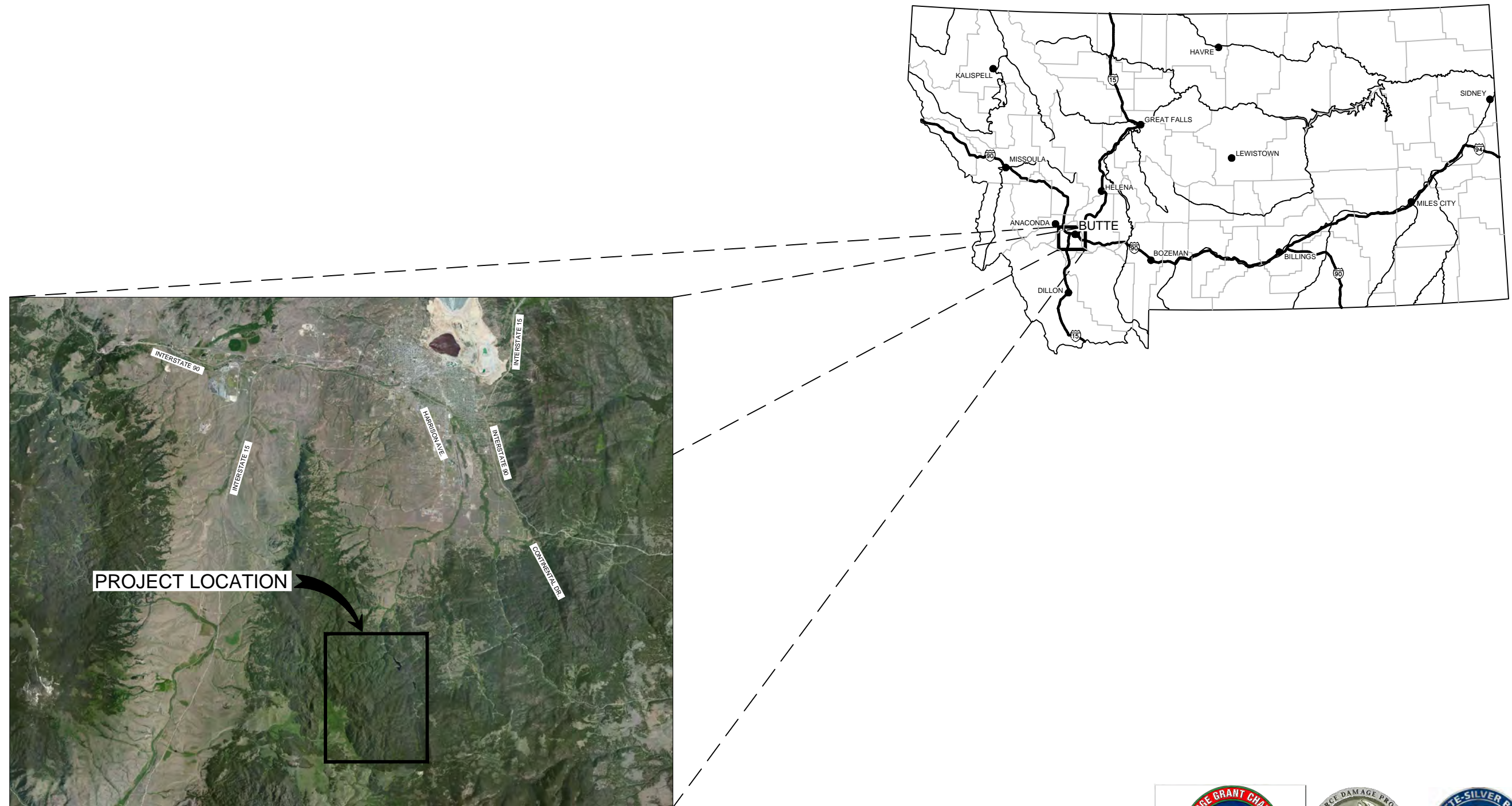
Conclusion

GGTU is excited to move forward with the Basin Creek Recreational Development project and feels that this project fits squarely within NRDP funding priorities. GGTU considers the Basin Creek Reservoir Area to have potential to be one of Montana's premier recreational areas that not only provides drinking water to Butte, but also recreational opportunities for generations to come.

FIGURES

BASIN CREEK RESERVOIR RECREATION DEVELOPMENT PROJECT

LOCATED IN SILVER BOW COUNTY, MONTANA



BASIN CREEK RESERVOIR
RECREATION DEVELOPMENT PROJECT

PROJECT NAME: BASIN CREEK RESERVOIR RECREATION DEVELOPMENT PROJECT
LOCATION: SILVER BOW COUNTY, MONTANA
FILE NO. SC-T101-BSBBasinCreek.dwg

OB NO:	BSBBASINCREEK
DATE:	11/15/16
DRAFTER:	DAS
CHECKED BY:	JT

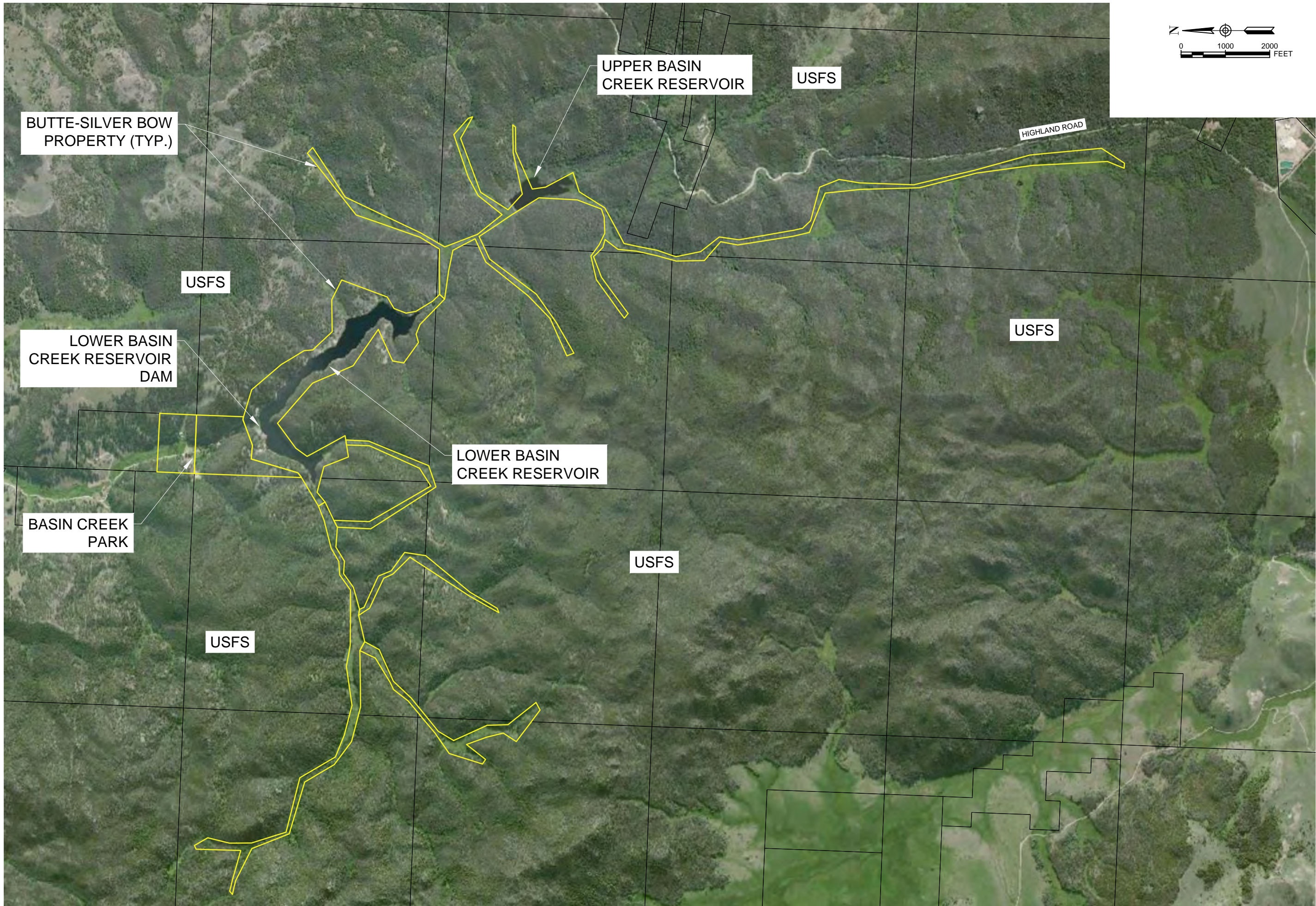
SHEET
FIG1

LOCATION MAP

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M:\A\G\B\B Basin Creek\CAD\CIVIL\MC-BM\01-BSBBasinCreek.dwg PLOT DATE 2016-11-15 08:54 USER: dstratton



No.	Description	Date	Drawn By

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OWNERSHIP MAP



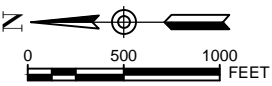
Water & Environmental
TECHNOLOGIES
480 E. Park Street
Butte, MT 59701
(406) 782-5220
WATERENTECH.COM

**BASIN CREEK RESERVOIR
RECREATION DEVELOPMENT PROJECT**

PROJECT NAME: BASIN CREEK RESERVOIR RECREATION DEVELOPMENT PROJECT
LOCATION: SILVER BOW COUNTY, MONTANA
FILE NO.: MC-BM01-BSBBasinCreek.dwg

JOB NO.: BSBASINCRK
DATE: 11/15/16
DRAFTER: DAS
CHECKED BY: JT

M:\A\G\B\B\Basin Creek\CAD\CIVIL\MC-BM\01-BSBBasinCreek.dwg PLOT DATE 2016-11-15 08:53 USER: dstratton



**BASIN CREEK RESERVOIR
RECREATION DEVELOPMENT PROJECT**

JOB NO: BSBASINCREEK
DATE: 11/15/16
DRAFTER: DAS
CHECKED BY: JT

SHEET
FIG3



RECREATIONAL AREA

No.	Description	Date	Drawn By

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APPENDIX A

Support Letters



November 14, 2016

Montana Natural Resource Damage Program
65 East Broadway
Butte, MT 59701

RE: Support for the Basin Creek Reservoir Recreational Development Project proposed by GGTU.

To whom it concerns:

As the fisheries biologist for Montana Fish, Wildlife & Parks (FWP) in the Upper Clark Fork basin, I would like to express my support for the Basin Creek Reservoir Recreational Development Project proposed by the George Grant Chapter of Trout Unlimited. Of particular interest to FWP are the necessary preparations for opening Basin Creek Reservoir to angling. Basin Creek Reservoir supports a rather robust, genetically pure westslope cutthroat trout fishery. Westslope cutthroat trout are a native species and a desirable sport fish. The goal of the department is to maintain and manage this westslope cutthroat trout fishery as a wild, self-sustaining population. This unique fishery can provide area residents with a quality angling experience, the likes of which has not been available near Butte for several generations. I look forward to assisting with the planning and implementation of this project.

Sincerely,

Jason Lindstrom
Fisheries Biologist
Montana Fish, Wildlife & Parks
P.O. Box 24
Anaconda, MT 59711

Phone: (406) 529-8058
Email: jlindstrom@mt.gov



United States
Department of
Agriculture

Forest
Service

Beaverhead-Deerlodge
National Forest
Butte-Jefferson Ranger Districts

1820 Meadowlark Lane
Butte, MT 59701
406 494-2147

File Code: 2300

Date: November 14, 2016

Water & Environmental Technologies
Attn: John Trudnowski, PE, Senior Engineer

To: Mr. Trudnowski:

I am writing this letter to express my support for the Basin Creek Reservoir Recreational Development Project which proposes to develop the Basin Creek Reservoir area into a public recreational area.

The Basin Creek Reservoir area is an outstanding resource that has the potential to provide recreational opportunities for the community that may include fishing, hiking, biking, horseback riding, non-motorized boating, and other non-motorized outdoor activities. The existing park below the reservoir already provides a site for outdoor recreation. Developing the amenities around the reservoir will provide additional opportunities for the community currently unavailable due to the watershed closure.

The Forest Service looks forward to working with Water & Environmental Technologies, George Grant Chapter of Trout Unlimited and Butte-Silver Bow to provide additional recreational opportunities in the Basin Creek area, in addition to those that currently exist adjacent to the watershed, which include motorized and non-motorized recreation, access to the Continental Divide National Scenic Trail and Thompson Park. If you have any questions please do not hesitate to contact me at (406) 494-2147.

Sincerely,

DAVID A. SABO
District Ranger



126 W. GRANITE
BUTTE, MT 59701



OFFICE: (406) 497-6515
FAX: (406) 497-6524

November 15, 2016

Montana Natural Resource Damage Program
65 East Broadway
Butte, MT 59701

Re: Basin Creek Reservoir Recreational Development Project

To Whom It May Concern,

Butte Silver-Bow (BSB) is currently building a water treatment plant to treat water from Basin Creek Reservoir. Once the treatment plant is on-line and operational, BSB supports developing the Basin Creek Reservoir Area into a recreational area as proposed by the George Grant Chapter of Trout Unlimited (GGTU). BSB will work with GGTU to develop a recreational area plan that will integrate well with our reservoir operations and will serve to provide an excellent recreational opportunity for the Butte community.

Sincerely,

David Schultz, P.E.
BSB Public Works Director