AGENDA

IDAHO WATER RESOURCE BOARD

Finance Committee Meeting No. 4-18

July 17, 2018 at 10:30 a.m.
Idaho Water Center
Conference Rooms C and D
322 E. Front St.
Boise, Idaho

1. Introductions and Attendance
2. FY 2019 Secondary Aquifer Planning, Management and Implementation Fund Budget*
3. Flood Management Grant Recommendations*
4. Other Items for Discussion
5. Adjourn

Committee Members: Vince Alberdi (Chair), Al Barker, Roger Chase, & Dale Van Stone

*Action Item: A vote of recommendation regarding this item may be made at this meeting. Identifying an item as an action item on the agenda does not require a vote to be taken on the item.

Americans with Disabilities

The meeting will be held in facilities that meet the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations to attend, participate in, or understand the meeting, please make advance arrangements by contacting Department staff by email nikki.regent@idwr.idaho.gov or by phone at (208) 287-4800.

FY2019 BUDGET FOR THE SECONDARY AQUIFER FUND

Carry-Over From FY18	$	2,898,760
General Fund (HB 677):	$	5,000,000
HB547 funds - receipt of Cigarette Tax proceeds	$	5,000,000
IGWA Loan Repayment to the Secondary Fund	$	4,000,000
DOE-INL SEP Funds ($2.068 M over 3 years)	$	690,000
Estimated interest	$	250,000
TOTAL	**$**	**17,838,760**

BUDGET TRACKING

Category	Sub-Category		FY19 Budget (as Approved)	FY19 Amended Budget
ESPA MANAGED RECHARGE				
ESPA Recharge Operations		Conveyance Cost	$3,500,000	$3,500,000
		Equipment & Supplies	$89,000	$89,000
		Recharge Monitoring	$554,550	$554,550
		Regional Monitoring	$200,000	$200,000
		TOTAL	**$4,343,550**	**$4,343,550**
ESPA Managed Recharge Infrastructure Projects	**Budgeted Projects**	North Side Wilson Canyon Site	$1,750,000	$1,900,000
		AFRD2 MP29 Site	$2,150,000	$2,150,000
		AFRD2 MP28 Hydro Plant Tailbay	$1,000,000	$1,400,000
		South Fork and Other Small Upper Valley S	$1,000,000	$1,000,000
		A&B Injection Wells	$550,000	$550,000
	Reserved for additional recharge infrastructure projects		$500,000	$100,000
		TOTAL	**$6,950,000**	**$7,100,000**
Managed Recharge Investigations	**Budgeted Investigations**	North Side Recharge Sites	$200,000	$200,000
		Large Upper Valley Site(s)	$200,000	$200,000
		Big / Little Wood Sites	$200,000	$200,000
	Reserved for additional investigations and engineering		$300,000	$300,000
		TOTAL	**$900,000**	**$900,000**
ESPA Hydrologic Monitoring (DOE Funding) (Year 1 of 3 - Total $928,000)			$310,000	$310,000
ESPA MANAGED RECHARGE TOTAL			**$12,503,550**	**$12,653,550**
TREASURE VALLEY				
Treasure Valley Aquifer Ground Water Model (Year 3 of 5 - Total $2.5 M)			$500,000	$500,000
Boise River Storage Studies (final payment)			$1,000,000	$1,000,000
Southeast Boise Groundwater Management Area Monitoring			$100,000	$100,000
Treasure Valley DCMI Water Conservation Study			$200,000	$200,000
TREASURE VALLEY TOTAL			**$1,800,000**	**$1,800,000**
CAMAS PRAIRIE				
Ground & Surface Water Monitoring			$75,000	$75,000
CAMAS PRAIRIE TOTAL			**$75,000**	**$75,000**
BIG LOST TOTAL				
Hydrologic Monitoring (DOE Funding) (Year 1 of 3 - Total $1.14 M)			$380,000	$380,000
BIG LOST TOTAL			**$380,000**	**$380,000**
PALOUSE BASIN				
Water Sustainability Projects			$100,000	$100,000
PALOUSE TOTAL			**$250,000**	**$250,000**
BEAR RIVER BASIN				
Water Sustainability Projects			$250,000	$250,000
BEAR RIVER BASIN TOTAL			**$250,000**	**$250,000**
STATE-WIDE				
Aquifer monitoring network enhancement in priority aquifers			$200,000	$200,000
Cooperative Cloud Seeding Program:				
		Operations & Maintenance Costs (Board portion is 1/3 per year)	$800,000	$800,000
		Cloud Seeding Modeling Project (Year 2 of 4 - Total $1.47 Million)	$470,000	$470,000
		Operations costs for additional Ground Generators & Upper Snake Aircraft	$425,000	$425,000
Administrative expenses (public information, staff training, etc)			$80,000	$80,000
Professional Assistance for securing Federal Funding			$100,000	$100,000
STATE-WIDE TOTAL			**$2,075,000**	**$2,075,000**
RESERVE FOR WORK IN OTHER PRIORITY AREAS OR CARRY-			**$ 505,210**	**$ 355,210**
GRAND TOTAL			**$ 17,838,760**	**$ 17,838,760**

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF INFRASTRUCTURE IMPROVEMENTS FOR THE MP 28 HYDROPOWER PLANT ON THE MILNER-GOODING CANAL FOR AMERICAN FALLS RESERVOIR DISTRICT NO 2	RESOLUTION TO APPROVE FUNDS FROM THE SECONDARY AQUIFER PLANNING, MANAGEMENT, AND IMPLEMENTATION FUND AND PROVIDE SIGNATORY AUTHORITY

WHEREAS, House Bill 547 passed and approved by the 2014 Legislature allocates $5 million from the Cigarette Tax to the Idaho Water Resource Board's (IWRB) Secondary Aquifer Planning, Management, and Implementation Fund (Secondary Aquifer Fund) for statewide aquifer stabilization; and

WHEREAS, Senate Bill 1402 passed and approved by the 2016 Legislature allocated $5 million in ongoing General Fund dollars and $2.5 million in Economic Recovery Reserve Funds to the IWRB's Secondary Aquifer Fund for statewide water sustainability and aquifer stabilization; and

WHEREAS, the Eastern Snake Plain Aquifer (ESPA) has been losing approximately 216,000 acre-feet annually from aquifer storage since the 1950's resulting in declining ground water levels in the aquifer and declining spring flows from the aquifer; and

WHEREAS, the State Water Plan includes a goal to accomplish managed recharge in the ESPA averaging 250,000 acre-feet annually; and

WHEREAS, the 2016 Idaho Legislature passed and approved Senate Concurrent Resolution 136 directing the IWRB to develop the capacity to achieve 250,000 acre-feet of annual average managed recharge to the ESPA by December 31, 2024; and

WHEREAS, on May 18, 2018, the IWRB adopted the Secondary Aquifer Fund Fiscal Year 2019 Budget, which included $1,000,000 for infrastructure improvements on the MP 28 Hydropower Plant and reserved $500,000 for additional recharge infrastructure projects to improve managed recharge capacity in the ESPA; and

WHEREAS, American Falls Reservoir District No 2 (AFRD2) operates and maintains an irrigation delivery system that conveys water from the Snake River through the Milner-Gooding Canal to various recharge sites downstream of the MP 28 Hydropower Plant; and

WHEREAS, cost estimates provided by AFRD2 and their consultants to construct the required infrastructure to allow winter-time recharge water deliveries past the MP 28 Hydropower Plant total $1,400,000;

NOW, THEREFORE BE IT RESOLVED that the IWRB authorizes expenditures budgeted for the MP 28 Hydropower plant improvements and $400,000 from funds reserved for other ESPA recharge projects, not to exceed a total of $1,400,000, from the Secondary Aquifer Fund for the infrastructure improvements to the MP 28 Hydropower plant that include improvements to the bypass gates, the power plant, the

forebay, and tailbay; and

NOW, THEREFORE BE IT RESOLVED that the IWRB Fiscal Year 2019 budget for the Secondary Aquifer Planning, Management, and Implementation Fund will be amended to reflect the changes specified in this resolution.

NOW, THEREFORE BE IT RESOLVED that the IWRB authorizes its chairman or designee, Brian Patton, Executive Officer to the IWRB, to execute the necessary agreements or contracts to complete the winterizing infrastructure at the MP 28 Hydropower Plant.

DATED this 27th day of July, 2018.

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ROGER W. CHASE, Chairman
Idaho Water Resource Board

ATTEST _____

VINCE ALBERDI, Secretary

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF CONSTRUCTION OF THE WILSON CANYON RECHARGE SITE OFF THE NORTH SIDE CANAL COMPANY	RESOLUTION TO APPROVE FUNDS FROM THE SECONDARY AQUIFER PLANNING, MANAGEMENT, AND IMPLEMENTATION FUND AND PROVIDE SIGNATORY AUTHORITY

WHEREAS, House Bill 547 passed and approved by the 2014 Legislature allocates $5 million from the Cigarette Tax to the Idaho Water Resource Board's (IWRB) Secondary Aquifer Planning, Management, and Implementation Fund (Secondary Aquifer Fund) for statewide aquifer stabilization; and

WHEREAS, Senate Bill 1402 passed and approved by the 2016 Legislature allocated $5 million in ongoing General Fund dollars and $2.5 million in Economic Recovery Reserve Funds to the IWRB's Secondary Aquifer Fund for statewide water sustainability and aquifer stabilization; and

WHEREAS, the Eastern Snake Plain Aquifer (ESPA) has been losing approximately 216,000 acre-feet annually from aquifer storage since the 1950's resulting in declining ground water levels in the aquifer and declining spring flows from the aquifer; and

WHEREAS, the State Water Plan includes a goal to accomplish managed recharge in the ESPA averaging 250,000 acre-feet annually; and

WHEREAS, the 2016 Idaho Legislature passed and approved Senate Concurrent Resolution 136 directing the IWRB to develop the capacity to achieve 250,000 acre-feet of annual average managed recharge to the ESPA by December 31, 2024; and

WHEREAS, on May 18, 2018, the IWRB adopted the Secondary Aquifer Fund Fiscal Year 2019 Budget, which included $1,750,000 for the North Side Wilson Canyon Recharge Site to improve managed recharge capacity in the ESPA; and

WHEREAS, on May 18, 2018, the IWRB adopted the Secondary Aquifer Fund Fiscal Year 2019 Budget, which included $655,210 reserve funds for work in other priority areas (reserve funds) ; and

WHEREAS, North Side Canal Company (NSCC) operates and maintains an irrigation delivery system that conveys water from the Snake River through the Main Canal to the Wilson Canyon Recharge Site; and

WHEREAS, cost estimates provided by NSCC and Quadrant Consulting Inc. to construct the required infrastructure and three (3) groundwater monitoring wells to make the Wilson Canyon Recharge Site a viable managed recharge location total $1,900,000;

NOW THEREFORE BE IT RESOLVED that the IWRB authorizes expenditures budgeted for the North Side Wilson Canyon Recharge Site and $150,000 from the reserve funds, not to exceed a total of $1,900,000, from the Secondary Aquifer Fund for the development of the Wilson Canyon Recharge Site which includes construction of turnout structure, berms and basin improvements, and groundwater

monitoring wells; and

NOW, THEREFORE BE IT RESOLVED that the IWRB Fiscal Year 2019 budget for the Secondary Aquifer Planning, Management, and Implementation Fund will be amended to reflect the changes specified in this resolution.

NOW THEREFORE BE IT RESOLVED that the IWRB authorize its chairman or designee, Brian Patton, Executive Officer to the IWRB, to execute the necessary agreements or contracts to complete the development of the Wilson Canyon Recharge Site.

DATED this 27th day of July, 2018.

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ROGER W. CHASE, Chairman
Idaho Water Resource Board

ATTEST _____
VINCE ALBERDI, Secretary

Memorandum

To: Finance Committee, Idaho Water Resource Board

From: Neeley Miller

Date: July 13, 2018

Re: Flood Management Grant Applications

REQUIRED ACTION: Funding Recommendation to IWRB

Background

House Bill 712 passed and approved by the 2018 Legislature included a FY 2018 transfer of $1,000,000 from the General Fund to the Water Management Fund in the Department of Water Resources budget. This funding was intended for a grant program administered by the Idaho Water Resource Board to provide competitive grants for flood-damaged stream channel repair, stream channel improvement, flood risk reduction, or flood prevention projects.

On May 18, 2018 the Board adopted by resolution an evaluation criteria for the award of Flood Management Grant funding. The criteria establish an application deadline of June 15, 2018 and indicated that funding awards would be announced at the July 27, 2018 Board meeting.

Application/Ranking

Staff received ten (10) applications during the applications period. The applications and sponsor's grant documents were evaluated, scored, and ranking according to criteria adopted by Board.

Staff Recommendation

Staff recommends that all the applications be funded at the requested amounts.

Package includes:

1. Criteria
2. Ranking Application Sheet
3. Project Summaries
4. Draft Resolution
   - Attachment A: Flood Management Grant Awards
   - Attachment B: Amended Criteria
5. Abbreviated Flood Management Grant Applications

IWRB Flood Management Grant Program Criteria

The Idaho Water Resource Board (IWRB) Flood Management Grant Funding Program provides financial assistance on a competitive statewide basis to Flood Control Districts, Drainage Districts, Irrigation Districts, Canal Companies, Municipalities, Counties and other public entities interested in pursuing flood damaged stream channel repair, stream channel improvement, flood risk reduction, and flood prevention projects. (See HB 712; Statutes 42-1760; IDAPA 37.02.02)

Pursuing flood damage repair and improvement projects can help prevent or reduce flood damage in Idaho's streams and rivers. To be considered for grant funding, entities must be able to provide evidence of flood damage, or evidence of conditions that create the risk of flooding in a stream channel and submit a funding request document outlining the proposed repairs and/or improvements to the stream channel.

Eligible Entities: Flood Control Districts, Drainage Districts, Irrigation Districts, Canal Companies, Municipalities, and Counties. Other public entities are eligible to apply.

Eligible Geographic Area: Statewide

Program Budget:

- $1,000,000
- No more than 50% ($500,000) of the total budget may be spent within a single IWRB district. This limit may be waived if there are no competing funding demands.

Funding Amount: up to $200,000 per project; one project per application

- Funding awards will be reallocated unless Flood Management work begins prior to November 1, 2018.
- Funding will not be distributed unless the project is fully permitted. Sponsor is responsible for providing permit documentation to IWRB staff.

Matching Funds for Projects:

- Entities requesting funding for flood management grant projects must provide at least 50% matching cost-share funding with non-state dollars. Projects that include higher cost share amounts will receive a higher ranking during project evaluations
- In-kind services can be used for 30% of the total projects costs (e.g. *a $100K project, sponsor would have to provide at least $50K in matching cost share funding. Of the $50K, the sponsor could provide up to $30K in in-kind services and $20K in cash to meet the matching cost-share requirement)*
- Funding award will be based on project ranking

Evaluation Criteria: To maximize the effective and efficient use of available funds, applications and sponsor's grant document will be evaluated, scored *(120 point scale)*, and ranked according to the following criteria:

Effectiveness of Project *(60 points)*

- What is the urgency of the project and anticipated costs? *(10 points)*
- What are the objectives and benefits of the project? *(10 points)*
- How does the proposed project solution address the objectives? *(10 points)*
- How will the project measure success of its objectives, and describe the proposed monitoring plan. *(5 points)*
- Is the proposed budget and schedule realistic and is the budget appropriate for the scope of work provided? Has the applicant provided detailed construction expenses documenting how money will be spent to complete the project? *(15 points)*

- Are project sponsors using relevant and appropriate information to develop the proposed project? (Sponsor should include references to relevant studies, assessments, reports, management plans, etc.) How will the project account for expected future changes to hydrology, sediment regimes, or water supply? *(10 points)*

Readiness of Project *(40 points)*

- Lead sponsor of project is identified and there is a description of other affected stakeholders and jurisdictions. *(10 points)*
- Project sponsors will provide documentation that affected local stakeholders and jurisdictions have been consulted. If the project is located within a Flood Control District, the sponsor must provide documentation showing the Flood Control District supports the project, otherwise the project will be declared ineligible. *(10 points)*
- Specify cash matching funds that will be provided for the project, including any in-kind services. Indicate what funding sources are secured or pending. The applicant must provide at least 50% matching cost share funding with non-state dollars. In-kind services can be used for 30% of the total projects costs (e.g. *a $100K project, sponsor would have to provide at least $50K in matching cost share funding. Of the $50K, the sponsor could provide up to $30K in in-kind services and $20K in cash to meet the matching cost-share requirement) (10 points)*
- Projects that propose matching cost-share amounts above 50% will receive additional points in the ranking. *(1 point for each additional 1% increase up to 60%, up to 10 additional points)*

Organization Capacity *(20 points)*

- What is the sponsor's history of successful accomplishments on projects similar to this one? The sponsor shall provide several past project examples, if possible. *(10 points)*
- What level of sponsor and consultant staffing will be directed toward the implementation of the proposed project? Discuss the number of sponsor and consultant staff and amount of time dedicated for each for the project. Will the project utilize volunteers? If so, how? Include brief resumes or list of qualifications for each member of the project team. *(10 points)*

Application Process:

Application Submittal Notice: May 21, 2018

Application Deadline: June 15, 2018

Project Funding Recommendations: July 2018 Finance Committee

Funding Awarded: July 27, 2018 Board meeting

Notice of Award: July 30, 2018

Payment Process:

- Funds will be distributed upon sponsor submitting funding reimbursement requests to the IWRB.
- Sponsor funding requests shall include a cover letter which shall include a description of the project activities, dates for performing the project activities, and contractor or supplier invoices.
- A total of 5% shall be retained from each payment request until the project has been completed, and the applicant has fulfilled their deliverable requirements. The 5% award-withholding will be included with the final payment request disbursement.

Project Deliverables:

Entities that receive flood management grant funding will be required to submit monthly progress reports updating the IWRB on project progress, and a final report at the completion of the project. Additionally, entities will be expected to provide completed plans and specifications, bid documents, material testing and sampling reports, and a letter from the sponsor or sponsor's consultant that the project was completed in substantial conformance with the approved plans and specifications. If Flood Management Grant funding is available in the future, sponsor funding requests will not be considered if the sponsor does not comply with the deliverable requirements.

IWRB Districts are as follows:

District No. 1: Boundary, Bonner, Kootenai, Shoshone, Benewah, Latah, Clearwater, Nez Perce, Lewis and Idaho counties.

District No. 2: Adams, Valley, Washington, Payette, Gem, Boise, Canyon, Ada, Elmore and Owyhee counties.

District No. 3: Camas, Gooding, Jerome, Twin Falls, Cassia, Blaine, Lincoln, Minidoka, Lemhi, Custer and Butte counties.

District No. 4: Clark, Fremont, Jefferson, Madison, Teton, Bingham, Bonneville, Power, Bannock, Caribou, Oneida, Franklin and Bear Lake counties.

** No more than 50% ($500,000) of the total budget may be spent within a single IWRB district. This limit may be waived if there are no competing funding demands.*

Flood Management Grant Application Ranking

Entity	Funds Requested	Total Project Costs	Evaluation Score (130 Pts)
Flood Control District 9	$90,000.00	$273,809.00	127
Blaine County	$121,331.00	$306,334.00	115
Cassia County	$42,336.00	$84,672.75	103
Flood Control District 10	$78,400.00	$156,800.00	101
Flood Control District 10	$153,550.00	$307,100.00	99
Flood Control District 10	$38,808.00	$77,616.00	99
Clearwater Soil & Water Conservation Dis	$155,220.00	$310,439.00	98
Flood Control District 10	$22,000.00	$44,000.00	95
Flood Control District 11	$57,675.00	$115,350.00	83
Twin Lakes/Flood Control District 17	$7,750.00	$15,500.00	47
Total funds requested	**$767,070.00**		

FLOOD MANAGEMENT GRANT PROGRAM

RANKINGS AND PROJECT SUMMARIES

1. **FLOOD CONTROL DISTRICT NO.9 – Bypass Canal and Bannon Flood Mitigation Project**

   Flood Control District No.9 is requesting a $90,000 flood management grant for the $273,809 Bypass Canal and Bannon Flood Mitigation project. The project goal is to mitigate flood damage to irrigation water delivery structures that convey irrigation water to approximately 6,300 acres of land south of Bellevue. Due to the 2017 flood, the altered Wood River channel does not adequately deliver water to three head gate structures. The objectives of the project are to mitigate the effects of the flooding, alleviate future flood damage, ensure irrigation water delivery, stabilize streambanks, enhance riparian habitat, reduce the need for ongoing channel manipulations, and improve water quality.

2. **BLAINE COUNTY – Della View Subdivision Flood Mitigation Project**

   Blaine County is requesting a $121,331 flood management grant for the $306,334 Della View Subdivision Flood Mitigation project. The remaining matching funding of $185,003 will be provided by Blaine County, City of Hailey, and Flood Control District No.9. The goal of the project is to reduce the amount and duration of flooding in the area. The project consists of two (2) areas of treatment, which include activating a side channel on the Big Wood River and developing conveyance channels in the subdivision.

3. **CASSIA COUNTY – Raft River Channel Project**

   Cassia County is requesting a $42,336.38 flood management grant for the $84,672.75 Raft River Channel project. The remaining matching funding of $42,336.37 will be provided by Cassia County and the Raft River Flood District. The Raft River channel is a major irrigation water conveyance system to farms and ranches. The 2017 flood caused a significant amount of debris and sediment to collect at the Reid Springs Road bridge. Without the required stream channel repair, the bridge is at risk of major structural damage. The debris and sedimentation has altered the natural stream flow, damaging the stream channel. Cassia County will perform the stream channel repairs to restore the channel to its original configuration.

4. **FLOOD CONTROL DISTRICT NO.10 – New Dry Creek Diversion Structure Project**

   Flood Control District No.10 is requesting a $78,400.00 flood management grant for the $156,800 New Dry Creek structure project. Flood District No.10 will provide the matching funding of $78,400.00. The goal of the project is to repair the river bank adjacent to the New Dry Creek diversion structure, which was breached during the 2017 flooding on the Boise River,

and armor an area of severe bank erosion adjacent to the Greenbelt. The objective of the project is to return the river to its normal channel, protection of the greenbelt pathway, hardening of the channel bottom to reduce head cutting at the diversion, and to reduce flood risk to adjacent land owners and a gravel mining site.

5. **FLOOD CONTROL DISTRICT NO.10 – Duck Alley Pit Capture Project**

Flood Control District No.10 is requesting a $153,550.00 flood management grant for the $307,100.00 Duck Alley Pit Capture project. The remaining matching funding of $153,550.00 will be provided by adjacent landowners, Flood District No.10, and the NRCS. The goals of the project are to redirect base river flow back to the pre-existing river channel, and redirect current flood waters from agricultural land back to the historic river channel. The project includes bank restoration using rock armoring and bioengineering methods, such as log root wads, willow plantings, cottonwood pole plantings, and grass seeding's for bank stability, and the removal of gravel currently blocking normal river flows.

6. **FLOOD CONTROL DISTRICT NO.10 – Porter and Mulchay Project**

Flood Control District No.10 is requesting a $38,808.00 flood management grant for the $77,616.00 Porter and Mulchay project. Flood District No.10 will provide the matching funding of $38,808.00. The goal of the project is to reduce erosion to ranch lands and an irrigation diversion structure on the north side of the river channel. The erosion of the river bank and failure of the Porter's diversion structure are a result of a continued accumulation of gravel in this reach of the Boise River. The project is a gravel removal project, with a total estimated removal volume of 26,600 cubic yards.

7. **CLEARWATER SOIL AND WATER CONSERVATION DISTRICT – Quartz Creek Project**

The Clearwater Soil and Water Conservation District is requesting a $155,220.00 flood management grant for the $310,439.00 Quartz Creek project. PotlatchDeltic, a private industrial forestland owner/management firm, will provide the matching funding of $155,220.00. The goal of the project is to reduce the impacts of annual flooding on the Snake Creek Road, which is a major secondary road in Clearwater County. The Snake Creek Road provides access to private, state, and federal lands managed for timber and year-round recreation. The proposed project will replace sixteen (16) undersized culverts within Quartz Creek, and two (2) culverts within the Calhoun Creek drainage that have a direct impact on flows in Quartz Creek along Snake Creek Road.

8. **FLOOD CONTROL DISTRICT NO.10 – Leighton and Wells Project**

Flood Control District No.10 is requesting a $22,000 flood management grant for the $44,000.00 Leighton and Wells project. Flood Control District No.10 will provide the matching funding of $22,000.00. The goal of the project is reduce erosion to ranch lands and river channel banks. An accumulation of gravel in this stretch of the Boise River channel has caused serious erosion and flooding of adjacent property owner's fields. This project is a gravel removal project, with a total estimated gravel removal volume of 22,000 cubic yards.

9. **FLOOD CONTROL DISTRICT NO.11 – Tree and Debris Removal Project**

Flood Control District No.11 is requesting a $57,675.00 flood management grant for the $115,350.00 tree and debris removal project on the Boise River. Flood Control District No.11 will provide the matching funding of $57,675.00. The goal of the project is to remove trees and debris from the Boise River that are causing out of bank flows and damage to the river bank, adjacent farm lands, and irrigation diversion structures. The Flood Control District has identified over 140 locations for tree and debris removal, and upon removal, all trees and debris will be disposed of by burning and/or chipping.

10. **<u>TWIN LAKES CREEK FLOOD CONTROL DISTRICT NO.17</u> – Flood Control and Stream Flow Monitoring Equipment Project**

Twin Lakes Creek Flood Control District No.17 is requesting a $7,750.00 flood management grant for the $15,500.00 flood control and stream flow monitoring equipment project. Twin Lakes Creek Flood Control District No.17 will provide the matching funding of $7,750.00. The goal of the project is to install lake level and discharge monitoring equipment, including telemetry, to provide real-time dam operations to the operators to reduce or prevent flooding downstream of the dam.

BEFORE THE IDAHO WATER RESOURCE BOARD

IN THE MATTER OF FLOOD MANAGEMENT GRANTS	RESOLUTION TO AWARD FUNDS AND AMEND THE CRITERIA

WHEREAS, House Bill 712 passed and approved by the 2018 legislature transferred $1,000,000 from the General Fund to the Water Management Fund creating a Flood Management Grant Program administered by the Idaho Water Resources Board (IWRB) to be used for the purpose of flood-damaged stream channel repair, stream channel improvement, flood risk reduction, or flood prevention projects; and

WHEREAS, House Bill 712 allows for the award of grants larger than $50,000 for the Flood Management Program, at the discretion of the IWRB; and

WHEREAS, House Bill 712 directs the IWRB to require the availability of fifty percent (50%) matching funds for all projects to be considered under the grant program; and

WHEREAS, House Bill 712 directs the IWRB to prioritize projects on a competitive statewide basis; and

WHEREAS, on May 18, 2018 the IWRB adopted a criteria for the award of Flood Management Grants, and

WHEREAS, the IWRB wishes to amend the criteria allow for a second round of funding awards, and

NOW, THEREFORE BE IT RESOLVED that the IWRB approves the award of Flood Management Grants as specified in Attachment A to this resolution, and

NOW, THEREFORE BE IT FURTHER RESOLVED that the IWRB adopts the amended criteria attached hereto in Attachment B to allow for a second round of applications for the award of Flood Management Grants and directs staff to issue a statewide solicitation for Flood Management projects.

DATED this 27 day of July, 2018.

ROGER W. CHASE, Chairman
Idaho Water Resource Board

ATTEST _____
VINCE ALBERDI, Secretary

ATTACHMENT A: Flood Management Grant Funding Awards

Entity	Funds Awarded
Flood Control District 9	$90,000.00
Blaine County	$121,331.00
Cassia County	$42,336.00
Flood Control District 10	$78,400.00
Flood Control District 10	$153,550.00
Flood Control District 10	$38,808.00
Clearwater Soil & Water Conservation District	$155,220.00
Flood Control District 10	$22,000.00
Flood Control District 11	$57,675.00
Twin Lakes/Flood Control District 17	$7,750.00
Total funds awarded	**$767,070.00**

ATTACHMENT B: IWRB Flood Management Grant Program Criteria - Amended

The Idaho Water Resource Board (IWRB) Flood Management Grant Funding Program provides financial assistance on a competitive statewide basis to Flood Control Districts, Drainage Districts, Irrigation Districts, Canal Companies, Municipalities, Counties and other public entities interested in pursuing flood damaged stream channel repair, stream channel improvement, flood risk reduction, and flood prevention projects. (See HB 712; Statutes 42-1760; IDAPA 37.02.02)

Pursuing flood damage repair and improvement projects can help prevent or reduce flood damage in Idaho's streams and rivers. To be considered for grant funding, entities must be able to provide evidence of flood damage, or evidence of conditions that create the risk of flooding in a stream channel and submit a funding request document outlining the proposed repairs and/or improvements to the stream channel.

Eligible Entities: Flood Control Districts, Drainage Districts, Irrigation Districts, Canal Companies, Municipalities, and Counties. Other public entities are eligible to apply.

Eligible Geographic Area: Statewide

Program Budget:

- $1,000,000
- No more than 50% ($500,000) of the total budget may be spent within a single IWRB district. This limit may be waived if there are no competing funding demands.

Funding Amount: up to $200,000 per project; one project per application

- Funding awards will be reallocated unless Flood Management work begins prior to November 1, 2018.
- Funding will not be distributed unless the project is fully permitted. Sponsor is responsible for providing permit documentation to IWRB staff.

Matching Funds for Projects:

- Entities requesting funding for flood management grant projects must provide at least 50% matching cost-share funding with non-state dollars. Projects that include higher cost share amounts will receive a higher ranking during project evaluations
- In-kind services can be used for 30% of the total projects costs (e.g. *a $100K project, sponsor would have to provide at least $50K in matching cost share funding. Of the $50K, the sponsor could provide up to $30K in in-kind services and $20K in cash to meet the matching cost-share requirement)*
- Funding award will be based on project ranking

Evaluation Criteria: To maximize the effective and efficient use of available funds, applications and sponsor's grant document will be evaluated, scored *(120 point scale)*, and ranked according to the following criteria:

Effectiveness of Project *(60 points)*

- What is the urgency of the project and anticipated costs? *(10 points)*
- What are the objectives and benefits of the project? *(10 points)*
- How does the proposed project solution address the objectives? *(10 points)*
- How will the project measure success of its objectives, and describe the proposed monitoring plan. *(5 points)*
- Is the proposed budget and schedule realistic and is the budget appropriate for the scope of work provided? Has the applicant provided detailed construction expenses documenting how money will be spent to complete the project? *(15 points)*

- Are project sponsors using relevant and appropriate information to develop the proposed project? (Sponsor should include references to relevant studies, assessments, reports, management plans, etc.) How will the project account for expected future changes to hydrology, sediment regimes, or water supply? *(10 points)*

Readiness of Project *(40 points)*

- Lead sponsor of project is identified and there is a description of other affected stakeholders and jurisdictions. *(10 points)*
- Project sponsors will provide documentation that affected local stakeholders and jurisdictions have been consulted. If the project is located within a Flood Control District, the sponsor must provide documentation showing the Flood Control District supports the project, otherwise the project will be declared ineligible. *(10 points)*
- Specify cash matching funds that will be provided for the project, including any in-kind services. Indicate what funding sources are secured or pending. The applicant must provide at least 50% matching cost share funding with non-state dollars. In-kind services can be used for 30% of the total projects costs (e.g. *a $100K project, sponsor would have to provide at least $50K in matching cost share funding. Of the $50K, the sponsor could provide up to $30K in in-kind services and $20K in cash to meet the matching cost-share requirement) (10 points)*
- Projects that propose matching cost-share amounts above 50% will receive additional points in the ranking. *(1 point for each additional 1% increase up to 60%, up to 10 additional points)*

Organization Capacity *(20 points)*

- What is the sponsor's history of successful accomplishments on projects similar to this one? The sponsor shall provide several past project examples, if possible. *(10 points)*
- What level of sponsor and consultant staffing will be directed toward the implementation of the proposed project? Discuss the number of sponsor and consultant staff and amount of time dedicated for each for the project. Will the project utilize volunteers? If so, how? Include brief resumes or list of qualifications for each member of the project team. *(10 points)*

Application Process:

Application Submittal Notice: May 21, 2018

Round One Application Deadline: June 15, 2018

Round One Funding Awarded: July 27, 2018 Board Meeting

Round Two Application Deadline: August 17, 2018

Round Two Funding Awarded: September 14, 2018 Board Meeting

Payment Process:

- Funds will be distributed upon sponsor submitting funding reimbursement requests to the IWRB.
- Sponsor funding requests shall include a cover letter which shall include a description of the project activities, dates for performing the project activities, and contractor or supplier invoices.
- A total of 5% shall be retained from each payment request until the project has been completed, and the applicant has fulfilled their deliverable requirements. The 5% award-withholding will be included with the final payment request disbursement.

Project Deliverables:

Entities that receive flood management grant funding will be required to submit monthly progress reports updating the IWRB on project progress, and a final report at the completion of the project. Additionally, entities will be expected to provide completed plans and specifications, bid documents, material testing and sampling reports, and a letter from the sponsor or sponsor's consultant that the project was completed in substantial conformance with the approved plans and specifications. If Flood Management Grant funding is available in the future, sponsor funding requests will not be considered if the sponsor does not comply with the deliverable requirements.

IWRB Districts are as follows:

District No. 1: Boundary, Bonner, Kootenai, Shoshone, Benewah, Latah, Clearwater, Nez Perce, Lewis and Idaho counties.

District No. 2: Adams, Valley, Washington, Payette, Gem, Boise, Canyon, Ada, Elmore and Owyhee counties.

District No. 3: Camas, Gooding, Jerome, Twin Falls, Cassia, Blaine, Lincoln, Minidoka, Lemhi, Custer and Butte counties.

District No. 4: Clark, Fremont, Jefferson, Madison, Teton, Bingham, Bonneville, Power, Bannock, Caribou, Oneida, Franklin and Bear Lake counties.

** No more than 50% ($500,000) of the total budget may be spent within a single IWRB district. This limit may be waived if there are no competing funding demands.*

June 14, 2018

Idaho Water Resources Board
Po Box 83720
Boise, ID 83720

Dear Idaho Water Resources Board,

Flood Control District No. 9 is requesting $90,000 from the Flood Management Grant Funding Program for the Bypass Canal and Bannon Ditch Flood Mitigation Project on the Big Wood River. The Bypass Canal and Bannon Ditch Flood Mitigation Project will mitigate flood damage to irrigation water delivery structures that deliver water to approximately 6,300 acres of irrigated agricultural land south of Bellevue.

Flooding in the Big Wood River in 2017 caused major stream channel changes and severely eroded portions of the Bannon ditch. Now, the altered river channel does not adequately deliver water to the three headgate structures because of erosion and stream channel alignment. The objectives of this project are to mitigate the effects of flooding, alleviate future flood damage, ensure irrigation water delivery, stabilize streambanks, enhance riparian habitat, and reduce the need for ongoing channel manipulations, and improve water quality.

Match funding is provided by Flood Control District No. 9, Trout Unlimited, the Idaho Department of Water Resources 319 program, private fundraising, and volunteer effort.

This project is vital to continued irrigation water delivery to agricultural land in Blaine County and to restore functionality of the Big Wood River in this reach.

Thank you for your consideration.

Sincerely,

Bruce Tidwell
Chair, Flood Control District No. 9

II. General Information:

A. Type of organization: (Check box)

- [x] Flood District
- [ ] Municipality
- [ ] County
- [ ] Other

Flood Control District No. 9
Organization name

Bruce Tidwell, Chairman
Name and title of Contact Person

PO Box 3181
PO Box/Street Address

208-720-1647
Contact telephone number

Hailey, ID 83333
City, County, State, Zip Code

bmtbruce@gmail.com
e-mail address

82-0385294
Taxpayer ID#

Project location/ legal description Bypass canal diversion on the Big Wood River off Glendale Rd. south of Bellevue. Coordinates are 43.429674 N -114.261396 W

B. Is your organization registered with the Idaho Secretary of State's office? Yes [x] No [ ]

C. Purpose and name of project for this grant application.

- [X] Stream Channel Repair
- [X] Stream Channel Improvement
- [X] Flood Risk Reduction
- [X] Flood Prevention
- [ ] Other _____

III. WATER PROJECT/ACTIVITY:

A. Source of water:

- [X] Surface
- [ ] Reservoir
- [ ] Other

B. Describe the Flood Management Project/Activity - What is the primary purpose of this grant application?

The Bypass Canal and Bannon Ditch Flood Mitigation Project will restore stream channel erosion from the 2017 flood, implement instream treatments to prevent future flood damage, and repair the stream channel to enable adequate water delivery.

C. Does this project/activity address multiple objectives? If so explain.

In addition to addressing flood damage and prevention, this project will stabilize streambanks, reduce erosion and sedimentation, and minimize the need for annual channel manipulation for water delivery.

D. Will this flood management project/activity be implemented in a single year, or phased over multiple years?

☒ 1-year ☐ Multiple-years (Phased)

E. Project start and completion date:

Project implementation would begin prior to Nov. 1, 2018. If grant funding is awarded, project elements such as permitting, award of construction bid, and access agreement will begin immediately.

F. Project detailed cost estimate, including all labor and materials:

The total project cost is $273,809. A detailed budget is provided in the application.

G. Has your organization performed stream channel or stream bank repair and/or improvement projects in the past?

Flood Control District No. 9 performs repair and maintenance of levees along the Big Wood River.

H. Provide the required regulatory approval and permit documents for this project.

Subject to Idaho Statute 42-1102, water users of the Bypass canal, Glendale diversion, and Bannon ditch are permitted Rights-of-Way to maintain irrigation water delivery. Stream alteration permit applications will be filed to the Army Corps of Engineers, Idaho Dept. of Water Resources, and Blaine County.

IV. FINANCIAL INFORMATION:

A. Does your organization have a regular assessment for a reserve or special needs fund?

Yes ☐ No ☒

B. Does your organization have prior experience in working with the Idaho Water Resource Board?

Yes ☐ No ☒

C. What other sources of funding have been explored to fund the project? (e.g. U.S. Army Corps of Engineers, NRCS, FEMA, Banks, Local Government, etc.)

Idaho Dept. of Environmental Quality, Blaine County Land, Water, and Wildlife Program

Amount of funds requested: $90,000

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

Authorized signature& date: [signature] 5/14/2018

2.1 Project Background Information

2.1.1 Purpose

The Bypass Canal and Bannon Ditch Flood Mitigation Project will mitigate flood damage to irrigation water delivery structures off the Big Wood River by implementing instream treatments along 1,500 ft. of river. The Baseline Bypass canal, the Glendale diversion, and the Bannon ditch were constructed in the 1920s to deliver water to approximately 6,300 acres of irrigated agricultural land south of Bellevue. Extreme high water in the spring of 2017 severely eroded portions of the Bannon ditch and required emergency instream work to protect the Bypass canal. Now, the altered river channel does not adequately deliver water to the three headgate structures because of erosion and stream channel alignment. The objectives of this project are to implement instream treatments to mitigate the effects of flooding, ensure irrigation water delivery, stabilize streambanks, enhance riparian habitat, reduce the need for ongoing channel manipulations, and improve water quality. These measures will decrease future flood damage by dispersing flow velocity, protecting stream banks, and creating floodplain benches to absorb high flows.

The three delivery structures are managed by Surface Water District 37. Irrigation delivery typically occurs between April 15 and October 31 through control valves and check boards with measuring devices. The Bypass canal was constructed by the Upper Big Wood River Water Users Association in the 1920s to bypass the portion of the Big Wood River that flows subsurface during summer and fall months. The Bypass canal travels south along Highway 75, crosses underneath near Baseline Rd., and continues to irrigate agricultural land in the Bellevue triangle from the Baseline canal. The Bannon ditch was constructed in 1883, and the Glendale diversion was constructed in 1884 to deliver water to agricultural land on the west side of Highway 75. Water delivery through these structures irrigates approximately 6,300 acres and is critical to agriculture and the economy of Blaine County.

Aerial photographs from 1994 – 2014 show that over time, the river channel has changed course and deposited gravel and sediment mid-channel, requiring annual instream work to deliver adequate water supplies. During the flood of 2017, the river's immense volume and velocity severely eroded the western streambank and destroyed 200 ft. of the Bannon ditch. The main force of the river was then focused across the channel directly at the Bypass canal headgate. This emergency situation required protection of the Bypass canal headgate to prevent complete destruction. After flood waters dissipated, an immense instream gravel bar remained and water delivery to the Bypass canal is impeded without major channel manipulation. Emergency stream work has cost the water users $98,000, in addition to annual costs of channel manipulation for water delivery.

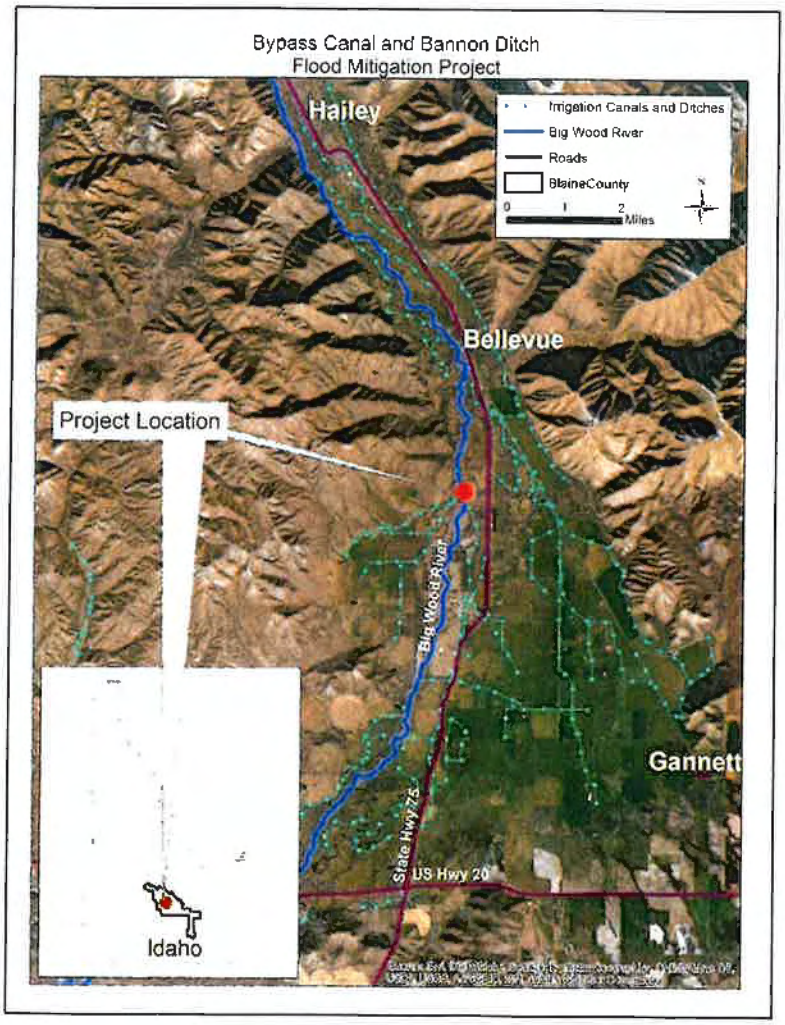
This portion of the Big Wood River is also of concern for the Department of Environmental Quality. The Big Wood TMDL Implementation Plan for Agriculture in the Glendale reach recommends a 34.6% reduction in substrate sediments in this reach to meet beneficial uses of cold water aquatic life, salmonid spawning, recreation, special resource water, and drinking water. Since construction, yearly practices include the use of heavy equipment to manipulate the upstream river channel for water delivery. This ongoing channel manipulation causes sediment pollution to the southern reaches of the Big Wood River, impacting aquatic organisms and their habitat. A watershed assessment study completed in 2015 reported contributions of 0.214 tons/foot/year of sediment in this reach, equating to 321 tons of sediment/year for

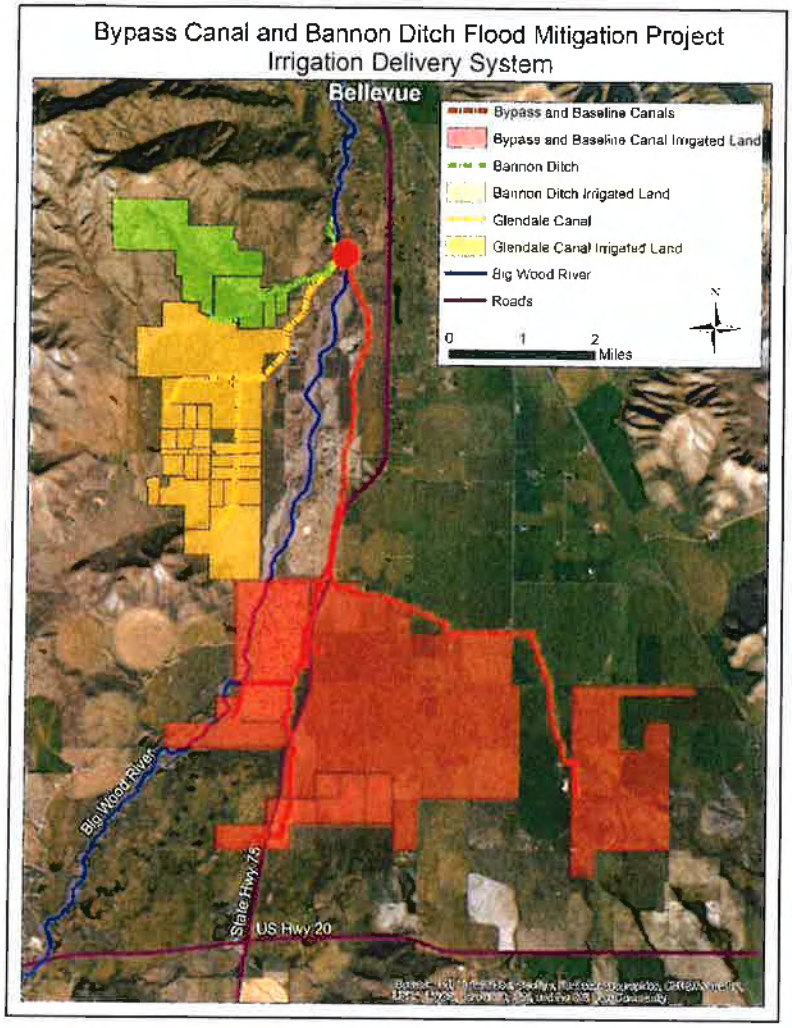
this 1,500-ft. project site. The sediment load reduction will be reduced by 138 tons/year, according to Department of Environmental Quality calculations. Reductions in sedimentation through these instream treatments will support healthy cold-water aquatic life and other beneficial uses.

2.1.2 Project Area Description

a. The project site is approximately 1,500 ft. of the Big Wood River just upstream of the Glendale Bridge along Glendale Rd. approximately two miles south of Bellevue. Irrigated cropland served by these water delivery structures is both east and west of Highway 75 south of Bellevue.

b. Maps





c. Land use surrounding the project site is agricultural and rural residential.

2.1.3 Previous Projects and Studies

Biota Research and Consulting, Inc. 2016. Geomorphic Assessment Report, Big Wood River, Blaine County. Prepared for Trout Unlimited. online https://woodriverlandtrust.org/bigwoodassessmentupdate/

Pentzer, C. 2006. Big Wood River Watershed Total Maximum Daily Load (TMDL) Implementation Plan for Agriculture. Idaho Dept. of Environmental Quality.
online https://www.deq.idaho.gov/media/1117170/big-wood-river-ag-imp-plan-0214.pdf

Rapp, C. F. 2006. Geomorphic Assessment of the Big Wood River. Prepared for Wood River Land Trust.
online http://www.co.blaine.id.us/vertical/sites/%7BBB2A7BCF-1E38-4DB2-AE8E-3A22829A1987%7D/uploads/Rapp_Geomorphic_Assessment_2006.pdf

2.2 Project Sponsor

a. The project sponsor is Flood Control District No. 9 of Idaho, established in Blaine County, Idaho on July 13, 2007. The entity was formed under statues of the Department of Reclamation of the State of Idaho. The formation order is attached.
b. Since 2006, Flood Control District No. 9 has focused its energies on bank stabilization projects partnering with private landowners and municipalities. In 2006 Flood Control District No. 9 spent considerable resources protecting private homes, property and state and county infrastructure fighting to maintain two significant levees on the Big Wood River during peak flow. In 2017 the largest expenditure went to stabilizing one levee during and after peak flow. This levee also protects private homes, property and county and municipal infrastructure.
c. The majority of Flood Control District No. 9 revenue is levied from property taxes. The District recently received a private donation for the first time in the entity's existence. 2017 tax revenue was approximately $46,000.
d. Flood Control District No. 9 does not own any significant assets of real estate or machinery. The District is the local sponsors of six USACE levees located on the Big Wood River in the southern portion of the valley. Five of these levees are on private property and the sixth is on private and city owned property.

Trout Unlimited is a primary project partner and has experience in Idaho and nationwide completing restoration, flood mitigation, and irrigation projects. For more than a half century, Trout Unlimited—a grassroots sportsmen's conservation organization—has worked to improve trout and salmon habitat across the United States. Today, Trout Unlimited is the premier 501c(3) coldwater conservation organization in the United States, with more than 300,000 members in more than 30 states. Trout Unlimited is also is an acknowledged leader in collaborating with the agricultural producers in the West to find creative solutions that benefit both fisheries and producers' bottom lines. Trout Unlimited partners with farmers, ranchers and irrigation companies on pragmatic, voluntary, and market-driven solutions that benefit agricultural operations as well as fish and wildlife habitat. In Idaho, Trout Unlimited has successfully completed numerous projects in the Yankee Fork, Pahsimeroi, Lemhi, Blackfoot, and Upper Snake, and Wood River basins.

Big Wood River Project Manager, Keri York, will be the primary staff implementing this project, as a partner with Flood Control District No. 9. The Flood Control District will administer this grant and provide support as needed. As the Big Wood River Project Manager, Ms. York coordinates and manages restoration and water conservation projects in the Big and Little Wood River basins. She has successfully implemented projects that address aquatic habitat and irrigation water delivery on Rock Creek, a tributary to the Big Wood River. Ms. York administers the Wood River Water Collaborative, was an initial staff member on the Hailey Greenway Master Plan, and was involved in the Hulen Meadows restoration and recreation planning efforts. As a project partner, she also helped direct the Wood River Geomorphic Assessment. She completed numerous conservation easement and land management projects with private landowners and agricultural producers for 10 years in her previous position at Wood River Land Trust. Ms. York's staff time as project manager is included in the overall project budget and will be provided by Trout Unlimited and the Department of Environmental Quality matching funds.

Other affected stakeholders in this project include water users along the delivery systems, appropriate state and local agencies, and interested conservation groups. The Upper Big Wood River Water Users Association, which manages the Bypass canal has been consulted on this project and has provided a letter of support. Additional letters of support are provided by Water District 37, Trout Unlimited, Idaho Dept. of Fish and Game, and Wood River Land Trust. We appreciate the Board's consideration of these support letters with a different project title, 'Big Wood River Sediment Reduction and Water Delivery Project.' Water users along the Bannon ditch and Baseline canal, including Glendale Farms LLC, and Brown Ranches have been consulted. Idaho Dept. of Fish and Game Regional Fisheries Manager and Idaho Dept. of Water Resources State Coordinator for the Stream Protection Program have also been consulted.

2.4 Project Description

2.4.1 Project Description

a. Project Description

The Blaine County Flood Control District proposes to implement instream treatments and Best Management Practices to mitigate damage caused by the 2017 flood and reduce future damage from high flows. Water delivery to the three control structures will be re-established by restoring historic river channel morphology and flow direction. By using information from previous studies, including the Big Wood River Geomorphic Assessment Report, Biota Research and Consulting has completed a design that is aligned with the natural geomorphology of the Big Wood River in this location. Implementation of a design that is based on

A primary eastern river channel will be reactivated to direct flow towards the Bypass canal, which delivers most of the irrigation water. Appropriate deflector structures and grade control will be applied to the eastern channel. A riffle/pool sequence will be created to effectively transport sediment storage areas for removal. A secondary western channel will remain to deliver water to the Glendale diversion and Bannon ditch and for high flows. These two channels will distribute flow proportionally and prevent the entire river's velocity from damaging the Bypass canal headgate, which occurred in 2017. Portions of the Bannon ditch that were eroded in 2017 have been replaced with pipe. As part of this project, the streambank will be reconstructed and the pipe protected from further erosion and damage.

Streambanks will be established with woody structures to reduce erosion and create aquatic and riparian habitat. These structures use root wads, tree clumps, woody shrubs, or logs to stabilize banks, and transplanted woody clumps will increase bank roughness. Using wood to accomplish bank stabilization increases hydraulic roughness of the channel and reduces near-bank flow velocity and erosion. Transplanted willow clumps and willow stingers will be installed to establish a root matrix and growth of young plants. Porous matrix logjams using available woody debris will stabilize the upstream end of the gravel bar separating the east and west channels. Floodplain benches will be created to absorb high flows, promote bank stability, and floodplain sediment deposition. Creation of floodplain along the western channel will also enhance and restore riparian and aquatic habitat.

Along the eastern channel, a sediment storage area will be created to enable sediment extraction without significantly disturbing the streambed. Minimal sediment removal will likely be required due to the high input from upstream reaches and the need to prevent blockage of the Bypass Canal diversion. A heavy use protection area (haul road) will be created with appropriate materials to minimize the impacts of sediment extraction upstream of the headgate.

Streambank vegetation has additional benefits of filtering nutrients from runoff and reducing instream temperatures. Stormwater and runoff from agricultural fields flows through riparian vegetation and infiltrates into groundwater or flows directly into surface water. Roots and stabilized soil capture Phosphorus and other nutrients, improving water quality. Woody trees and shrubs planted along streambanks cools instream temperatures, which can be elevated to levels of concern for trout species during late summer months.

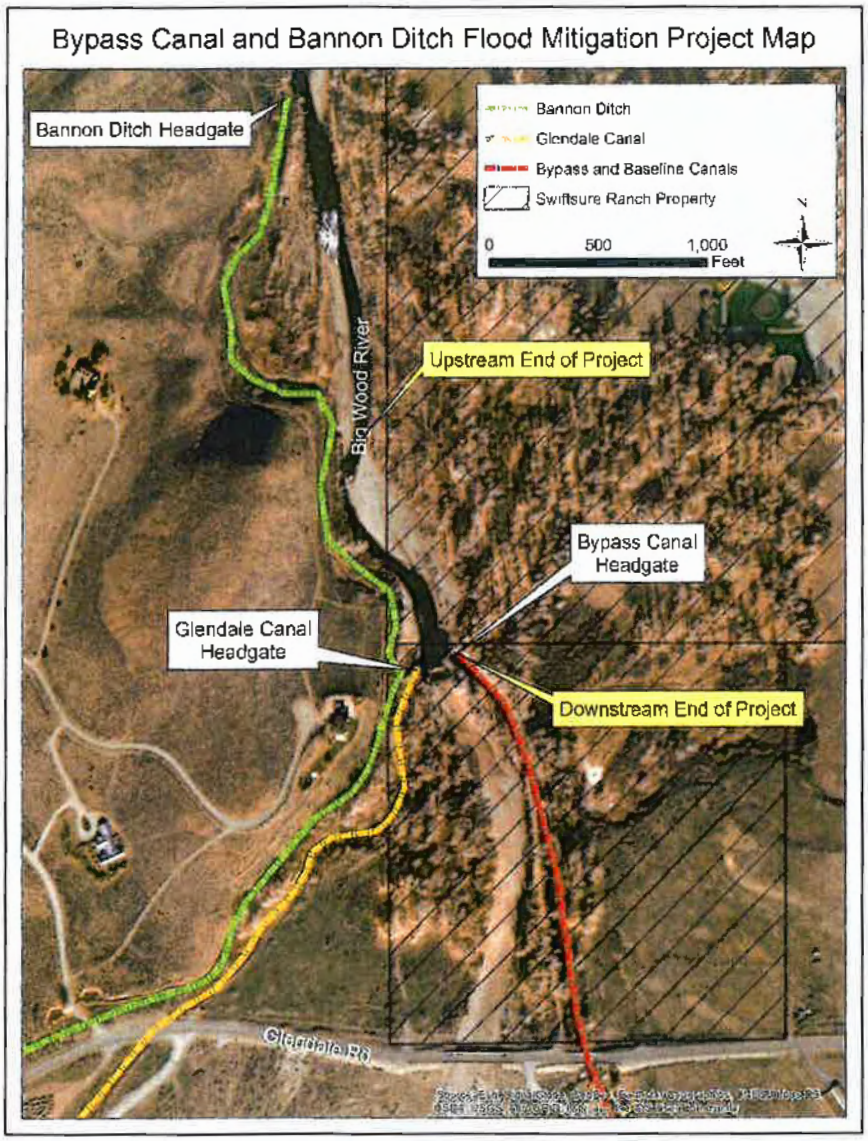
Success will be measured by the reduction in ongoing damage to the Bannon ditch and pipeline. Pipeline that was installed due to flood damage is inundated by high flows in 2018 and will continue to be threatened unless the streambank is reconstructed and stabilized with vegetation. Success will also be measured by the reduction in the amount of instream work required to deliver water to the Bypass canal and protect it during extreme high water. By designing instream treatments according to the river's geomorphology, the proposed solution will be long-term and will address flood mitigation as well as environmental issues. The incorporation of multiple channels will disperse velocity and lessen high flow impacts on headgate structures and streambanks. Sedimentation and other water quality indicators will continue to be monitored by the Department of Environmental Quality through their BURP program.

During construction, the project will be monitored onsite daily by project partner, Trout Unlimited, and a contracted engineer or geomorphologist to ensure design specifications are followed. Prior to the project, photopoints will be established to provide qualitative information documenting changes to structures, vegetation, and specific features over time. Baseline photographs and drone imagery will identify existing conditions, and photographs will be taken after construction and thereafter annually to monitor the project. Photographs and annual site visits by Trout Unlimited will determine if any project maintenance is required. The Department of Environmental Quality will continue its water quality monitoring on the Big Wood River and provide information in its TMDL documents regarding reductions in sediment load and other parameters.

This project is aimed at mitigating impacts of the 2017 flood while providing a long-term solution for irrigation water delivery and improved river conditions. The benefits include reliable irrigation delivery to the Bypass canal, Bannon ditch, and Glendale diversion; reduction in annual channel manipulation and associated costs; improved streambank stability and riparian habitat; and reduction in sedimentation to the river. If this project does not occur, the river will exist in its current state and will be manipulated annually for water delivery, adding a financial burden to irrigators. High flows and flooding will continue to damage irrigation structures, contribute sediment load to the system, and require ongoing channel manipulation. The ongoing struggle to deliver adequate irrigation water to the three points of diversion will remain. Through

collaboration between the Blaine County Flood Control District, agricultural water users and Trout Unlimited, this project will be a leading effort in the basin and southcentral Idaho. Local contractors and consultants will be hired for engineering, construction, and sourcing materials wherever possible.

b. Map



c. Conceptual Plan/Cross Section

Please see attached Sheets 5 – 7 with Conceptual Design Plan and Cross Section.

d. Conceptual Design and Repair Features

The conceptual design and plan uses repair features that will mitigate impacts of the 2017 flood, alleviate future flooding, and enhance riparian and aquatic habitat. Along the western channel,

floodplain benches, floodplain wood structures, and meander bend structures will be installed to reactivate the floodplain, protect the streambank, and reconstruct the damaged portion of the Bannon ditch. The main channel will be realigned along the eastern bank, and deflector structures will be constructed along the channel to protect the eastern streambank and mid-channel gravel bar. Sediment storage areas will be created for annual sediment removal. A haul road will be constructed to access sediment storage areas. An instream riffle/pool sequence will be created to transport sediment not contained by the sediment storage areas. A pool will be created upstream of the Bypass canal diversion to flush transported sediment past the headgate.

e. Right-of-Way / Easement

Subject to Idaho Statute 42-1102, water users of the Bypass canal, Glendale diversion, and Bannon ditch are permitted Rights-of-Way to maintain irrigation water delivery. An access agreement with Swiftsure Ranch on the east side of the Big Wood River will be completed prior to any construction or implementation work.

2.4.2 Cost Estimate

Construction cost estimates are based on a bid from Biota Research and Consulting (see attached Sheet 12).

Bypass Canal and Bannon Ditch Flood Mitigation Project Budget

Subcontract Costs - Design	**Total Cost**
- Preliminary Design Development	$3,200.00
- Final Design, Engineering Analysis	$15,070.00
Subtotal	$18,270.00
Subcontract Costs - Permitting	$5,400.00
- FEMA CLOMR	$18,960.00
Subtotal	$24,360.00
Subcontract Costs - Installation	
- Construction Admin - Staking	$32,437.00
- River and Floodplain Restoration	$162,183.00
Contingency (15%)	$15,000.00
Subtotal	$209,620.00
Monitoring	
- Drone footage and post-processing	$1,000.00
- Water delivery monitoring by Dist 37 and users	$250.00
Subtotal	$1,250.00
Project Management	$6,876.00
Legal, Administrative, and Indirect Costs (4.9%)	
- Project Administration	$565.20
- Legal Counsel	$241.10
- Indirect	$12,627.17
Subtotal	$13,433.47
TOTAL	**$273,809.47**

2.4.3 Implementation Schedule

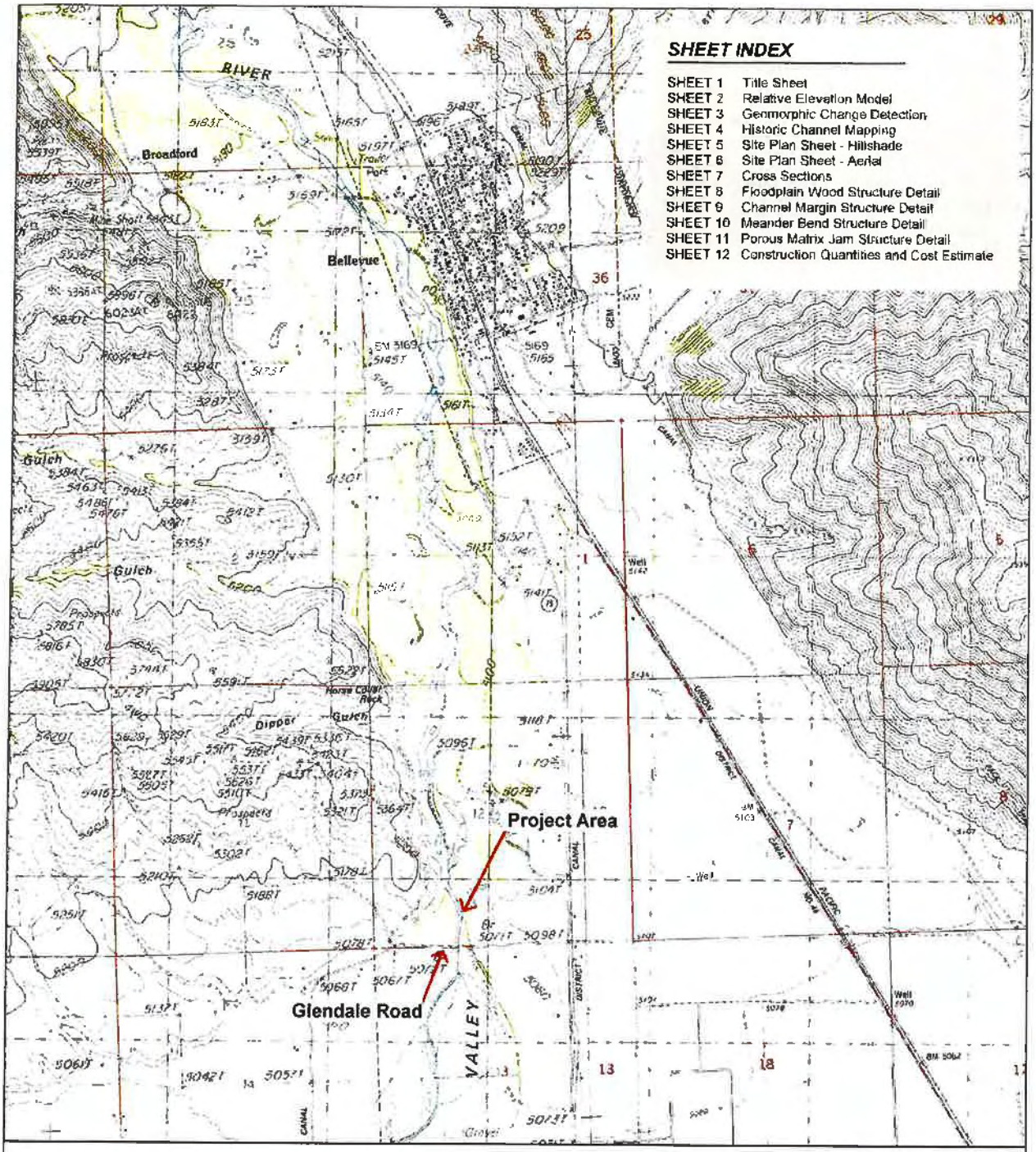
Task	Start Date	End Date
Final Design	August 1, 2018	August 15, 2018
Permitting and Regulatory Review	August 15, 2018	October 15, 2018 or sooner
Finalize Access Agreement with Swiftsure Ranch	June 15, 2018	August 15, 2018
Construction Bid Evaluation	June 15, 2018	July 15, 2018
Pre-Construction Monitoring	October 1, 2018	October 15, 2018
Construction	October 15, 2018	November 1, 2018
Post-Construction Monitoring	November 1, 2018	Annually thereafter

2.5 Financial Feasibility Analysis

The total cost for this project is estimated at $273,809. The request to Idaho Water Resources Board is $90,000 (33%). Match funding is provided by Flood Control District No. 9, the Idaho Department of Environmental Quality 319 Program, and Trout Unlimited. A grant has been awarded to Trout Unlimited in the amount of $64,864 from The Idaho Department of Environmental Quality through the 319 Agricultural BMP Program. Clean Water Act 319(h) grant funds through the federal Environmental Protection Agency are provided to qualifying states to administer nonpoint source pollution management programs. These funds are appropriated annually through Congress. In 2018, §H. R. 1625—322 under Public Law 115-141 (the fiscal year 2018 omnibus appropriations bill) appropriated funds for the Environmental Protection Agency under section 319 of the Federal Water Pollution Control Act https://www.congress.gov/115/bills/hr1625/BILLS-115hr1625enr.pdf.

Please see attached letter from Trout Unlimited committing $25,959.47 of in-kind match. Cash match in the amount of $72,986 will be provided by Trout Unlimited, Flood Control District No. 9, and private fundraising.

Funding Source	Amount
Idaho Water Resources Board	$90,000
Flood Control District No. 9	$20,000
Idaho DEQ 319 Program	$64,864
Trout Unlimited In-Kind	
Project Management, Legal, Permitting, Administrative, Indirect, and Volunteers	$25,959.47
Private Fundraising	$72,986
Total	**273,809.47**



Project Description:

The Glendale Bypass project area is located on the Big Wood River approximately 2.4 miles south of Bellevue, Idaho. The area is within the unincorporated Blaine County in Township 01N, Range 18E, Section 12. The Big Wood River in this reach has been directly altered by anthropogenic activities that include encroachment on the floodplain; clearing of riparian vegetation; removal of instream woody debris; channel straightening; construction and maintenance of flood control berms and levees; installation of rip rap and bank armoring; and the establishment of transportation crossings. The result of these activities is an unstable river system that is highly dynamic and prone to severe deposition and bank erosion. Because of this the Glendale Bypass Diversion and other diversions in the project area require ongoing instream manipulation to continue operations. Bank erosion has also completely eroded an approximately 200 ft section of a ditch in the project area (Bannon Ditch). The overall goals of the project are to create a stable and functional channel that provides reliable delivery to the Bypass canal and other diversion points while improving habitat quality, decreasing the need for ongoing instream channel manipulation, and improving water quality.

Project Locator Map

Blaine County, Idaho

Big Wood River Restoration Project,
Glendale Bypass Area
Blaine County, Idaho

SHEET 1

Scale: 1 inch = 2,000 feet
Township 01N Range 18E Section 12
USGS Bellevue Quadrangle

Biota

PO Box 8578, 140 S Broadway, Suite 23, Jackson, WY 83002

THE BOARD OF BLAINE COUNTY COMMISSIONERS

206 FIRST AVENUE SOUTH, SUITE 300
HAILEY, IDAHO 83333
PHONE: (208) 788-5500 FAX: (208) 788-5569
www.blainecounty.org bcc@co.blaine.id.us

Angenie McCleary, Chairman * Lawrence Schoen, Vice-Chairman * Jacob Greenberg, Commissioner

June 15, 2018

Idaho Department of Water Resources
Attn: Mr. Neeley Miller
P.O. Box 83720
Boise, ID 83720

Dear Mr. Neeley and Selection Committee,

Blaine County is requesting Idaho Water Resource Board grant funding for the Della View Subdivision Flood Mitigation Project. The total cost of the project is estimated to be $306,334.00 and Blaine County is requesting $121,331.00 and with the help of the City of Hailey and Flood Control District Number 9, will match the remaining $185,003.00.

The Della View Subdivision Flood Mitigation Project is a flood reduction project consisting of two areas of treatment where the two smaller areas of treatment will be completed together to achieve a more positive outcome for the residents of Della View Subdivision and the now yearly flooding from the Big Wood River. By activating a side channel on the Big Wood River next to Della View Subdivision and developing conveyance channels in the subdivision, Blaine County and the City of Hailey hope to reduce the amount of flooding and the duration of flooding in the area.

Enclosed please find the Idaho Water Resource Board Grant Application and supporting documents per the application requirements. We appreciate your time and consideration for our application and process. If you have any questions about our application, please contact Chris Corwin, Blaine County Emergency Disaster Services Coordinator at (208) 788-5508 or by email at ccorwin@co.blaine.id.us.

Sincerely,

Angenie McCleary
Chairman

Lawrence Schoen
Vice-Chairman

Jacob Greenberg
Commissioner

APPLICATION FOR FLOOD MANAGEMENT GRANT

II. General Information

A. Type of Organization: (Check box)

- ☐ Flood District
- ☐ Municipality
- ☒ County
- ☐ Other

Blaine County
Organization Name

Chris Corwin, GIS Analyst/Disaster Services
Name and title of Contact Person

206 1st Avenue South
PO Box/Street Address

208-788-5508
Contact telephone number

Hailey, Blaine, Idaho, 83333
City, County, State, Zip Code

ccorwin@co.blaine.id.us
e-mail address

82-6000283
Tax Payer ID#

B. Is your organization registered with the Secretary of State's office? ☒ **Yes** ☐ **No**

C. Purpose and Name of Project for this Grant Application.

- ☐ Stream Channel Repair
- ☐ Stream Channel Improvement
- ☒ Flood Risk Reduction
- ☐ Flood Prevention
- ☐ Other _____

Name of Project: Della View Subdivision Flood Mitigation Project

III. Water Project/Activity

A. Source of Water

- ☒ Surface
- ☐ Reservoir
- ☐ Other

B. Describe the Flood management Project/Activity – What is the primary purpose of this grant application?

The project has two areas of treatments that will work together to lower flood levels and reduce the flood duration in the Della View Subdivision. The first treatment is a side channel activation of the Big Wood River next to the subdivision. The second treatment is the installation of a connected system of floodwater conveyance ditches along War Eagle Dr., Triumph Dr. and through Heagle Park.

C. **Does this project/activity address multiple objectives? If so explain.**

Yes the project addresses multiple objectives. This project will: 1.Mitigate flood impact to public property, such as undercutting and/or erosion of roadways, 2. Mitigate flood impact to City park lands and park amenities, 3. Mitigate flood impact to private property, such as driveway access and landscape damage, 4. Mitigate duration of flood events, allowing homeowners to stay in their homes, 5. Reduce expense of annual City flood response activities (road closures, sandbags, personnel, etc.), 6. Reduce expense associated with repair of damages to public and private property, 7. Reduce the occurrence of questionable and/or unlawful private property flood mitigation activities and 8.Create momentum to implement complementary projects to restore floodplain function and increase resiliency to flood events.

D. **Will this flood management project/activity be implemented in a single year or phased over multiple years?**

☒ 1-year ☐ Mutiple-years (Phased)

E. **Project start and completion date:**

June - July 2018	Design
July 27, 2018	Funding Awarded
August – September 2018	Permitting
October 29, 2018	Construction Commence
November – December	Construction Completed

F. **Project detailed cost estimate, including all labor and materials:**

See attached budgets

G. **Has your organization performed stream channel or stream bank repair and/or improvement projects in the past year?**

Yes, in the spring of 2017 Blaine County completed emergency stream bank repair in two other locations, separate from the project site on the Big Wood River. For this project, Blaine County will contract out the stream channel and bank repair work to a qualified firm.

H. **Provide the required regulatory approval and permit documents for this project.**

The project would require authorization under Section 404 of the Clean Water Act. This would be accomplished through submittal of a Joint Application for Permits that would be delivered to the Army Corps of Engineers and ID Department of Water Resources. The Corps would likely authorize this work under Nationwide Permit 27. IDWR would likely authorize this work through issuance of a Stream Alteration Permit. The project treatments would be located on Hailey City property, so would likely require a decision and approval to proceed on the part of the City Council. The project treatments are located in the county, so would require a Blaine County Stream Alteration Permit. Since the project is located outside of the mapped floodway, a No-Rise Certification is not expected to be needed. If base flood elevations (BFEs) are modified more than 1-ft, a Conditional Letter of Map Revision (CLOMR) may be required to be submitted to and approved by FEMA prior to construction and a Letter of Map Revision (LOMR) after construction is completed.

IV. Financial Information:

A. **Does your organization have a regular assessment for the reserve or special needs fund?**

☒ Yes ☐ No

B. **Does your organization have prior experience in working with the Idaho Water Resource Board?**

☒ Yes ☐ No

C. **What other sources of funding have been explored to fund the project? (e.g. U.S. Army Corps of Engineers, NRCS, FEMA, Banks, Local Government, etc.)**

For this project, we have applied for funds from the FEMA Hazard Mitigation Grant Program.

Amount of funds requested: $121,331

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

Authorized signature & date: 6/15/18

ATTEST
JoLynn Drage
Blaine County Clerk

BOARD OF COUNTY COMMISSIONERS
BLAINE COUNTY IDAHO
SEAL

Della View Subdivision Flood Mitigation Project Grant Document

Purpose:

The Della View Subdivision Flood Mitigation Project is a flood reduction project consisting of two areas of treatment. It is two smaller areas of treatment will be completed together to achieve a more positive outcome for the residents of Della View Subdivision and the now yearly flooding from the Big Wood River. The cost of the project is estimated to be $306,334. Blaine County is requesting $121,331 from the Idaho Water Resource Board. The project would accomplish the objectives of both reducing the amount of flooding in the Della View Subdivision and reducing the duration of the flooding in the subdivision. During the winter of 2016-2017, the Big Wood River watershed received record amounts of snow. In the spring of 2017, the runoff from the snow melt caused extreme changes in the course and profile of the Big Wood River flood plain. The Della View Subdivision was most affected by these changes. In 2017, the neighborhood experienced the worst flooding in its history, causing nearly $750,000 in private property insurance claims. The City incurred $200,000 in expenses for flood response and clean-up. In the spring of 2018, with a near normal snowpack and an approximately average runoff, the Della View Subdivision was once again flooded by the waters of the Big Wood River. The changes in the river from the 2017 floods are now causing flooding at a much lower flow and likely on a regular basis in the future. Due to this change in the flow of the Big Wood River, there is an urgency to complete this project by next runoff. Not only are the citizen's homes threatened by this level of flooding but so is public infrastructure. War Eagle Drive in Hailey continues to have river water erode its shoulder and to flow over the road during normal spring runoff. With water flowing over the road, public safety response and public services like trash and school buses are unable to safely service this area. This project is important because it will reduce the amount of flooding and the duration of the flooding in the Della View Subdivision, lessening the impact to the citizen who live there. The project would require authorization under Section 404 of the Clean Water Act. This would be accomplished through submittal of a Joint Application for Permits that would be delivered to the Army Corps of Engineers and ID Department of Water Resources. The Corps would likely authorize this work under Nationwide Permit 27. IDWR would likely authorize this work through issuance of a Stream Alteration Permit. The project treatments would be located on Hailey City property, so would likely require a decision and approval to proceed on the part of the City Council. The project treatments are located in the county, so would require a Blaine County Stream Alteration Permit. Since the project is located outside of the mapped floodway, a No-Rise Certification is not expected to be needed. If base flood elevations (BFEs) are modified more than 1-ft, a Conditional Letter of Map Revision (CLOMR) may be required to be submitted to and approved by FEMA prior to construction and a Letter of Map Revision (LOMR) after construction is completed.

Project location/ legal description

The project is located within Blaine County in and next to the Big Wood River. The work within the Big Wood River will be completed in a side channel, next to the Della View Subdivision. The conveyance work is within the Della View Subdivision, along War Eagle Drive, which is located in the City of Hailey and next to the Big Wood River. A platted right of way in Della View Subdivision recorded on November 30, 1970 (Blaine County Instrument 137447). The two area of treatment are approximately 500 feet

from each other. The centroid GPS coordinates of the project are 43°30'28.28"N and 114°18'53.63"W. The project area is a residential subdivision and next to a public park (Heagle Park) that is within the subdivision. The land owner of the location of the project is the City of Hailey. City of Hailey will complete the flood conveyance portion of this project within its right of way on War Eagle Drive. City of Hailey has given Blaine County approval to complete the stream channel restoration part of the project on its parcel, RP02N180163500 (Legal Description: Tax Lot 9338, Blaine County Instrument Number 621803).

Previous Projects and Studies

Attached to this application are three recent studies that have been completed within the Big Wood River. The first was a Geomorphic Study of the Big Wood River in 2014. Also in 2014, a Technical Assistance Report on flood potential Blaine County after the Beaver Creek Fire was completed. The Army Corps of Engineers also completed another Technical Assistance Report for the City of Hailey in 2017 during the flood. There was also a report done by Harmony Engineering for the City of Hailey in 2017, which was incorporated into the Hailey Greenway Master Plan.

Project Sponsor

Blaine County is a county government in the state of Idaho. In 1895, Blaine County was created by the Idaho State legislature by combining Alturas and Logan Counties. It was a large county consisting of five other present-day counties, Lincoln, Gooding, Minidoka, Jerome and Camas. Blaine County's current boundaries were established on February 8, 1917 as described in Idaho Code 31-109. Blaine County was formed under The Idaho Constitution – Article XVIII and Idaho Statutes Title 31 contains Idaho Code pertaining to counties.

Prospectors entered the Wood River area soon after the beginning of the 1862 Boise Basin mining boom. The County's first permanent settlers were farmers who arrived in 1879. The 1880 Wood River mining boom brought the first large population influx, including a significant number of Irish, Welsh, German and Chinese immigrants. Also starting in 1880, was the feeding and shipping of sheep. By 1900, more than 2 million sheep had been raised or trailed through the Wood River Valley. With the construction of Sun Valley Resort in 1936, Blaine County experienced a second boom. Averell Harriman, Chairman of the Board of the Union Pacific Railroad, conceived the idea of establishing, near Ketchum, a first-class resort for skiers, the first in the United States. Blaine County's topography, geographic location and seasonal variation in climate create a unique and varied natural environment, ranging from the scenic, high alpine country in the north to the desolate lava plains and high-desert mountains in the south. As a recreational area, Blaine County is known throughout the world for the quality and beauty of its natural environment and recreational opportunities.

Blaine County's revenue source is from assessments. Blaine County is a local government that provides public services to the citizens of Blaine County, Idaho. Blaine County has a three person county commissioner's board and a county administrator. Blaine County has approximately 20 different departments and 166 employees. The departments include: Administrative Services, Assessors Office, Commissioners Office, Coroner, County Services, County, Emergency Communications, DMV, Elections, Facilities, GIS, Information Technology, Land Use and Building Services, Probation, Prosecuting Attorneys, Clerk/Recorders, Recycling, Road & Bridge, Sheriff, Treasurer and Weed Department. Blaine County has an official County Code that was last updated by ordinance 2018-03, passed February 13,

2018. In the county code under Chapter 7 is the county commissioner bylaws. Given the size of Blaine County workforce and with their knowledge and experience, Blaine County has the organizational capacity to undertake and complete the project described in this application. Blaine County's project lead, Chris Corwin, has worked on several FEMA grants within the past 18 months, including the Emergency Management Program Grant, State Homeland Security Grant Program and the Hazard Mitigation Grant Program. Chris will work with other county staff including the county engineer and flood plain manager to ensure the work being complete meets both engineering standards and flood plain regulations. The amount of time that will need to be dedicated to this project is difficult to determine at this time but Chris has the flexibility in his job responsibilities to be able to put the needed time to complete the project timely, efficiently and properly. The project will take place on a parcel of land that falls within Blaine County's jurisdiction and within City of Hailey's jurisdiction. We are partnering with City of Hailey to complete the part of this project that takes place within their incorporated city limits. The local flood control district number 9 has provided a letter of support along with financial support as documented in the letter and in the financial analysis.

Project Description

The first area of treatment is a project that would activate a side channel on the west side of the Big Wood River across from Heagle Park in the Della View Subdivision. This would be done by excavating material to clear the historic overflow channel against the Della Mountain hillside and installing sufficient rock grade control structures to prevent enlargement of the re-established secondary channel. This project also includes selective clearing of debris. Debris configurations that impede establishment of the functional channel form would be modified and debris configurations that complement the functional channel form would be allowed to remain in place. For example, debris that would otherwise impair conveyance into the re-established secondary channel would be removed. Debris that is stabilizing banks would remain in place. Existing debris would be evaluated on a case-by-case basis to determine if debris is complementing or detracting from the design functional channel form. Monitoring of the completed project would be completed annually by Blaine County's engineer each fall to determine if any maintenance work needs to be completed in the treatment area.

The treatments objectives were identified based upon existing site conditions, previous assessments, land use constraints, and fluvial system potential. Project objectives include the following: 1. Restore side channel connectivity; 2. Increase floodwater conveyance capacity; 3. Minimize channel avulsion potential; 4. Identify self-maintaining treatments that maximize the ecological values of the Big Wood River.

The benefits of the treatment of the activation of the Heagle Park side channel provides an opportunity to improve riverine conditions while benefitting proximate land uses. The design plans were developed to achieve objectives of improved side channel connectivity and increased flood flow conveyance.

The second area of treatment is a project that consists of installing a connected system of floodwater conveyance ditches along War Eagle Dr., Triumph Dr., and through Heagle Park. The ditch designs vary depending on their location. Where there are no driveway or street crossings, the new ditches use either compacted structural backfill, or a combination of two sizes of crushed rock. At driveway crossings (three on War Eagle) and where the ditch crosses War Eagle at Triumph, the City will install concrete trench drains with traffic-rated grates. Although more costly, the concrete trench drains are

the best choice at these locations; they will reliably convey a significant amount of water. Culverts are not a good option because elevations and utilities at the crossing locations would dictate a tiny culvert size. Such culverts would be overwhelmed with water at very low flow levels. Concrete trench drains have the value-added benefit of being easily cleaned (just remove the grate), and they are also sturdy and immobile, which contributes to protecting against erosion of asphalt edges. Final design will involve further detailed analysis of this concept to fully prove out the cost-benefit, along with consideration of potential alternatives for the crossings.

The ditches along War Eagle and Triumph will convey floodwater to two conveyance ditches through Heagle Park: one on the far-east side of the park (natural ditch created by the 2017 flood will be modified to a permanent ditch under this project), and a new ditch on the far west side of the park. These new ditches in the park terminate to unoccupied, lower elevation, City-owned lands to the south, conveying all floodwaters back towards the Big Wood.

Conveyance Ditches will flow approximately 16.18 cfs at 2.31 ft/sec using a slope of 0.5% and a Manning's roughness of 0.035. Preliminary project slopes range from 0.5% up to 2.0%, with the exception of the conveyance ditch on the north side of War Eagle which has a minimum preliminary slope of 0.35% to match existing topography. The structural channels will convey greater than 16 cfs due to the reduced Manning roughness coefficients of the structure material. Additional flow calculations and channel details will be refined during final design.

Approximately 1,282 cubic yards of material will be removed from floodplain for construction of the conveyance ditches, and they will disturb approximately 3,500 square yards of roadside area. Imported structural gravel will be used to line the ditches after initial shaping and will consist of uniformly graded fractured material sourced from local gravel pits. Subgrade and structural gravel will be compacted to 95% maximum laboratory density as defined by AASHTO T-99 to minimize future erosion.

The proposed project is intended to mitigate lower-flow flooding, which is much more common in the neighborhood than large, disaster-level flood events as were experienced in 2017. These lower-flow events are now expected to occur annually. For example, this year (a low snow year), the Big Wood at this location overtopped its banks at a mere 3.8 feet, causing flooding in the neighborhood. The historic flood stage at this location is 6 feet. The streets and neighborhood have been experiencing flooding for more than a month. Installing the proposed infrastructure has the following benefits:

- Mitigate flood impact to public property, such as undercutting and/or erosion of roadways
- Mitigate flood impact to City park lands and park amenities
- Mitigate flood impact to private property, such as driveway access and landscape damage
- Mitigate duration of flood events, allowing homeowners to stay in their homes
- Reduce expense of annual City flood response activities (road closures, sandbags, personnel, etc.)
- Reduce expense associated with repair of damages to public and private property
- Reduce the occurrence of questionable and/or unlawful private property flood mitigation activities
- Create momentum to implement complementary projects to restore floodplain function and increase resiliency to flood events

All work will be performed along existing roadsides or other previously disturbed areas during the dry season with no water present. Because of this, turbidity and other water quality issues will not be present, and compaction/stabilization can occur using conventional earthwork techniques. There are no other factors that require special consideration other than the use of low profile conveyance structures to prevent underground conflicts with existing utilities. City of Hailey's public works director and engineer will work with his streets department to do annual inspections of the work to monitor any changes to the work that was completed.

All project locations are owned by the City of Hailey. No right of way acquisition or easements are required to implement the project. A City of Hailey Flood Hazard Development Permit is the only permit required for this part of the project, and is attached to this application. City of Hailey has given Blaine County approval to complete the stream channel restoration part of the project on its parcel, RP02N180163500 (Legal Description: Tax Lot 8338, Blaine County Instrument Number 621803).

Please see the attached concept plans in Appendix C and D of each treatment for more details.

Cost Estimate

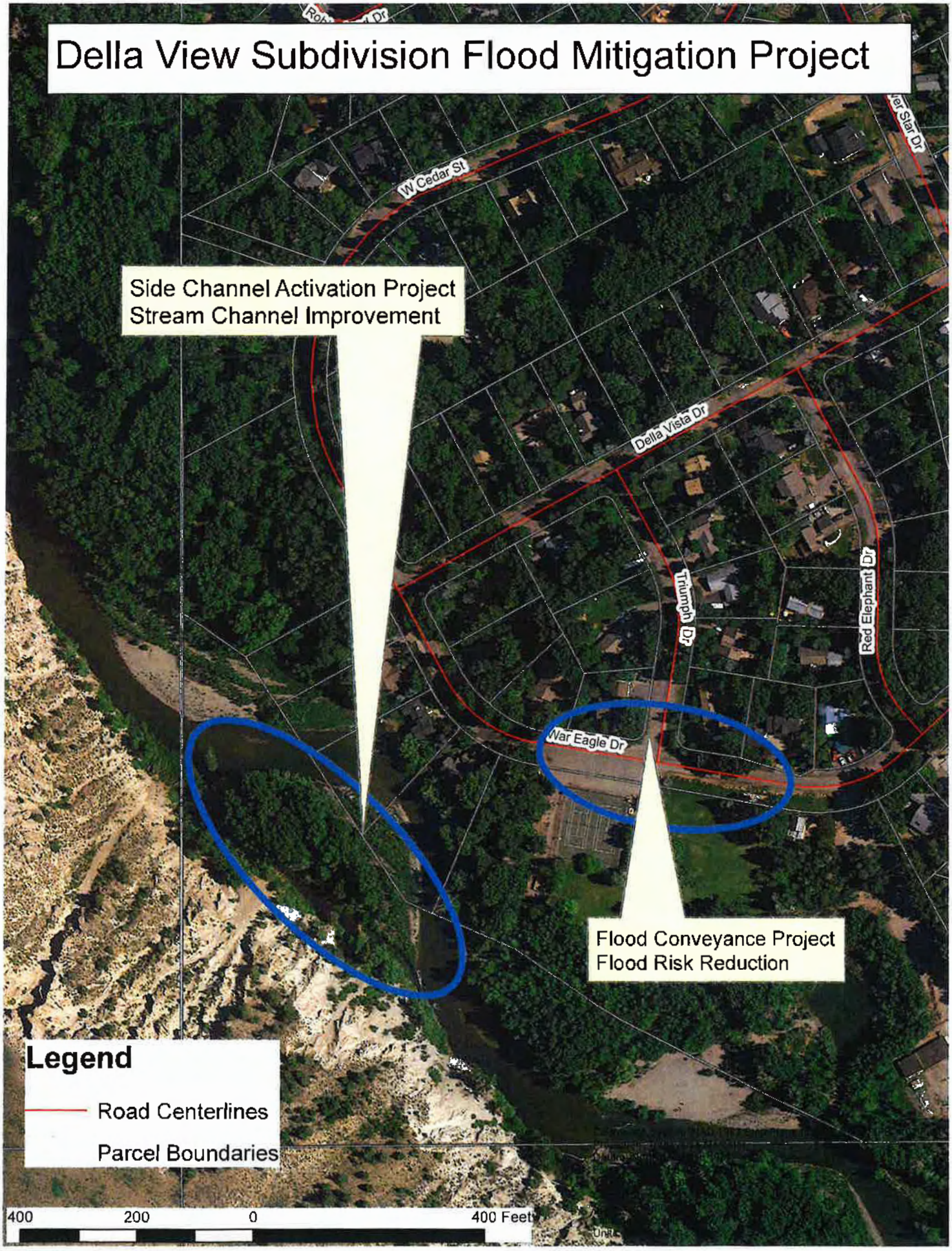
We have attached two documents. Each document is a detailed cost estimate of each treatment of the project. They can be found in Appendix B.

Implementation Schedule

June - July 2018	Design
July 27, 2018	Funding Awarded
August – September 2018	Permitting
October 29, 2018	Construction Commence
November – December	Construction Completed

Financial Feasibility Analysis

The total project cost is $306,334. The Idaho Water Resource Board grant request is $121,331. As show on the two attached budget spreadsheets, the City of Hailey will contribute $79,000 cash to the project and $7,779 of in-kind services, which included $1431 of administrative services. Blaine County will contribute $60,000 cash to the project and $13,224 of in-kind grant administrative services. This cost is not listed in the Biota project budget. Flood Control District Number 9 has agreed to also contribute $25,000 cash to the project. The total matching fund is $185,003 or 60.4%.


Della View Subdivision Flood Mitigation Project
W Cedar St
Della Vista Dr
Triumph Dr
Red Elephant Dr
War Eagle Dr
Side Channel Activation Project
Stream Channel Improvement
Flood Conveyance Project
Flood Risk Reduction
Legend
Road Centerlines
Parcel Boundaries
400
200
0
400 Feet

Implementation Cost Estimate
Side Channel Activation Project
Heagle Park Area, Blaine County, Idaho

Wednesday, June 13, 2018

ITEM	QUANTITY	UNIT	UNIT COST	TOTAL COST
FINAL DESIGN				
Field surveys (channel cross sections for final design and permitting)	1	ea	$2,000	$2,000
Develop final design report and figures	50	hrs	$135	$6,750
Develop construction drawings and specifications	38	hrs	$130	$4,940
SUBTOTAL				**$13,690**
PERMITTING				
Blaine County Stream Alteration Permit, No-Rise Analysis	1	ea	$8,100	$8,100
Joint Application (Corps and IDWR)	1	ea	$1,620	$1,620
SUBTOTAL				**$9,720**
MOBILIZATION				
Equipment/Contractor Mobilization and Demobilization	1	ea	$7,500	$7,500
SUBTOTAL				**$7,500**
RIVER AND FLOODPLAIN RESTORATION				
Side Channel Inlet Excavation	330	cy	--	--
Excavation and Haul Across River (excavator & 2 haul trucks)	1	ea	$12,000	$12,000
Load and Haul Off-site to Disposal Area	1	ea	$10,000	$10,000
Meander Bend Structures	2	ea	$6,750	$13,500
Apex Jam Structures	1	ea	$8,500	$8,500
Hardened Riffle, Rock Purchase and Delivery	340	cy	$65	$22,100
Hardened Riffle, Construction	1	ea	$6,000	$6,000
Willow Bundles (river bank treatment)	28	ea	$50	$1,406
Site Reclamation, Seeding, Clean-up	1	ea	$2,000	$2,000
SUBTOTAL				**$75,506**
CONSTRUCTION ADMINISTRATION				
Construction Staking and Supervision	1	ea	$15,101	$15,101
SUBTOTAL				**$15,101**
PROJECT COST				**$121,518**

NOTICES:

Fees and costs associated whith the FEMA CLOWR process are not included in this estimate. It is assumed that permits for this project will be secured through a standard No-Rise analysis (instead of the FEMA CLOMR process).

The information contained here was prepared in June 2018 and is based on information available at that time. Actual costs to complete project activities may vary depending on changing conditions, regulatory requirements, and the needs of the client.

An Opinion of Probable Construction Cost for 08/06/18

Della View Flood Improvements - 2018

#	Item & Category Description	Unit	Qnty	Unit Cost	Item Cost	Category Cost
	Category A: Conveyance Ditch Construction					
1	Stripping & Grubbing – 6" Depth w/i R/W	S.Y.	3,505	$1.00	$ 3,505.47	
2	Excavation	C.Y.	1,282	$3.50	$ 4,485.25	
3	Remove and dispose of Trees	L.S.	2	$5,000.00	$ 10,000.00	
4	3/4" Leveling Course Gravel, 4" Depth	C.Y.	48	$37.00	$ 1,786.26	
5	Superpave HMA SP3, 1/2" gradation, PG58-34, 3" Depth	S.Y.	38	$18.00	$ 678.80	
6	Remove and Reset Pavers	S.Y.	70	$15.00	$ 1,050.00	
7	Top Soil and Drought Resistance Grass	S.Y.	1,115	$3.00	$ 3,345.33	
8	Concrete Channel: Product Purchase	L.F.	122	$489.00	$ 59,658.00	
9	Concrete Channel: Installation	L.F.	122	$150.00	$ 18,300.00	
10	Relocate Utilities (Power, Phone, Cable)	L.F.	100	$20.00	$ 2,000.00	
11	Remove and Reset Sign	Each	2	$300.00	$ 600.00	
12	Remove and Reset Fence	L.F.	180	$20.00	$ 3,600.00	
13	Repair Park Irrigation System	L.F.	400	$5.00	$ 2,000.00	
14	Relocate Landscape Boulders	Each	40	$25.00	$ 1,000.00	
15	Traffic Control	L.S.	1	$5,000.00	$ 5,000.00	
						$117,009
16	Mobilization		1	10.0%	$11,701	
17	Design Engineering & Basemap Surveying		1	12.0%	$14,041	
18	Construction Surveying		1	3.0%	$3,510	
19	Construction Inspection: City Street Dept.		80	$48.84	$3,907	
20	Construction Inspection: City Engineer		40	$61.03	$2,441	
21	Administration: City Staff		40	$35.77	$1,431	
22	Construction Contingency		1	15.0%	$17,551	
						$54,583
23	Total Opinion of Probable Construction Cost					**$171,592**

City Match: Cash	$79,000
City Match: In Kind (rows 19-21 previously)	$7,779
Total Match	**$86,779**
Percentage of Total Project	**50.6%**
Total Grant Request	**$84,813**

COUNTY OF CASSIA

OFFICE OF THE BOARD OF COUNTY COMMISSIONERS

Bob Kunau, *Chair*
Paul Christensen, *Commissioner*
Tim Darrington, *Commissioner*

COURTHOUSE
Room #210
1459 Overland Avenue
BURLEY, IDAHO 83318

Phone: 208-878-7302
Fax: 208-878-3510
www.cassiacounty.org

June 14, 2018

Idaho Department of Water Resources
Idaho Water Resource Board

RE: Flood Management Grant Funding Program

Dear Board Members:

The Cassia County Commissioners personally witnessed 100 year flood event in the Raft River Channel on February 9, 2017. During this time there was significant flood damage throughout the County. In particular, one area that was affected in the County was the Raft River Channel. This channel is a major irrigation and watering artery to farms and ranches and provides water in areas where flood irrigation is utilized. Reid Springs Road crosses this Raft River Channel and the bridge at that crossing was constructed in 2002. Damage from the 2017 flood caused a significant amount of debris to collect at the bridge, as well as increased sediment in the area. The net effect of all of this has now altered the natural stream flow, and damaged the stream channel. Without stream channel repair, the bridge is at risk of major structural damage.

The County is seeking this grant, and coupled with County resources and assistance from the Raft River Flood District, the County can repair and improve the stream channel, as well as reduce sediment and further erosion problems which will restore the stream to its natural order, providing stability and longevity to the existing bridge.

In that context of joint cooperation and best use of resources, please accept our application for this grant funding.

Board of Commissioners for Cassia County, Idaho

By: Bob Kunau

Bob Kunau, Chair

IDAHO WATER RESOURCE BOARD
322 East Front Street, Statehouse Mail
Boise, Idaho 83720
Tel: (208) 287-4800
FAX: (208) 287-6700

APPLICATION FOR FLOOD MANAGEMENT GRANT

Answer the following questions and provide the requested material as directed. All pertinent information must be provided. Additional information may be requested by the Idaho Water Resource Board (IWRB) depending on the scope of the project and amount of funding requested.

Incomplete documents will be returned and no further action will be taken by IWRB staff. All paperwork must be submitted within twenty-eight (28) working days prior to the next IWRB meeting.

Board meeting agendas can be found at: http://www.idwr.idaho.gov/IWRB/meetings/

I. Overview:

This form applies to the *IWRB Flood Management Grant Program*. The Flood Management Grant Program provides financial assistance to eligible entities interested in pursuing flood damaged stream channel repair, stream channel improvements, flood risk reduction, or flood prevention projects. Pursuing flood management improvement and repair projects can assist in maintaining flow capacities in major waterways, prevent bank and channel erosion, and reduce property damage during flood events.

The grant funding shall require a 50% funding match by the sponsor of the total project costs. In-kind services can account for up to 30% of the total project costs. Legal/Administrative in-kind services are limited to 5% of total project costs.

Funds will be distributed by sponsor submitting funding reimbursement requests, which shall include:

1. Cover letter formally requesting a funding reimbursement, description of project activities, dates of project activities, and contractor or supplier invoices. Funds shall be distributed within 15-days of receipt of reimbursement request.

Upon completion of the project, sponsor and/or consultant, shall submit a notice of completion to the IWRB, and that the improvements and/or repairs were constructed in substantial conformance with the approved plans and specifications.

Prepare and attach a "Grant Document" to this application.

The Grant Application Document requirements are outlined in the IWRB Flood Management Grant Program Guidelines. The guidelines can be found at:
http://www.idwr.idaho.gov/waterboard/Financial%20program/financial.htm
You can also obtain a copy by contacting IWRB staff.

II. General Information:

A. Type of organization: (Check box)

- ☐ Flood District
- ☐ Municipality
- ☑ County
- ☐ Other

Cassia County
Organization name

Sam Adams, Cassia County Road & Bridge, Supervisor
Name and title of Contact Person

1459 Overland Avenue, Room 210
PO Box/Street Address

208-312-1173
Contact telephone number

Burley, Cassia, Idaho 83318
City, County, State, Zip Code

sadams@cassiacounty.org
e-mail address

82-60000292
Taxpayer ID#

Project location/ legal description Where Reid Springs Road and Raft River Drainage intersection.

113°36'44.219" W, 42°02'32.793"N (Approx)

B. Is your organization registered with the Idaho Secretary of State's office? Yes ☐ No ☑

C. Purpose and name of project for this grant application.

- ☑ Stream Channel Repair
- ☑ Stream Channel Improvement
- ☐ Flood Risk Reduction
- ☐ Flood Prevention
- ☐ Other _____

III. WATER PROJECT/ACTIVITY:

A. Source of water:

- ☑ Surface
- ☐ Reservoir
- ☐ Other

B. Describe the Flood Management Project/Activity - What is the primary purpose of this grant application?

Rehabilitate flood damaged and altered stream channel and to fix and prevent damage to Reid Springs Road bridge structure.

C. Does this project/activity address multiple objectives? If so explain.

Provide for continued irrigation, enhance stream flow, and prevent erosion and related damage to a major bridge structure on county road, and maintain residents' accessibility, major farming operations accessibility and school bus route access in the vicinity.

D. Will this flood management project/activity be implemented in a single year, or phased over multiple years?

☑ 1-year ☐ Multiple-years (Phased)

E. Project start and completion date:

Project Start: September 25, 2018 Completion Date: November 29, 2018

F. Project detailed cost estimate, including all labor and materials:

Labor: 6074.00 + Materials: 78598.75 = $84,672.75

G. Has your organization performed stream channel or stream bank repair and/or improvement projects in the past?

Yes. Example: Elba Idaho Clyde Creek Project; Narrows Bridge Project Almo; All projects required extensive work with Idaho Department of Water Resources and Army Corp. of Engineers.

H. Provide the required regulatory approval and permit documents for this project.

Yes, will obtain the required regulatory approval and permits for this project.

IV. FINANCIAL INFORMATION:

A. Does your organization have a regular assessment for a reserve or special needs fund?

Yes ☐ No ☑

B. Does your organization have prior experience in working with the Idaho Water Resource Board?

Yes ☑ No ☐

C. What other sources of funding have been explored to fund the project? (e.g. U.S. Army Corps of Engineers, NRCS, FEMA, Banks, Local Government, etc.)

Raft River Flood District.

Amount of funds requested: $42,336.38

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

Authorized signature& date: Bob Kunau 6/15/2018

Cassia County Road and Bridge, Cassia County, Idaho

Grant
Application
For
IDWRB Flood Management Grant Funding Program

Cassia County Road and Bridge
Sam Adams, Supervisor

1459 Overland Ave., Burley, ID 83318
sadams@cassiacounty.org
208-312-1173

Cassia County Proposed Project Raft River Channel
NARRATIVE

2.1 Project Background Information

2.1.1 Purpose

In February 9, 2017 the Raft River channel experienced a 100 year flood event. This event caused great damage to certain areas of the channel. One area in particular of the Raft River Channel suffered damage. That channel is a major artery of irrigation waters to farms and ranches. The area for our project, and which is of vital concern, is at the Reid Springs Road intersection with the Raft River Channel where a concrete bridge was constructed in 2002. Damage from the 100 year flood event was altered water flow due to significant debris build up. This damaged the stream channel and places the bridge at risk of major structural damage because it is exposed to high water flowing underneath the bridge, unprotected by the eroded and damaged stream banks.

Repairs will be implemented to improve and repair the stream channel, as well as reduce sediment and further erosion problems by using rip rap as well as replacing the stream to its natural order with reimplementation of willows thereby providing stability and longevity to the existing bridge structure.

2.1.2 Narrative

The Raft River Drainage begins in Lynn, Utah and winds its way northward through the Almo valley located in Cassia County, Idaho approximately 5.5 miles from the town of Almo, Idaho. It continues through the Narrows area and into the Malta Valley, where later it crosses Interstate I84 and continues northward. The Raft River Drainage collects all of the minor tributaries throughout the adjoining valleys.

A map showing location of the above area is attached to show the location of roadways, bridges, irrigation structures and the proposed the project site.

General characteristics of the project area include a dairy farming, several ranches, hundreds of acres of farm ground, school bus route access, and community access for residents in this area, one woodworking business, and emergency access services.

2.1.3 Previous Projects and Studies

On the Raft River we replaced an identical bridge in the same year approximately 5 miles away on the EY Road. Approximately ten miles from proposed project, the Narrows Bridge was completed and replaced, including the installation of four eight foot culverts.

2.2 Project Sponsor

Cassia County Idaho is a political subdivision of the State of Idaho since February 1879. Cassia County is largely of agriculture influence that depends on both water for irrigation and roads for access to lands which benefit and serve the agricultural economy of the area and the citizens of this County.

2.4.1 Project Description

a. We are proposing to work on the Raft River Drainage located 5.5 miles south of Almo, Cassia County, Idaho to do the following work:

- Excavate and haul way debris, fines and sediment that were caused from, and built up by, the 2017 flooding in Cassia County.
- Create a better channel, more effective water flow, and stabilize stream banks.

b. A Map of the entire project area showing the location of the proposed flood management activities and affected stream is attached.

c. Drawings are attached that show the current status and views of the proposed project as well as the finished project.

d. The drawings show proposed implementation of the best management practices for bank stabilization along the bridge, as well as erosion prevention, excavation and grading, and other factors.

e. Property owner Bruce Durfee owns the parcel of land where the project is located. A letter from Bruce Durfee, is attached that gives right to access the stream channel from his land and, as well, to repair the stream channel for this proposed project.

2.4.2 Cost Estimate

Cost Estimate of Proposed Project			Total:	**84,672.75**
IDWR 50%				42,336.38
Plans				12,000.00
404 Permit				5,000.00
Hydraulic Report if Needed				20,000.00
Construction County Share				8,500.00
Construction Raft River Flood District Contribution				8,500.00
3 Week Time Frame 120 Hours				
Work Schedule				
Excavator	120 Hrs.	x 128.50 hr.		15,420.00
Dump Truck 12 yd.	120 Hrs.	x 71.50 hr.		8,580.00
Dump Truck	12 yd.	x 71.50 hr.		8,580.00
Wheel Loader	75 Hrs.	x 60.25 hr.		4,518.75
Employee 1	120 Hrs.	x 21.12 hr.		2,534.00
Employee 2	120 Hrs.	x 15.50 hr.		1,860.00
Employee 3	120 Hrs.	x 14.00 hr.		1,680.00
Administrative				500.00
Land, Right of Way Acquisition				00.00
Easements				00.00
Construction Inspections				2,000.00
Contingency Costs				2,000.00
Materials: RipRap, Willows, etc. (Local Sources Free)				00.00

2.4.3 Implementation Schedule

The proposed project is tentatively scheduled to begin September 25, 2018 and the completion date is scheduled for November 29, 2018.

July 30th	Receive Grant Money from IDWR
July 31st	Start process for 404 Permit, Engineers Plan, Hydraulic Report if needed
Sept. 17th	Have in hand at Jobsite required permits, plans.
Sept. 18th – 20th	Move equipment into place, including excavator, loader, trucks, etc.
Sept. 25th	Work begins. Excavate Banks, remove debris from stream channel Haul off loose dirt and sediment to keep jobsite clean as possible, Estimated yards of removal 2000 yards.
Oct. 1st Week	Remove Sediment, and debris from underneath the bridge, Compact Banks, and stream channel using vibratory compactor.
Oct. 9th Week	Line banks and stream bottom with engineered size rock, cleaning Up any rock, dirt, etc. Leaving job site clean and presentable To land owner, IDWR, Army Corp of Engineers and the General public.

2.5 Financial Feasibility Analysis

Amount Requested of Proposed Project Cost:

Cost Estimate of Proposed Project			**Total:**	**84,672.75**
IDWR 50%				42,336.38
Plans				12,000.00
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Hydraulic Report if Needed				20,000.00
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Employee 3	120 Hrs.	x 14.00 hr.		1,680.00
Administrative				500.00
Land, Right of Way Acquisition				00.00
Easements				00.00
Construction Inspections				2,000.00
Contingency Costs				2,000.00
Materials: RipRap, Willows, etc. (Local Sources Free)				00.00

Financing Sources:

- From IDWR: 50%
- Cassia County 10%
- Raft River Flood District 10%
- In Kind Services (County) 30%

2.6

a. Cover Letter from Cassia Commissioners attached.

Narrative Responding to Grant Program Criteria.

Effectiveness of Project:

The urgency of this project is the stream flow has been altered by debris, and erosion of stream channel walls. Work needs to be done to abate further damage to the bridge and to repair and improve stream channel integrity prior to winter setting in and while the stream is dry and water has receded from the channel.

The work is to clean out all the debris, fines and sediment that have altered stream flow and to repair the stream channel banks and stop further damage to the stream channel and to protect the bridge infrastructure.

The stream banks will be improved and protected from further erosion and future damage. We will rehabilitate the stream channel by replanting willows and placing proper size riprap. Engineered design will help make this a model project.

We will also obtain the 404 permits as required, as well as conducting engineering studies as necessary, along with conducting the work to complete this project to Cassia County and State Standards.

Readiness of Project:

The lead sponsor will be Cassia County, through its County Road and Bridge Department. The County is supported by the Raft River Flood District. The Raft River Flood District is helping to match the cost share as well as providing some in-kind resources.

The land owner surrounding the project has written a letter of support and is granting access to do the work that is necessary to repair and rehabilitate the proposed project.

This project is estimated to take 120 hours of labor to complete. The project will begin on September 25, 2018 and will be completed by November 29th, 2018.

Past Projects: The County Road and Bridge Department has been involved, in past projects, with CMAQ, controlled management of air quality; with LHTAC grant funding on gravel crushing projects; with the Narrows Bridge replacement project (in cooperation with the Raft River Flood

Control District, which was a complete bridge removal including acquiring all the required permits from State and Army Corp. of Engineers; and, the Elba Square project which consisted of replacing culverts and live stream channel improvement to allow water flow while maintaining road integrity, this required permits from State and Army Corp. of Engineers.

Implementation of Proposed Project:

10%	Cassia County
10%	Raft River Flood District
30%	In-kind Services (County)
50%	IDWR

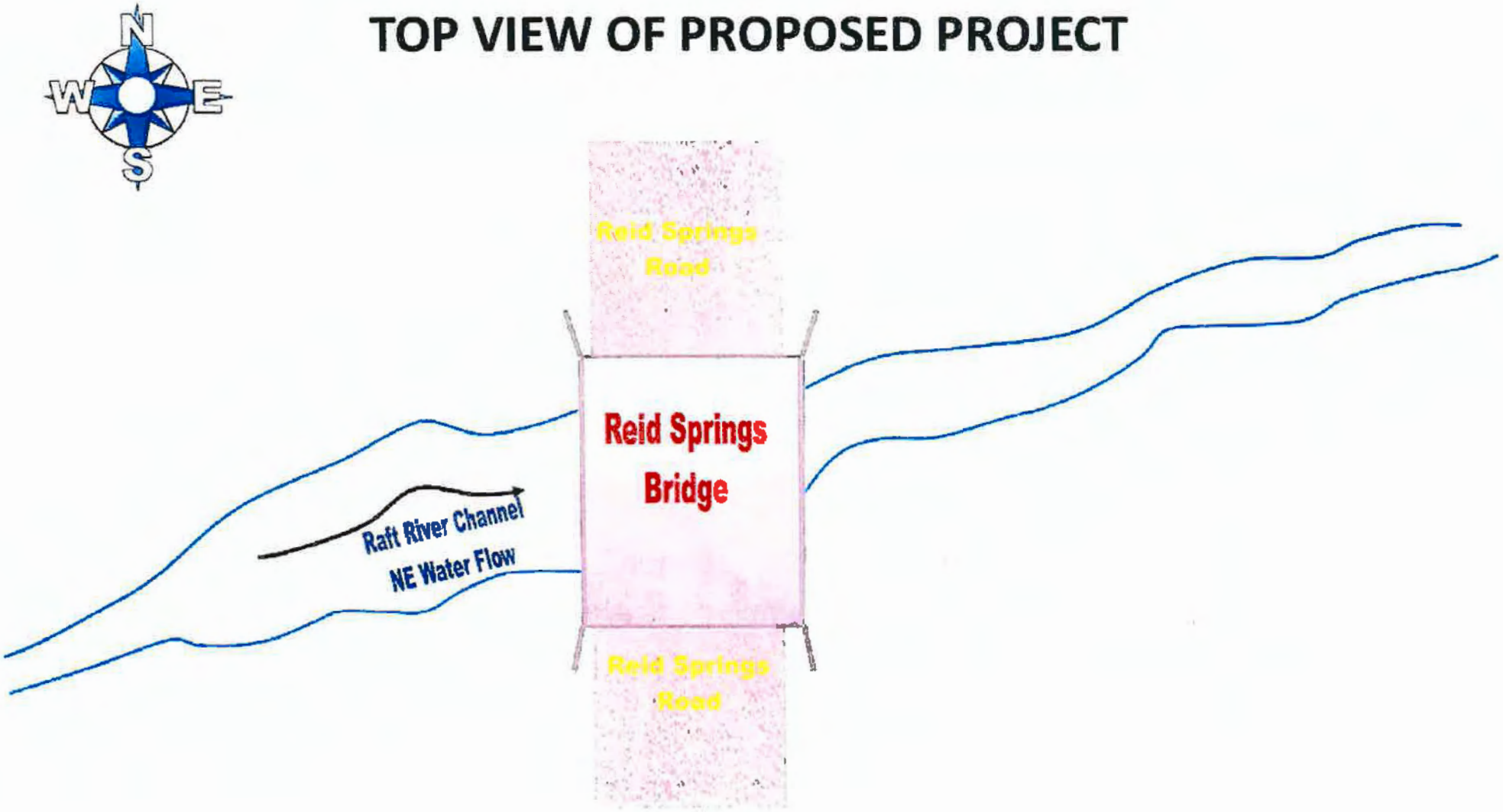
Consulting Staff and Sponsor includes:

- Flood District
- Engineer
- Road Supervisor and Staff

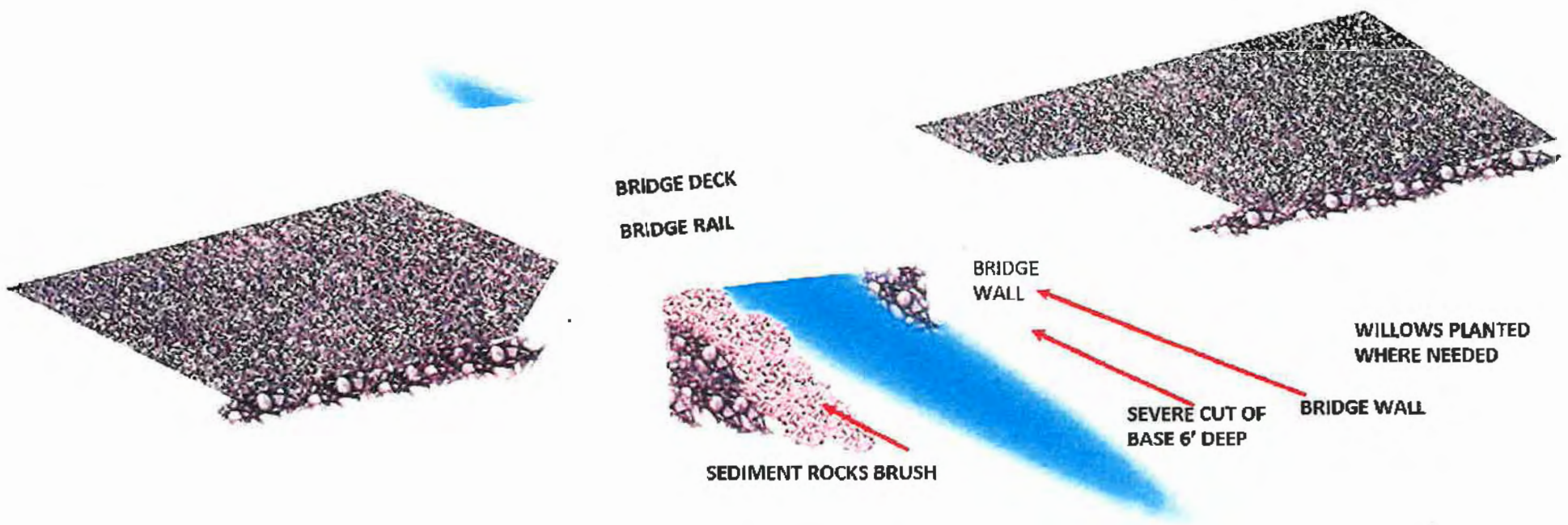
Jay Black, Raft River Flood Advisory Board Member – Resume Included
Sam Adams, Cassia County Road & Bridge Supervisor – Resume Included
Randy Johnson, P.E. Forsgren Associates – Resume Included
Steven Yearsley, P.E. Forsgren Associates – Resume Included

Also included: Letter from Property Owner Bruce Durfee
Letter from Spencer Land & Livestock

TOP VIEW OF PROPOSED PROJECT

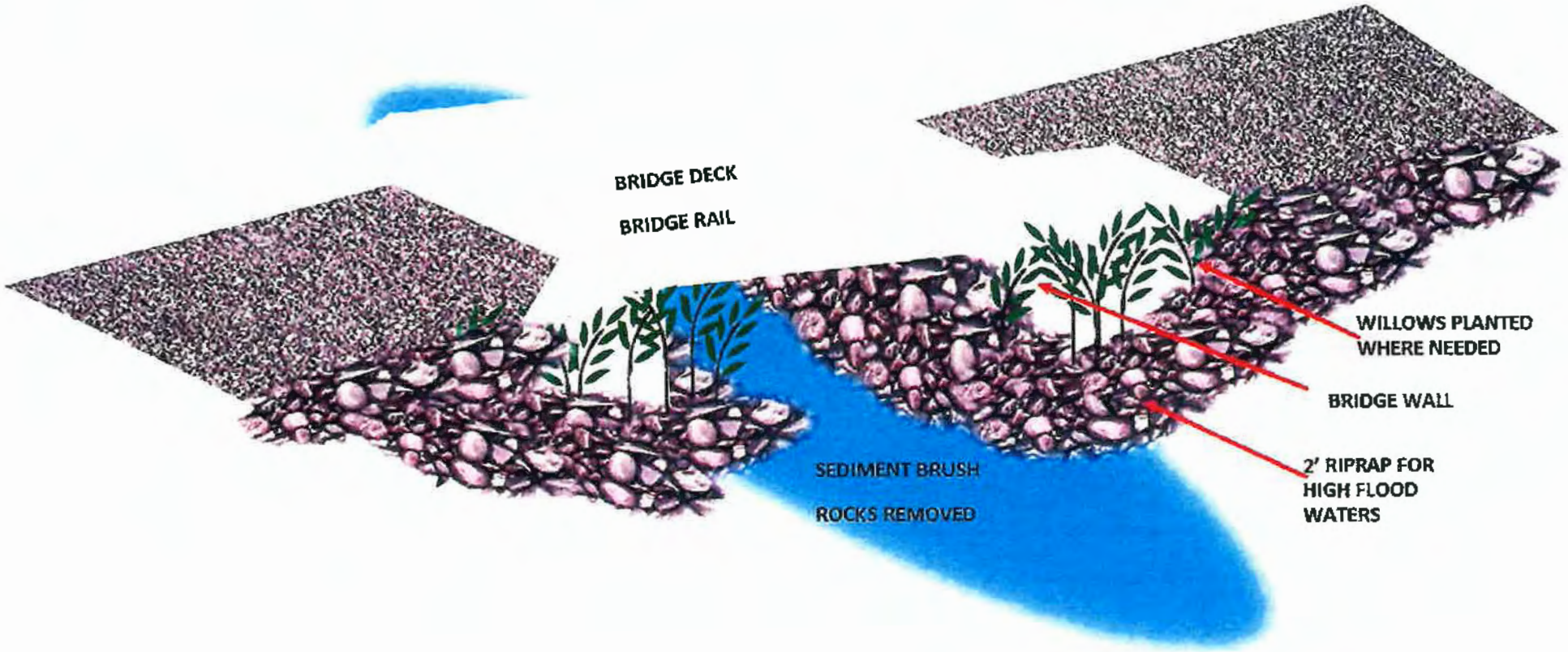


CURRENT SIDE VIEW OF PROPOSED PROJECT FIRST 100' FROM BRIDGE

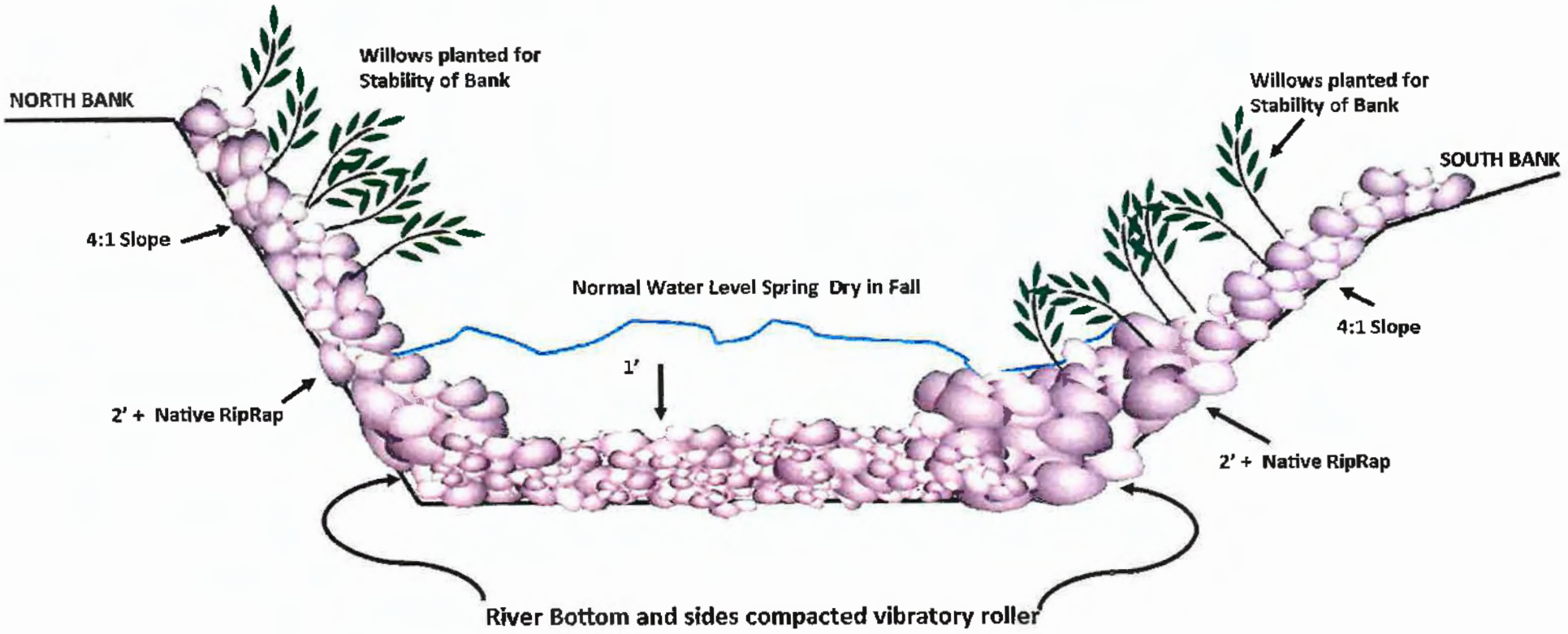


SIDE VIEW OF PROPOSED PROJECT

FINISHED FIRST 100'



SIDE VIEW OF PROPOSED PROJECT
FINISHED STREAM 700' OF CHANNEL



BOISE RIVER FLOOD CONTROL DISTRICT #10
PO Box 140396
Garden City, Idaho 83714-0396

June 15, 2018

Idaho Water Resource Board
322 East Front Street, Statehouse Mail
Boise, ID 83720

ATTN: Grant Fund Committee

Please find attached an application for the Flood Management Grant Funding Program. The application has been completed pursuant to the criteria listed in the Flood Management Grant Funding Guidelines. The Boise River Flood Control District #10 Board of Commissioners has approved and supports this project.

If you have questions or need further information, please contact Mike Dimmick, District Manager, at projectmgr@boiseriver.org or (208) 861-2766. Also available for additional information, contact Steve Sweet at steve@quadrant.cc or (208) 850-3452.

Thank you for your consideration of this application. Your support is appreciated.

Mike Dimmick

Mike Dimmick, District Manager
Boise River Flood Control District #10

IWRB Flood Management Grant Application

II. GENERAL INFORMATION

A. Type of Organization:

☒ Flood District ☐ Municipality ☐ County ☐ Other

Flood Control District #10 (FCD10)
Organization Name

Mike Dimmick, District Manager
Contact Person, Name & Title

PO Box 140396
PO Box/Street Address

208-861-2766
Contact Telephone Number

Garden City, ID, 83714-0396
City, County, State, Zip Code

projectmgr@boiseriver.org
E-Mail Address

82-0419262
Taxpayer ID#

Project location/ legal description: Boise River Mile 46.5

Latitude: 43°40'2.53"N Longitude: 116°17'57.71"W See Attachment

B. Is your organization registered with the Idaho Secretary of State's office?

☐ **Yes** ☒ **No**

C. Purpose and name of project for this grant application.

☒ Stream Channel Repair
☒ Stream Channel Improvement
☒ Flood Risk Reduction
☒ Flood Prevention
☒ Other: Diversion Stabilization

III. WATER PROJECT/ACTIVITY

A. Source of Water

☒ Surface ☐ Reservoir ☐ Other

B. Describe the Flood Management Project/Activity – What is the primary purpose of this grant application?

The primary purpose of this project is to repair a failed river bank adjacent to the New Dry Creek diversion structure and armor an area of severe bank erosion adjacent to the Greenbelt.

C. Does this project/activity address multiple objectives? If so explain.

Yes, the project will keep the river in the normal channel by repairing the breach formed by 2017 flood water. Bank armoring will protect the greenbelt pathway from damage. Hardening of channel bottom to arrest the continuing potential of a head cut flanking the diversion. The project also reduces flood risk to adjacent landowners and gravel mining site.

D. Will this flood management project/activity be implemented in a single year, or phased over multiple years?

☒ 1-Year ☐ Multiple-Years (Phased)

E. Project start and completion date:

The project will be started during low flow in the Boise River. The start date will be November 2018 and will be completed by Spring of the following year.

F. Project detailed cost estimate, including all labor and materials:

Cost estimate is $156,800. See Attached Itemized Cost Estimate.

G. Has your organization performed stream channel or stream bank repair and/or improvement projects in the past?

Yes, FCD10 has performed ongoing stream channel, stream bank repair, and improvement projects during low river flows since 1972. See attached list of projects.

H. Provide the required regulatory approval and permit documents for this project.

Permitting and letters of authorization from County, USACE, IDWR, and any other organizations will be accomplished after the project has been awarded. FCD10 secures required permits from regulatory agencies as standard operating procedure for the District.

IV. FINANCIAL INFORMATION

A. Does your organization have a regular assessment for a reserve or special needs fund?

☐ Yes ☒ No

B. Does your organization have prior experience in working with the Idaho Water Resource Board?

☒ Yes ☐ No

C. What other sources of funding have been explored to fund the project? (e.g. U.S. Army Corps of Engineers, NRCS, FEMA, Banks, Local Government, etc.)

FD10 will provide matching funds.

2.1 Project Background Information

1. Purpose
   Reducing flood risk by repairing bank and reducing impact to the diversion structure. Reducing out of bank events at lower than flood stage flows.
2. Project Area Description
   Ada County, Boise River Mile 46.5, Latitude: 43°40'2.53"N Longitude: 116°17'57.71"W
3. Previous Projects and Studies
   See attachment for list of multiple projects.

2.2 Project Sponsor

a. Flood Control District #10

2.4 Project Description

a. Project Description – See Plan Set Attachment
b. Map – See Attached Plan
c. Conceptual Plan/Cross Section –See Attached Plan
d. Conceptual Design and Repair Features –See Attached Plan
e. Right-of-Way/Easement –FCD10 is coordinating with adjacent landowners, City of Garden City, and Ada County to provide access for this project.

2.4.2 Cost Estimate
See attached Cost Estimate.

2.4.3 Implementation Schedule
Low water 2018, completion by April 2019.

2.5 Financial Feasibility Analysis

- **Amount of IWRB Grant Funding Requested**
  The total estimated project cost is $156,800. The amount of funding requested is $78,400.

- **Financing Sources**

  In addition to the State funds, the project match financing will be provided by FCD10.

Effectiveness of Project *(60 points)*

- **What is the urgency of the project and anticipated costs? (10 points)**

  The urgency of the project is to mitigate flood risk to adjacent and downstream property owners, gravel mining operation, and reduce the erosion to the Greenbelt and stabilizing the diversion. See attachment of cost estimates.

- **What are the objectives and benefits of the project? (10 points)**

  The objective is to reduce the flood risk to adjacent and downstream property owners and protect the Greenbelt. Another objective of this project is to prevent flanking of the diversion structure by an ongoing head cut.

- **How does the proposed project solution address the objectives? (10 points)**

  Repairing channel bank maintains the flow in the normal channel and reducing out of bank flooding at less than flood stage. The solution also reduces risk of damage to the Greenbelt.

- **How will the project measure success of its objectives, and describe the proposed monitoring plan. (5 points)**

  Periodic inspections by FCD10 staff and contract Engineer will assure project is maintained in a functional state. Maintenance work will be performed as needed.

- **Is the proposed budget and schedule realistic and is the budget appropriate for the scope of work provided? Has the applicant provided detailed construction expenses documenting how money will be spent to complete the project? (15 points)**

  The proposed budget is based upon best business practices and estimates provided by experienced river work contractors and consulting engineers. See attached cost estimates. Invoicing will follow Grant Application criteria.

- **Are project sponsors using relevant and appropriate information to develop the proposed project? (Sponsor should include references to relevant studies, assessments, reports, management plans, etc.) How will the project account for expected future changes to hydrology, sediment regimes, or water supply? *(10 points)***

  As demonstrated in Attached list of projects, FCD10 has developed and performed numerous equivalent projects over a 35 mile river reach. These projects were performed using information and criteria required by ACOE, IDWR, DEQ, and other agencies.

Readiness of Project *(50 points)*

- **Lead sponsor of project is identified and there is a description of other affected stakeholders and jurisdictions. *(10 points)***

  Flood Control District #10 is the lead for this project. City of Garden City, Ada County, adjacent landowners, and New Dry Creek Ditch Company are the additional stakeholders.

- **Project sponsors will provide documentation that affected local stakeholders and jurisdictions have been consulted. If the project is located within a Flood Control District, the sponsor must provide**

documentation showing the Flood Control District supports the project, otherwise the project will be declared ineligible. ***(10 points)***
Boise River Flood Control District #10 supports this project, see application cover letter. Verbal commitments have been received from local stakeholders and jurisdictions. Written letters of support have been promised but due to time constraints, have not been received as of the application date.

- **Specify cash matching funds that will be provided for the project, including any in-kind services. Indicate what funding sources are secured or pending. The applicant must provide at least 50% matching cost share funding with non-state dollars. In-kind services can be used for 30% of the total projects costs. Legal/Administrative in-kind services are limited to 5% of total project costs.** ***(10 points)***
  We are applying for 50/50 match. See attached Match Funding Breakout.
- **Projects that propose matching cost-share amounts above 50% will receive additional points in the ranking** ***(1 point for each additional 1% increase up to 70% to receive up to 20 additional points).***

Organization Capacity *(20 points)*

- **What is the sponsor's history of successful accomplishments on projects similar to this one? The sponsor shall provide several past project examples, if possible.** *(10 points)*

  See attached Permitting History Summary, which lists successfully completed projects.
- **What level of sponsor and consultant staffing will be directed toward the implementation of the proposed project? Discuss the number of sponsor and consultant staff and amount of time dedicated for each for the project. Will the project utilize volunteers? If so, how? Include brief resumes or list of qualifications for each member of the project team.** ***(10 points)***
- One FCD10 staff member with consulting engineering support will provide regular oversight up to 2 hours per day. No volunteers will be utilized.

Attachments supporting this application are available at the following cloud site:

https://app.box.com/folder/50381600784

Amount of Funds Requested: $78,400

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

Authorized signature & date:

PRELIMINARY ESTIMATES

New Dry Creek Cost Estimate				
Item	Cost	Unit Price	Units	Quantity
Mobilization	$ 5,000	$ 5,000	LS	1
Access Road (VKS)	$ 4,500	$ 15	CY	300
Access Road (Dechambeau)	$ 10,500	$ 15	CY	700
Culvert (Temporary)	$ 400	$ 20	LF	20
Greenbelt Traffic Control	$ 4,800	$ 480	DAY	10
Material (Rock)	$ 28,800	$ 24	CY	1,200
Placement (Rock)	$ 18,000	$ 15	CY	1,200
Road Removal (Dechambeau)	$ 5,000	$ 5,000	LS	1
Greenbelt Reconstruction	$ 48,000	$ 10	SF	4,800
Site Restoration	$ 5,000	$ 5,000	LS	1
Permitting and Plans	$ 13,000	$ 13,000	LS	1
Admin	$ 13,800	$ 7,150	LS	1
Total	$ 156,800			

Matching Funds	
State	$ 78,400
FCD10	$ 78,400

NEW DRY CREEK

DIVERSION STABILIZATION

HIGHWATER PHOTO: APRIL 21, 2017
Q=8600 CFS @ GLENWOOD
LATITUDE: 43°40'3"N
LONGITUDE: 116°17'58"W

FLOOD CONTROL DISTRICT #10
WATER MANAGEMENT FUND PROJECT

GARDEN CITY
IDAHO

DESIGNED BY: NK/AME
DRAWN BY: AME
CHECKED BY: NK
PLOT DATE: 6/14/18

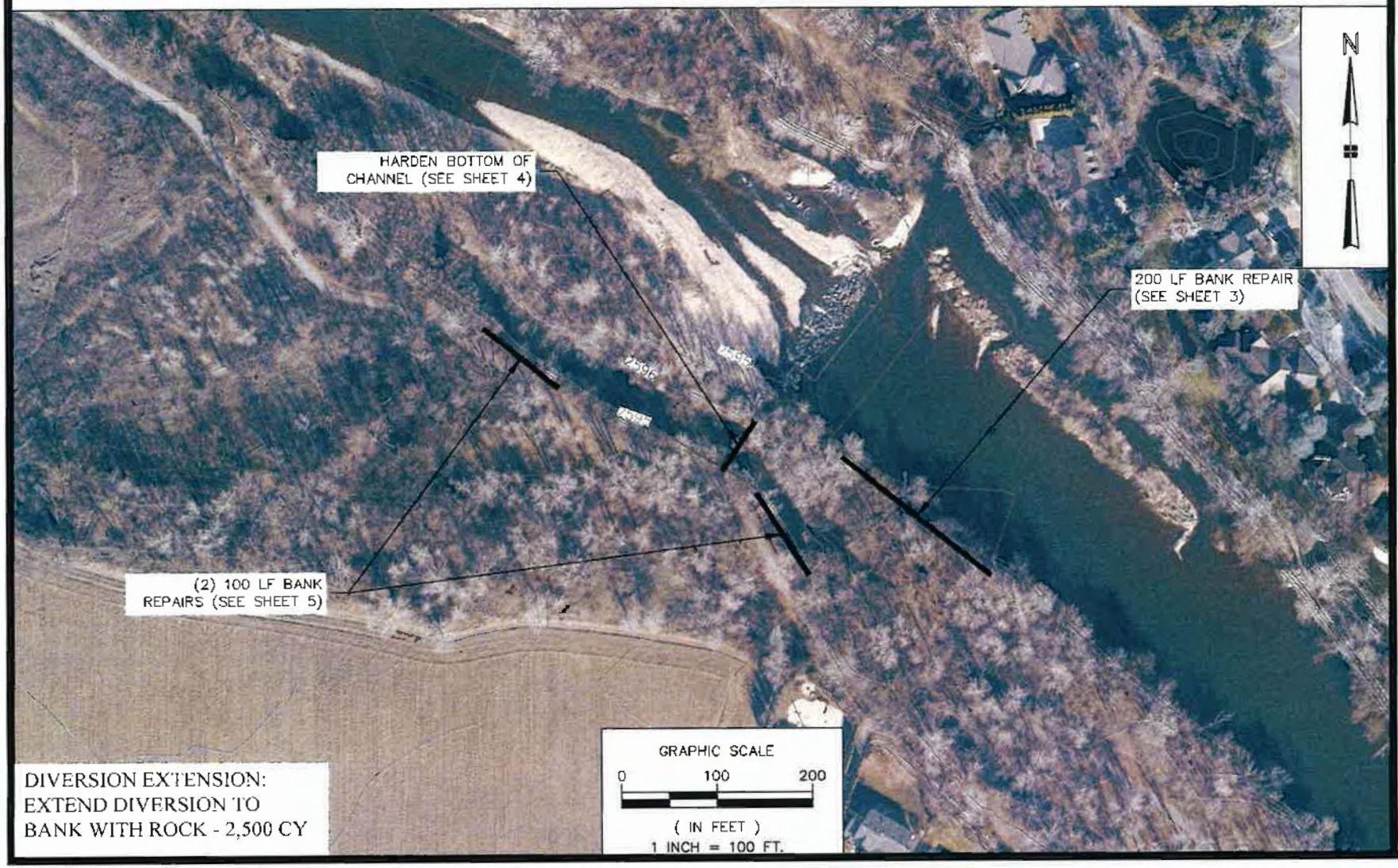
SHEET 1

SCALE: 1"=100'

PROJECT NO. 168-01

Quadrant Consulting, Inc.
1904 W. Overland Rd
Boise, Idaho 83705
(208) 342-0091 PHONE (208) 342-0092 FAX
CIVIL ENGINEERING-SURVEYING

NEW DRY CREEK
DIVERSION STABILIZATION



DIVERSION EXTENSION:
EXTEND DIVERSION TO
BANK WITH ROCK - 2,500 CY

Quadrant Consulting, Inc.
1804 W. Overland Rd
Boise, Idaho 83705
(208) 342-0091 PHONE (208) 342-0092 FAX
CIVIL ENGINEERING-SURVEYING

FLOOD CONTROL DISTRICT #10
WATER MANAGEMENT FUND PROJECT

GARDEN CITY
IDAHO

DESIGNED BY: NK/AME
DRAWN BY: AME
CHECKED BY: NK
PLOT DATE: 6/14/18

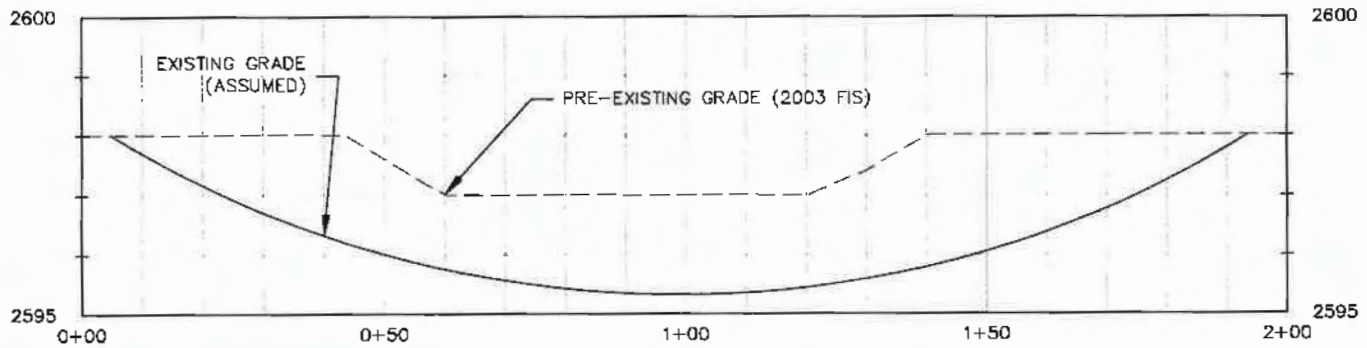
SCALE: 1"=100'

PROJECT NO. 168-01

SHEET 2

NEW DRY CREEK

DIVERSION STABILIZATION



LATERAL WEIR ALIGNMENT PROFILE

GRAPHIC SCALE

0 100 200

(IN FEET)

1 INCH = 100 FT.

Quadrant Consulting, Inc.

1904 W. Overland Rd
Boise, Idaho 83705
(208) 342-0091 PHONE (208) 342-0092 FAX
CIVIL ENGINEERING-SURVEYING

FLOOD CONTROL DISTRICT #10

WATER MANAGEMENT FUND PROJECT

GARDEN CITY
IDAHO

PROJECT NO.
16B-01

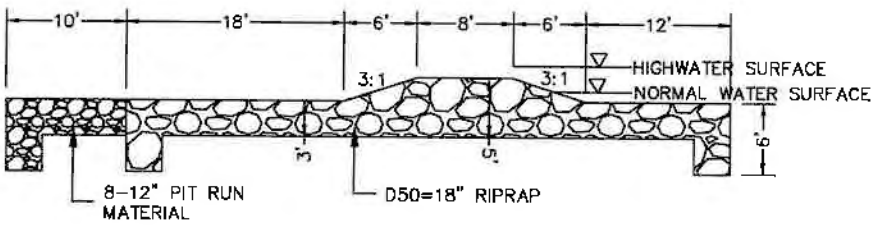
SCALE:
1"=100'

DESIGNED BY: NK/AME
DRAWN BY: AME
CHECKED BY: NK
PLOT DATE: 8/14/18

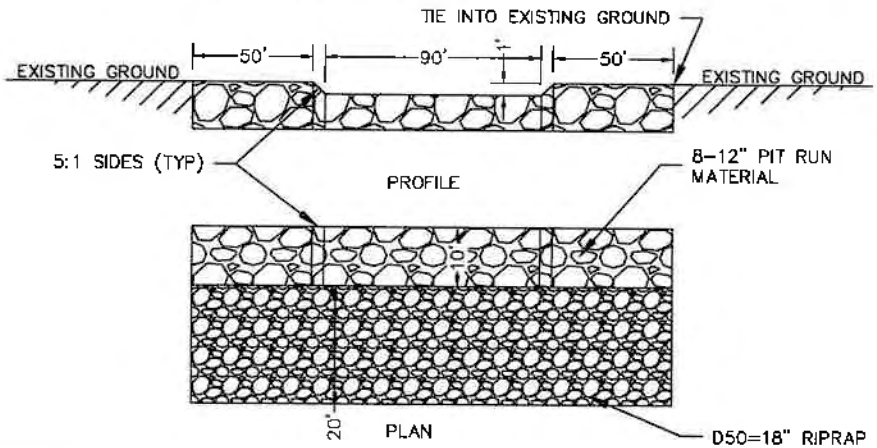
SHEET
3

NEW DRY CREEK
DIVERSION STABILIZATION

ROCK SILL IN BOTTOM OF SIDE CHANNEL DETAIL



BANK STABILIZATION ADJACENT TO BOISE RIVER DETAIL



Quadrant Consulting, Inc.
1904 W. Overland Rd
Boise, Idaho 83705
(208) 342-0081 PHONE (208) 342-0092 FAX
CIVIL ENGINEERING-SURVEYING

FLOOD CONTROL DISTRICT #10
WATER MANAGEMENT FUND PROJECT

GARDEN CITY
IDAHO

PROJECT NO.
168-01

SCALE:
NTS

SHEET
4

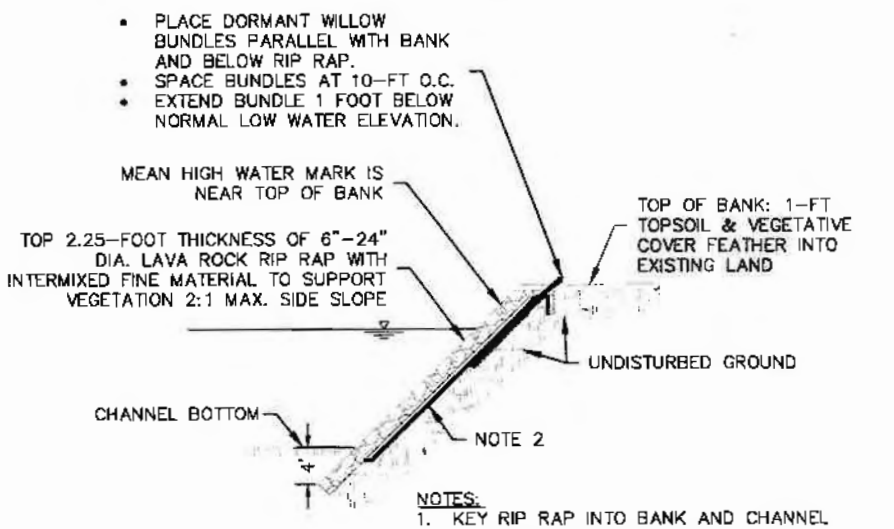
DESIGNED BY: NK/AME
DRAWN BY: AME
CHECKED BY: NK
PLOT DATE: 6/14/18

NEW DRY CREEK

DIVERSION STABILIZATION

DORMANT VERTICAL WILLOW BUNDLES

1. ASSEMBLE BUNDLES OF LIVE CUTTINGS.
2. USE CUTTINGS BETWEEN ½ AND 2 INCHES IN DIAMETER.
3. USE A MINIMUM OF 4 CUTTINGS PER BUNDLE.
4. ORIENT ALL CUTTINGS IN ONE DIRECTION (TOP GOES UP).
5. TIE CUTTINGS AT 2 TO 3 FT INTERVALS.
6. PLACE A BUNDLE IN TRENCH
7. REFILL BOTTOM OF TRENCH.
8. WASH LOOSE SOIL INTO CUTTINGS. AT LEAST ½ TO ¾ OF BUNDLE SHOULD BE COVERED.
9. TRIM TERMINAL BUDS (VERY TOP) OF CUTTINGS.
10. AFTER PLACEMENT, TRIM BUNDLE SO THAT THE MAXIMUM LENGTH OF EXPOSED CUTTINGS IS BETWEEN 6 AND 12-INCHES.



NOTES:

1. KEY RIP RAP INTO BANK AND CHANNEL BOTTOM MINIMUM OF 48" AT UPSTREAM AND DOWNSTREAM ENDS OF REACH.
2. FILTER BLANKET TO BE 6" THICK LAYER OF WELL-GRADED COARSE SAND AND GRAVEL OR AMOCO 4553 GEOTEXTILE FILTER FABRIC OR EQUIVALENT.

TYPICAL RIPRAP CROSS SECTION

Quadrant Consulting, Inc.
1804 W. Overland Rd
Boise, Idaho 83705
(208) 342-0091 PHONE (208) 342-0092 FAX
CIVIL ENGINEERING-SURVEYING

FLOOD CONTROL DISTRICT #10
WATER MANAGEMENT FUND PROJECT

GARDEN CITY
IDAHO

PROJECT NO.
168-01

SCALE:
NTS

SHEET
5

DESIGNED BY: NK/AME
DRAWN BY: AME
CHECKED BY: NK
PLOT DATE: 6/14/18

BOISE RIVER FLOOD CONTROL DISTRICT #10
PO Box 140396
Garden City, Idaho 83714-0396

June 15, 2018

Idaho Water Resource Board
322 East Front Street, Statehouse Mail
Boise, ID 83720

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Thank you for your consideration of this application. Your support is appreciated.

Mike Dimmick, District Manager
Boise River Flood Control District #10

IWRB Flood Management Grant Application

II. GENERAL INFORMATION

A. Type of Organization:

☒ Flood District ☐ Municipality ☐ County ☐ Other

Flood Control District #10 (FCD10) Organization Name	Mike Dimmick, District Manager Contact Person, Name & Title
PO Box 140396 PO Box/Street Address	208-861-2766 Contact Telephone Number
Garden City, ID, 83714-0396 City, County, State, Zip Code	projectmgr@boiseriver.org E-Mail Address
82-0419262 Taxpayer ID#	

Project location/ legal description: Boise River

Latitude: 43°40'54.57"N Longitude: 116°26'21.79"W See Sheet 1 of Attachment

B. Is your organization registered with the Idaho Secretary of State's office?

☐ **Yes** ☒ **No**

C. Purpose and name of project for this grant application.

☒ Stream Channel Repair
☒ Stream Channel Improvement
☒ Flood Risk Reduction
☒ Flood Prevention
☒ Other: Gravel Removal

III. WATER PROJECT/ACTIVITY

A. Source of Water

☒ Surface ☐ Reservoir ☐ Other

B. Describe the Flood Management Project/Activity - What is the primary purpose of this grant application?

As described in the NRCS 2017 Equip, Flood Rehabilitation Design Report, the primary purpose of this grant application is to redirect base flow back to the pre-existing primary river channel and restore basic river functions through reconstructing the left bank using rock armoring and bioengineering methods for stability (log root wads, willow bundles, cottonwood pole plantings, and grass seedings), and establish willow varieties along the bank. In addition to the channel restoration, this project will redirect current flood waters from agricultural land back to the historic river channel.

C. Does this project/activity address multiple objectives? If so explain.

Yes, the project addresses stream channel repair, stream channel improvement, flood risk reduction, flood prevention, and gravel removal. The stream channel repair and improvement will be addressed by the bank repair and removal of gravel to decrease out of bank flow. Flood risk reduction/prevention will be a result of the removal of the gravel occlusion currently blocking normal river flows.

D. Will this flood management project/activity be implemented in a single year, or phased over multiple years?

☒ 1-Year ☐ Multiple-Years (Phased)

E. Project start and completion date:

The project will be started during low flow in the Boise River. The start date will be November 2018 and will be completed prior to Spring runoff (2019).

F. Project detailed cost estimate, including all labor and materials:

See Attached Cost Estimate.

G. Has your organization performed stream channel or stream bank repair and/or improvement projects in the past?

Yes, FCD10 has performed ongoing stream channel, stream bank repair, and improvement projects during low river flows since 1972. See attached list of projects.

H. Provide the required regulatory approval and permit documents for this project.

Permitting and letters of authorization from County, USACE, IDWR, and other organizations have been completed. See attached listing of 58 river related projects completed by FCD10..

IV. FINANCIAL INFORMATION

A. Does your organization have a regular assessment for a reserve or special needs fund?

☐ Yes ☒ No

B. Does your organization have prior experience in working with the Idaho Water Resource Board?

☒ Yes ☐ No

C. What other sources of funding have been explored to fund the project? (e.g. U.S. Army Corps of Engineers, NRCS, FEMA, Banks, Local Government, etc.)

FCD10, adjacent landowner, and NRCS are jointly participating in providing the matching funds required. In addition, USACE, IDWR, Ada County, IDL, and City of Meridian.

Amount of Funds Requested: $153,550

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

Authorized signature & date: 

2.1 Project Background Information

2.1.1 Purpose

Reducing flood risk by restablishing historic channel flow.

2.1.2 Project Area Description

Ada County, Boise River Mile 37, Latitude: 43°40'54.57"N Longitude: 116°26'21.79"W

2.1.3 Previous Projects and Studies

See attachment for list of 58 similar projects that FCD10 has completed within the District.

2.2 Project Sponsor:

a. Flood Control District #10
b. Tim Gibson/Ray Arana (Landowner)
c. NRCS

2.4 Project Description

a. Project Description – Gravel Removal and Pit Capture Repair. See Attached NRCS Project Plan and Arana EQIP17 Design Report.
b. Map – See Attached NRCS Project Plan and Arana EQIP17 Design Report.
c. Conceptual Plan/Cross Section –See Attached NRCS Project Plan and Arana EQIP17 Design Report.
d. Conceptual Design and Repair Features –See Attached NRCS Project Plan and Arana EQIP17 Design Report.
e. Right-of-Way/Easement – Land owned by co-applicants, Tim Gibson and Ray Arana. No easement required.

2.4.2 Cost Estimate

Cost estimate $307,100. See attached itemized cost estimate.

2.4.3 Implementation Schedule

Begin work during low water 2018 with project completion by April 2019.

2.5 Financial Feasibility Analysis

- **Amount of IWRB Grant Funding Requested**

The total estimated project cost is $307,100. The amount of funding requested is $153,550.

- **Financing Sources –**

In addition to the IWRB matching funds, the project matching financing will be provided by FCD10, the adjacent landowner, and NRCS.

Effectiveness of Project *(60 points)*

- **What is the urgency of the project and anticipated costs? (10 points)**

  The urgency of the project is to prevent the river from establishing a new primary channel by redirecting the river back to historic river channel. See attached itemized cost estimate.

- **What are the objectives and benefits of the project? (10 points)**

The objective is to re-establish river flow to historic channel, thereby reducing flood risk and property loss.

- **How does the proposed project solution address the objectives? (10 points)**

  Improving channel capacity reduces out of bank flooding at less than flood stage. The repairing of the stream bank and removal of excess gravel will effectively redirect the flood waters from agricultural land and return the river back to the normal channel.

- **How will the project measure success of its objectives, and describe the proposed monitoring plan. (5 points)**

  A sediment monitoring station has been installed by University of Idaho, Center for Ecohydraulics Research through a contract with FCD10 to provide continuous measurement and monitoring of sediment transfer and will be compared to previous studies for this reach.

- **Is the proposed budget and schedule realistic and is the budget appropriate for the scope of work provided? Has the applicant provided detailed construction expenses documenting how money will be spent to complete the project? (15 points)**

  The proposed budget has been developed in coordination with NRCS, landowners, and construction companies who all agree the costs are within realistic estimates. FCD10 will submit invoices from the Contractor as work is completed and invoices for admin. and engineering costs upon project completion per guidelines for the grant funding program.

- **Are project sponsors using relevant and appropriate information to develop the proposed project? (Sponsor should include references to relevant studies, assessments, reports, management plans, etc.) How will the project account for expected future changes to hydrology, sediment regimes, or water supply? *(10 points)***

  The proposed project plan was developed to NRCS national standards. Refer to attached NRCS Project Plan and Arana EQIP17 Design Report.

Readiness of Project *(50 points)*

- **Lead sponsor of project is identified and there is a description of other affected stakeholders and jurisdictions. *(10 points)***
  Flood Control District #10 is the lead. Additional stakeholders include: Arana/Gibson landowners, downstream landowners, NRCS, USACE, IDWR, Ada County, IDL, and City of Meridian.

- **Project sponsors will provide documentation that affected local stakeholders and jurisdictions have been consulted. If the project is located within a Flood Control District, the sponsor must provide documentation showing the Flood Control District supports the project, otherwise the project will be declared ineligible. *(10 points)***
  Boise River Flood Control District #10 supports this project, see application cover letter. Verbal commitments have been received from local stakeholders and jurisdictions. Written letters of support have been assured but due to time constraints, have not been received as of the application date.

- **Specify cash matching funds that will be provided for the project, including any in-kind services. Indicate what funding sources are secured or pending. The applicant must provide at least 50% matching cost share funding with non-state dollars. In-kind services can be used for 30% of the total projects costs. Legal/Administrative in-kind services are limited to 5% of total project costs.** ***(10 points)***
  See attached matched funding breakout.

- **Projects that propose matching cost-share amounts above 50% will receive additional points in the ranking** ***(1 point for each additional 1% increase up to 70% to receive up to 20 additional points).***
  The proposed match for this project is 50%/50%.

Organization Capacity ***(20 points)***

- **What is the sponsor's history of successful accomplishments on projects similar to this one? The sponsor shall provide several past project examples, if possible.** *(10 points)*

  See attached Permitting History Summary, which lists successfully completed projects.

- **What level of sponsor and consultant staffing will be directed toward the implementation of the proposed project? Discuss the number of sponsor and consultant staff and amount of time dedicated for each for the project. Will the project utilize volunteers? If so, how? Include brief resumes or list of qualifications for each member of the project team.** ***(10 points)***
  One FCD10 staff member with consulting engineering support will provide regular oversight up to 2 hours per day. No volunteers will be utilized.

Attachments supporting this application are available at the following cloud site:

https://app.box.com/s/byz2ua7edk26r31vmcg22673nqcw6j4g

Duck Alley Pit Capture					
Work	Item	Cost	Unit Price	Units	Quantity
General Conditions	Mobilization	$ 4,900	$ 4,900	LS	1
	Water Control (Super Sack Placement)	$ 30,000	$ 200	EA	150
	Water Control (Super Sack Removal)	$ 24,000	$ 160	EA	150
	FCD10/Engineering	$ 5,000	$ 5,000	LS	1
	Admin	$ 14,600	$ 14,600	LS	1
Channel Gravel Management	Excavation	$ 80,000	$ 20	CY	4,000
	Willow Root Wads (Harvest)	$ 9,000	$ 200	EA	45
Embankment Repair	Load/Haul (Owner Furnished Rip Rap)	$ 28,800	$ 24	CY	1,200
	Move Onsite Rip Rap	$ 2,800	$ 7	CY	400
	Place Rip Rap Embankment in Breach	$ 90,000	$ 50	CY	1,800
	Onsite fill material placed on top of Rip Rap	$ 3,000	$ 15	TN	200
	Willow Root Wads and Bundles (Placement)	$ 15,000	$ 150	EA	100
	PROJECT TOTAL	**$ 307,100**			

Matching Funds	
State (IWRB)	$ 153,550
Landowner	$ 28,550
NRCS	$ 100,000
FCD10	$ 25,000
Project Total	**$ 307,100**

Figure 6 – April 1, 2016, not to scale

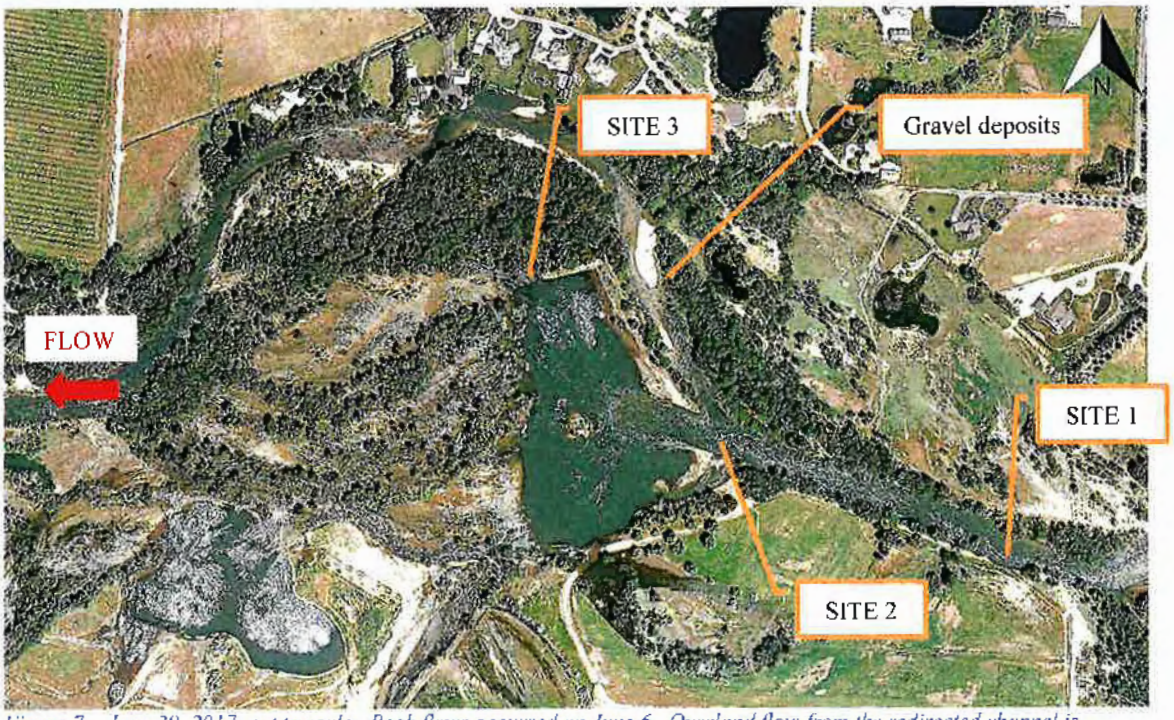


Figure 7 June 29, 2017, not to scale. Peak flows occurred on June 6. Overland flow from the redirected channel is visible.

Downstream of the break at Site 2 in Figure 7 there are large gravel deposits. Gravel deposits at this location are not seen on Figures 4 through 6. Sediment removal will be in this section.

BOISE RIVER FLOOD CONTROL DISTRICT #10
PO Box 140396
Garden City, Idaho 83714-0396

June 15, 2018

Idaho Water Resource Board
322 East Front Street, Statehouse Mail
Boise, ID 83720

ATTN: Grant Fund Committee

Please find attached an application for the Flood Management Grant Funding Program. The application has been completed pursuant to the criteria listed in the Flood Management Grant Funding Guidelines. The Boise River Flood Control District #10 Board of Commissioners has approved and supports this project.

If you have questions or need further information, please contact Mike Dimmick, District Manager, at projectmgr@boiseriver.org or (208) 861-2766. Also available for additional information, contact Steve Sweet at steve@quadrant.cc or (208) 850-3452.

Thank you for your consideration of this application. Your support is appreciated.

Mike Dimmick, District Manager
Boise River Flood Control District #10

IWRB Flood Management Grant Application

II. GENERAL INFORMATION

A. Type of Organization:

☒ Flood District ☐ Municipality ☐ County ☐ Other

Flood Control District #10 (FCD10) Organization Name	Mike Dimmick, District Manager Contact Person, Name & Title
PO Box 140396 PO Box/Street Address	208-861-2766 Contact Telephone Number
Garden City, ID, 83714-0396 City, County, State, Zip Code	projectmgr@boiseriver.org E-Mail Address
82-0419262 Taxpayer ID#	

Project location/ legal description: Boise River, River Mile 30.0

Latitude: 43°40'55.97"N Longitude: 116°33'15.14"W See Attachment

B. Is your organization registered with the Idaho Secretary of State's office?

☐ **Yes** ☒ **No**

C. Purpose and name of project for this grant application.

- ☐ Stream Channel Repair
- ☒ Stream Channel Improvement
- ☒ Flood Risk Reduction
- ☐ Flood Prevention
- ☒ Other: Gravel Removal

III. WATER PROJECT/ACTIVITY

A. Source of Water

☒ Surface ☐ Reservoir ☐ Other

B. Describe the Flood Management Project/Activity - What is the primary purpose of this grant application?

Project is designed to reduce erosion to ranch lands and irrigation diversion on the north side of the river channel. Continued accumulation of gravel in the reach has caused serious erosion and failure of Porter's diversion resulting in flooding of fields and roadways.

C. Does this project/activity address multiple objectives? If so explain.

Yes, the project addresses the accelerating loss of land (400 feet of Porter's property in last 25 years, see attachment) as demonstrated in the 2017 flooding. The project addresses the potential for a massive failure of the bank and diversion channel that will increase serious flood risk for the City of Middleton. The project will reduce the out of bank flooding at river flows less than 6,500 CFS.

D. Will this flood management project/activity be implemented in a single year, or phased over multiple years?

☒ 1-Year ☐ Multiple-Years (Phased)

E. Project start and completion date:

The project will be started during low flow in the Boise River. The start date will be November 2018 and will be completed by Spring of the following year.

F. Project detailed cost estimate, including all labor and materials:

See Attachment

G. Has your organization performed stream channel or stream bank repair and/or improvement projects in the past?

Yes, FCD10 has performed ongoing stream channel, stream bank repair, and improvement projects during low river flows since 1972.

H. Provide the required regulatory approval and permit documents for this project.

Permitting and letters of authorization from County, USACE, IDWR, and any other organizations will be accomplished after the project has been awarded. FCD10 secures required permits from regulatory agencies as standard operating procedure for the District.

IV. FINANCIAL INFORMATION

A. Does your organization have a regular assessment for a reserve or special needs fund?

☐ Yes ☒ No

B. Does your organization have prior experience in working with the Idaho Water Resource Board?

☒ Yes ☐ No

C. What other sources of funding have been explored to fund the project? (e.g. U.S. Army Corps of Engineers, NRCS, FEMA, Banks, Local Government, etc.)

Yes, landowners adjacent to project will provide majority of the match in cooperation with FCD10.

Amount of Funds Requested: $77,616

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

Authorized signature & date:

2.1 Project Background Information

2.1.1 Purpose

Reducing flood risk by improving channel flow.

2.1.2 Project Area Description

Canyon County, Boise River Mile 30, Latitude: 43°40'55.97"N Longitude: 116°33'15.14"W

2.1.3. Previous Projects and Studies

See attachment for list of multiple projects.

2.2 Project Sponsor

a. Flood Control District #10
b. Mike Mulchay (Landowner)
c. Rich Porter (Landowner)

2.4 Project Description

a. Project Description – Gravel Removal See Plan Set Attachment
b. Map – See Attachment
c. Conceptual Plan/Cross Section – See Attachment
d. Conceptual Design and Repair Features – See Attachment
e. Right-of-Way/Easement – Land owned by co-applicants, Mike Mulchay and Rich Porter. No easement required.

2.4.2 Cost Estimate

Cost estimate $77,616. See attached itemized cost estimate.

2.4.3 Implementation Schedule

Low water 2018, completion by April 2019.

2.5 Financial Feasibility Analysis

- **Amount of IWRB Grant Funding Requested**

The total estimated project cost is $77,616. The amount of funding requested is $38,808

- **Financing Sources –**

In addition to the IWRB matching funds, the project matching grant financing will be provided by FCD10, and the adjacent landowners.

- **Amount of IWRB Grant Funding Requested – • Financing Sources – Effectiveness of Project *(60 points)***

  - **What is the urgency of the project and anticipated costs? (10 points)**

    The urgency of the project is to mitigate flood risk to the City of Middleton and reduce the rate of land loss for the landowner. See attachment of cost estimates.

  - **What are the objectives and benefits of the project? (10 points)**

    The objective is to increase channel capacity by removing excess bedload. The

benefit of the project is reducing flood risk and property loss.

- **How does the proposed project solution address the objectives? (10 points)**

  Improving channel capacity reduces out of bank flooding at less than flood stage.

- **How will the project measure success of its objectives, and describe the proposed monitoring plan. (5 points)**

  A sediment monitoring station has been installed by University of Idaho, Center for Ecohydraulics Research through a contract with FCD10 to provide continuous measurement and monitoring of sediment transfer and will be compared to previous studies for this reach.

- **Is the proposed budget and schedule realistic and is the budget appropriate for the scope of work provided? Has the applicant provided detailed construction expenses documenting how money will be spent to complete the project? (15 points)**

  The proposed budget is within FCD10 recent costs for gravel management projects. This project's budget is significantly less than FCD10's most recent gravel removal project at the Head of Eagle Island in December 2017. This lower cost is appropriate due to shorter haul distance and less road construction. FCD10 will submit invoices from the Contractor as work is completed and invoices for admin. and engineering costs upon project completion per guidelines for the grant funding program.

- **Are project sponsors using relevant and appropriate information to develop the proposed project? (Sponsor should include references to relevant studies, assessments, reports, management plans, etc.) How will the project account for expected future changes to hydrology, sediment regimes, or water supply? *(10 points)***

  As demonstrated in the attachment FCD10 is acutely aware of sediment management issues in this area. As a consequence, FCD10 is presently contracted with the University of Idaho to complete a sediment management study in this reach of the Boise River.

Readiness of Project *(50 points)*

- **Lead sponsor of project is identified and there is a description of other affected stakeholders and jurisdictions. *(10 points)***

  Flood Control District #10 is the lead, City of Middleton, Canyon County, Boise River Watermaster, and affected landowners are active cooperators in this project.

- **Project sponsors will provide documentation that affected local stakeholders and jurisdictions have been consulted. If the project is located within a Flood Control District, the sponsor must provide documentation showing the Flood Control District supports the project, otherwise the project will be declared ineligible. *(10 points)***
  Verbal commitments have been received from local stakeholders and jurisdictions. Written letters of support will follow. The adjacent landowners are co-sponsors.

- **Specify cash matching funds that will be provided for the project, including any in-kind services. Indicate what funding sources are secured or pending. The applicant must provide at least 50% matching cost share funding with non-state dollars. In-kind services can be used for 30% of the total projects costs. Legal/Administrative in-kind services are limited to 5% of total project costs.** ***(10 points)***
  FCD10 will provide administrative and engineering costs up to 10% of total project costs. The landowners will provide the remainder. See the shared cost attachment.

- **Projects that propose matching cost-share amounts above 50% will receive additional points in the ranking** ***(1 point for each additional 1% increase up to 70% to receive up to 20 additional points).***
  The proposed match for this project is 50%/50%.

Organization Capacity *(20 points)*

- **What is the sponsor's history of successful accomplishments on projects similar to this one? The sponsor shall provide several past project examples, if possible.** *(10 points)*
  See attached Permitting History Summary, which lists successfully completed projects.

- **What level of sponsor and consultant staffing will be directed toward the implementation of the proposed project? Discuss the number of sponsor and consultant staff and amount of time dedicated for each for the project. Will the project utilize volunteers? If so, how? Include brief resumes or list of qualifications for each member of the project team.** ***(10 points)***
  One FCD10 staff member and engineering support will provide regular oversight up to 2 hours per day. No volunteers will be utilized.

Attachments supporting this application are available at the following cloud site:

https://app.box.com/s/0hxj35l95n1u0sk8vt5dfjxxrs6pd7ir

Amount of Funds Requested: $38,808

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

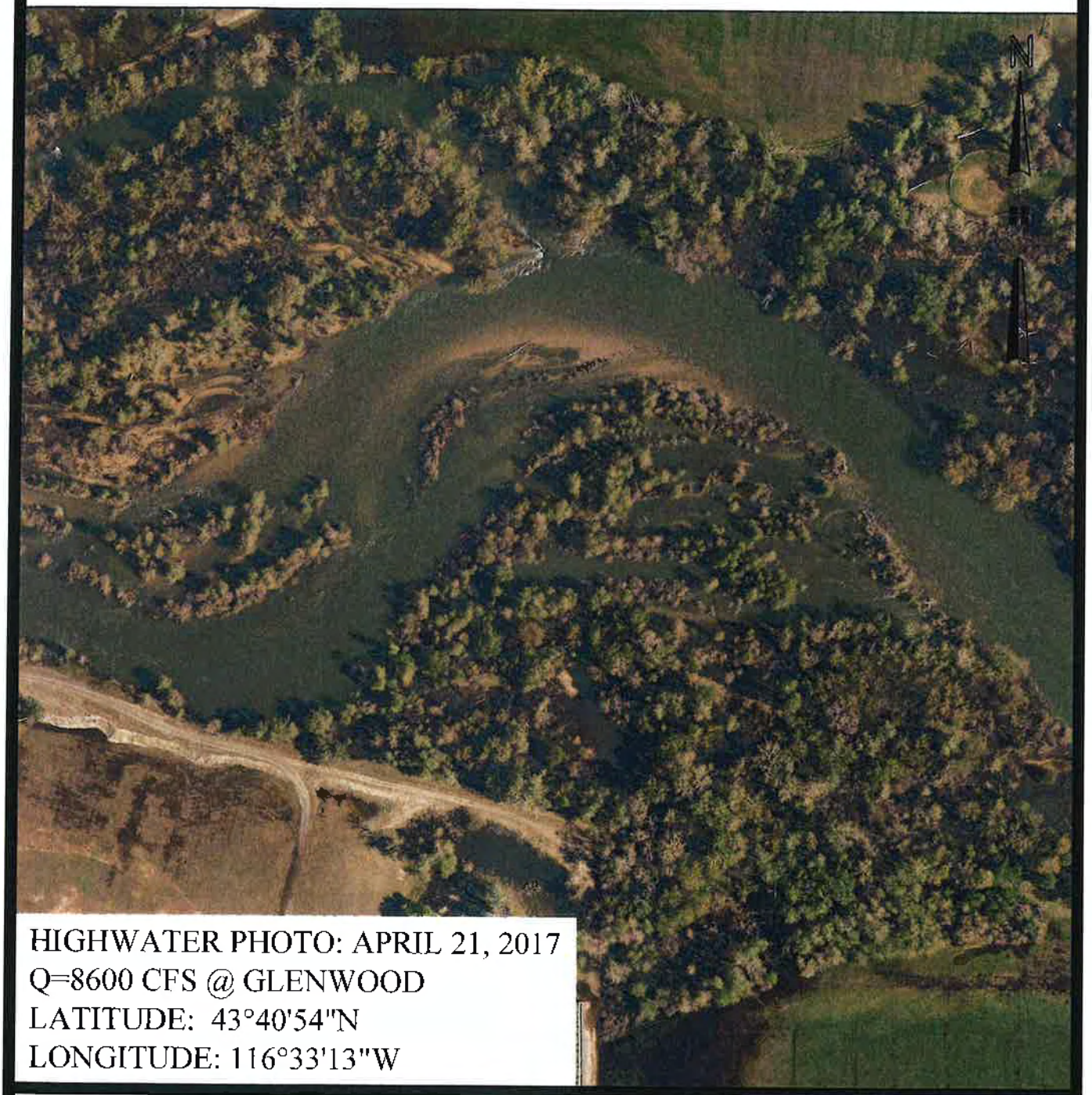
Authorized signature & date:

Porter & Mulchay Cost Estimate				
Item	Cost	Unit Price	Units	Quantity
Mobilization/Demob	$ 4,000	$ 4,000	LS	1
Site Preparation	$ 12,000	$ 200	HR	60
Excavation (2 Scrapers)	$ 33,800	$ 96	HR	352
Operater and Fuel	$ 21,120	$ 60	HR	352
Permit/Design	$ 3,000	$ 3,000	LS	1
Admin	$ 3,696	$ 3,696	LS	1
Total	**$**			**77,616**

Matching Funds	
State	$ 38,808
Landowners	$ 23,808
FCD10	$ 15,000

PORTER /MULCHAY

GRAVEL REMOVAL



HIGHWATER PHOTO: APRIL 21, 2017
Q=8600 CFS @ GLENWOOD
LATITUDE: 43°40'54"N
LONGITUDE: 116°33'13"W

DESIGNED BY: SS DRAWN BY: JJR CHECKED BY: SS PLOT DATE: 6/6/18	FLOOD CONTROL DISTRICT #10 WATER MANAGEMENT FUND PROJECT			Quadrant Consulting, Inc. 1904 W. Overland Rd Boise, Idaho 83705 (208) 342-0091 PHONE (208) 342-0092 FAX CIVIL ENGINEERING–SURVEYING
SHEET 1	SCALE: 1"=200'	PROJECT NO. 168-01	NAMPA IDAHO	

PORTER/MULCHAY

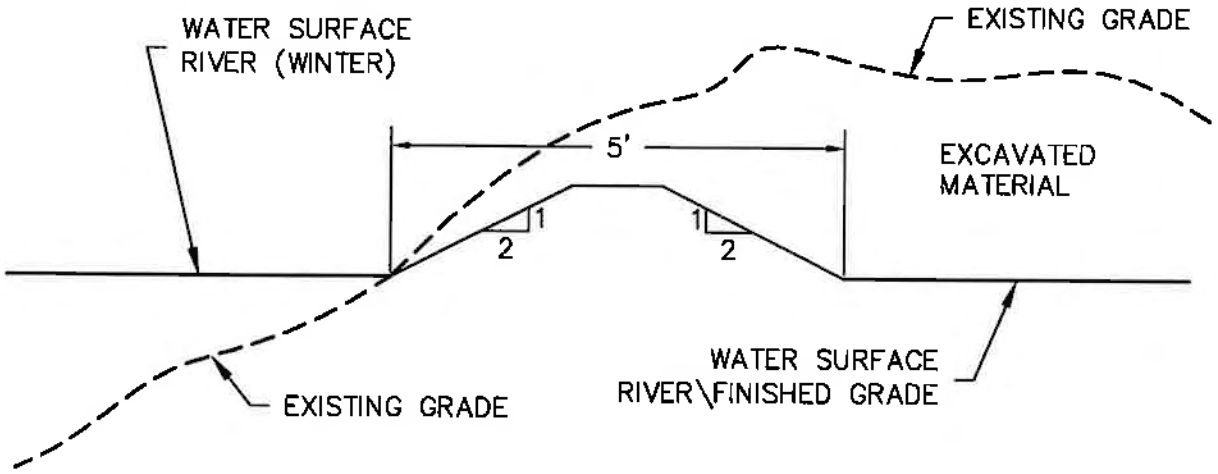
GRAVEL REMOVAL

GRAVEL REMOVAL:
AREA - 359,000 SF (8.2 ACRES)
VOLUME - 26,600 CY

DESIGNED BY: SS DRAWN BY: JJR CHECKED BY: SS PLOT DATE: 6/14/18	FLOOD CONTROL DISTRICT #10 WATER MANAGEMENT FUND PROJECT			Quadrant Consulting, Inc. 1904 W. Overland Rd Boise, Idaho 83705 (208) 342-0091 PHONE (208) 342-0092 FAX CIVIL ENGINEERING-SURVEYING
SHEET 2	SCALE: 1"=200'	PROJECT NO. 168--01	NAMPA IDAHO	

PORTER /MULCHAY

GRAVEL REMOVAL



GRAVEL BERM SEPARATING BOISE RIVER FROM SITE OPERATIONS.

DESIGNED BY: SS DRAWN BY: JJR CHECKED BY: SS PLOT DATE: 6/6/18	FLOOD CONTROL DISTRICT #10 WATER MANAGEMENT FUND PROJECT			Quadrant Consulting, Inc. 1904 W. Overland Rd Boise, Idaho 83705 (208) 342-0091 PHONE (208) 342-0092 FAX CIVIL ENGINEERING-SURVEYING
SHEET 3	SCALE: NTS	PROJECT NO. 168-01	NAMPA IDAHO	

Clearwater Soil and Water Conservation District
12730 Highway 12, Suite C – Orofino, Idaho 83544

Idaho Water Resources Board
322 E Front St
Statehouse Mall
Boise, ID 83720

June 13, 2018

RE: Application for Flood Management Grant

To whom it may concern,
The Clearwater Soil & Water Conservation District has completed the application for Flood Management Grant funds in accordance with the 2018 program guidelines. The District appreciates the opportunity to submit a project proposal to this source of funds. The proposed project has been developed in partnership with PotlatchDeltic forest engineers. This project will repair significant drainage issues that have been identified in the Quartz Creek drainage, a class I tributary of Orofino Creek. The project is shovel ready and implementation will begin immediately upon notice of funding award.
The District looks forward to working with the ID Water Resources Board on reducing the risk of major roadway failure and the resulting sediment build up and erosion within the Orofino Creek watershed.

Feel free to contact our office at 208-476-5313 X 5 or by email at Clearwater.swcd@gmail.com .

Sincerely,

Mike Hoffman
Office Manager
Clearwater Soil and Water Conservation District

IDAHO WATER RESOURCE BOARD
322 East Front Street, Statehouse Mail
Boise, Idaho 83720
Tel: (208) 287-4800
FAX: (208) 287-6700

APPLICATION FOR FLOOD MANAGEMENT GRANT

Answer the following questions and provide the requested material as directed. All pertinent information must be provided. Additional information may be requested by the Idaho Water Resource Board (IWRB) depending on the scope of the project and amount of funding requested.

Incomplete documents will be returned and no further action will be taken by IWRB staff. All paperwork must be submitted within twenty-eight (28) working days prior to the next IWRB meeting.

Board meeting agendas can be found at: http://www.idwr.idaho.gov/IWRB/meetings/

I. Overview:

This form applies to the *IWRB Flood Management Grant Program*. The Flood Management Grant Program provides financial assistance to eligible entities interested in pursuing flood damaged stream channel repair, stream channel improvements, flood risk reduction, or flood prevention projects. Pursuing flood management improvement and repair projects can assist in maintaining flow capacities in major waterways, prevent bank and channel erosion, and reduce property damage during flood events.

The grant funding shall require a 50% funding match by the sponsor of the total project costs. In-kind services can account for up to 30% of the total project costs. Legal/Administrative in-kind services are limited to 5% of total project costs.

Funds will be distributed by sponsor submitting funding reimbursement requests, which shall include:

1. Cover letter formally requesting a funding reimbursement, description of project activities, dates of project activities, and contractor or supplier invoices. Funds shall be distributed within 15-days of receipt of reimbursement request.

Upon completion of the project, sponsor and/or consultant, shall submit a notice of completion to the IWRB, and that the improvements and/or repairs were constructed in substantial conformance with the approved plans and specifications.

Prepare and attach a "Grant Document" to this application.

The Grant Application Document requirements are outlined in the IWRB Flood Management Grant Program Guidelines. The guidelines can be found at:
http://www.idwr.idaho.gov/waterboard/Financial%20program/financial.htm
You can also obtain a copy by contacting IWRB staff.

II. General Information:

A. Type of organization: (Check box)

- ☐ Flood District
- ☐ Municipality
- ☐ County
- ☑ Other

Clearwater Soil & Water Conservation District	Terry White, Chairman
Organization name	Name and title of Contact Person
12730 Hwy 12, Suite C	208-476-5313 x 5
PO Box/Street Address	Contact telephone number
Orofino, Clearwater County, ID 83544	clearwater.swcd@gmail.com
City, County, State, Zip Code	e-mail address
82-0294289	
Taxpayer ID#	

Project location legal description: Quartz Creek, Clearwater County, ID T 37 N r 05E Sections 5 & 9

B. Is your organization registered with the Idaho Secretary of State's office? Yes ☐ No ☑

C. Purpose and name of project for this grant application.

- ☐ Stream Channel Repair
- ☑ Stream Channel Improvement
- ☑ Flood Risk Reduction
- ☑ Flood Prevention
- ☐ Other _____

III. WATER PROJECT/ACTIVITY:

A. Source of water:

- ☑ Surface
- ☐ Reservoir
- ☐ Other

B. Describe the Flood Management Project/Activity - What is the primary purpose of this grant application?

The project primary purpose of the project is to reduce the risk of flood damage to a key secondary road within Clearwater County. Secondarily, the proposed project will replace undersized and unsuitable culverts within the Quartz Creek watershed, a class I fish bearing stream

C. Does this project/activity address multiple objectives? If so explain.

Yes, the proposed culvert replacement project will reduce teh risk of flood damage to roadway surfaces, will improve fisheries habitat, and will provide stability to a heavily used secondary roadway providing access to industrial, state and federal forest lands as well as designated recreation sites used in all seasons.

D. Will this flood management project/activity be implemented in a single year, or phased over multiple years?

☑ 1-year ☐ Multiple-years (Phased)

E. Project start and completion date:

The project is shovel ready and will begin within 30 days of award notice

The project is expected to be complete within 120 days

F. Project detailed cost estimate, including all labor and materials:

Culverts $ 80,300; bedding rock $ 79,467; grass seeding $ 2,500; Cultural Resource monitoring $ 4,500

Labor: Culvert replacement $ 104,340; Contract Supervision $ 28,222

G. Has your organization performed stream channel or stream bank repair and/or improvement projects in the past?

The Clearwater Soil & Water Conservation District has over twenty years experience in stream channel restoration and improvement

H. Provide the required regulatory approval and permit documents for this project.

The proposed activities are regulated under the Idaho Forest Practices Act.

IV. FINANCIAL INFORMATION:

A. Does your organization have a regular assessment for a reserve or special needs fund?

Yes ☑ No ☐

B. Does your organization have prior experience in working with the Idaho Water Resource Board?

Yes ☑ No ☐

C. What other sources of funding have been explored to fund the project? (e.g. U.S. Army Corps of Engineers, NRCS, FEMA, Banks, Local Government, etc.)

Funds ($ 155,219) from Potlatch-Deltic have been committed as match for this project.

Amount of funds requested: $ 155,220

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

Authorized signature& date: Joyce Simonsen 5/31/18

Vice Chair CSWCD

Purpose

The proposed project will reduce the impacts of flooding on the Snake Creek Road, a major secondary road within Clearwater County, Idaho. As a major secondary roadway, the Snake Creek Rd provides for an alternative route for traffic when the Grangemont Rd, a designated federal lands access roadway and a collector roadway, is closed due to slides or for major maintenance. The Snake Creek Road provides access to private, state and federal lands managed for timber and year-round recreation.

Currently, the Snake Creek Road experiences annually flooding – water over the roadway, as a result of the upper reaches of Quartz Creek peak flows due to mid winter thaw, spring run-off and from summer torrential rain storms. This Quartz Creek upper basin is bolstered by the influx of water flow by the tributary Calhoun Creek.

According to the US Geologic Services Stream Stats Report (https://streamstats.usgs.gov/ss/), the upper end of the Quartz Creek drainage average annual precipitation is 44 inches and peak flows range between 36 and 157 cubic ft per second (see Attachment A: Quartz Creek Upper-basin Characteristics). These flooding events overwhelm the existing culvert network and water runs over and down the roadway causing surface damage and out of stream sediment delivery downstream. Photographs documenting the flooding are included in Attachment B.

The proposed project has been developed in partnership with PotlatchDeltic, a private industrial forestland owner/management firm with landholdings accessed by the Snake Creek Road. The Clearwater Soil & Water Conservation District (District) works with private and public sector partners to address water quality issues across Clearwater County, ID. The District is often a lead facilitator on projects that address issues and concerns within water quality and/or stream channel issues.

The proposed project will replace sixteen (16) undersized culverts within the Quartz Creek and two (2) within Calhoun Creek drainages that have a direct impact on Quartz Creek flow along the Snake Creek Road. Specifically, the project will install eleven (11) 18" culverts and seven (7) open bottom culverts ranging in size from 3 ft to 8 ft. The project will include on-site cultural-historic resource monitoring and seeding to reduce site disturbance erosion. The proposed project costs is $ 310,439. PotlatchDeltic has pledged funds to cover fifty percent of the project costs, or $ 155,219 (see Attachment C: Letters of Support). This is a shovel ready project and if awarded the ID Water Resources Flood Management Grant funds would be immediately put towards project implementation.

Project Area

The Quartz Creek Flood Management project is located within Clearwater County, Idaho. Clearwater County is located within north central Idaho and is a rural county with four incorporated communities: Orofino, Elk River, Pierce and Weippe.

The project area is located seven (7) miles from Pierce and twenty-seven (27) miles from Orofino. The roadway system within the project area is secondary gravel surfaced roads used to access forestlands for management and recreation. Along the first mile of the Snake Creek Road there are two logging company shops, one residence and the County snowmobile groomer maintenance/storage Shed. Three miles up the road is Bald Mountain Ski Area. The secondary roadways included in the proposed project all lie within the PotlatchDeltic ownership.

According to USGS Stream Stats, the Quartz Creek upper basin watershed encompasses 3.7 square miles, 97% of which is forested land and slopes are moderate; within the watershed area elevations range 1,100 ft from peak to valley (see Attachment A Quartz Creek Upper-basin Characteristics).

Previous Projects and Studies

The District has worked on drainage issues along the Snake Creek Road with the Idaho Dept. of Lands, in 2014 with EPA 319 grant funds the District led a project to replace a 54" culvert with a 24' x 65' bridge to improve water quality and reduce stream flow impacts along the Snake Creek Road. Over the past fifteen years the District has focused its efforts on water quality projects and completed a significant amount of work in culvert replacement/bridge construction in partnership with the federal, state and private land managers/owners. In 2003 and 2007 the District completed projects specific to the Lower North Fork Clearwater River addressing watershed concerns identified in the Total Maximum Daily Loan Implementation Plans. Funding for District projects has come from US Environmental Protection Agency 319 program, Pacific Coast Salmon recovery Fund and Idaho Agricultural Water Quality programs.

Project Sponsor

The Clearwater Soil & Water Conservation District (District) was established in 1946 with the mission to

Provide local leadership to educate and assist the public on the wise stewardship of soil, water, air, plants, and animal resources, and to promote strong conservation partnerships to find practical, economical solutions to natural resource problems and coordinate their implementation.

The District is a subdivision of government within the State of Idaho, it is governed by an elected Board of Supervisors who serve voluntarily. The District is funded by State and County appropriation, private sector contributions and project grants. Idaho Statute Title 22, Chapter 27 provides the framework for Conservation Districts and the allocation of funding. Attachment D provides documentation of the District formation.

The District has been active in implementing water quality improvement projects in conjunction with the Snake River Basin Adjudication process, Pacific Coast Salmon Recovery, the Environmental Protection Agency 319 program and US Forest Service. Additionally, the District has secured funding to provide local natural resource education in partnership with state and federal agencies and local school districts.

Project Description

The proposed project will upgrade an existing undersized culvert system within the Quartz Creek upper basin, located in Clearwater County, Idaho. The project will protect major secondary roadways used to access private, state and federal forestlands and recreation sites. By replacing the culvert network with properly sized features Quartz Creek will be contained within its natural pathway and when events such as mid-January thaw, spring rain on snow events and mid-summer torrential downpours occur the creek will not impact the roadway surfaces. The project will reduce the risk of catastrophic road failure as creek flow will be better contained within the waterway. The project will reduce the risk of sediment loading within Quartz Creek, a class I (fish producing) stream.

Proposed Scope of Work

The project will replace eighteen undersized and/or damaged culverts along the Quartz Creek. The installation will include eleven (11) 18" culverts and seven (7) open bottom culverts ranging in size from 3 ft to 8 ft. Currently, the majority of the culverts have been damaged by past flood events (crushed openings, sediment filled or simply rotten due to having been submerged in silt/sediment. Locations where intersecting roadways cross the creek open bottom culverts will replace existing circular steel culverts. The open bottom culverts will provide for fish passage at all times of the year, and provide for uninhibited flow during high water events.

At each project site, cultural-historic resource monitoring will take place to document the excavation and each site will be seeded to reduce site disturbance erosion.

Conceptual Design/Cross Section/ Features

The proposed scope of work has been developed by on the ground staff, visits to the sites to identify where specific culverts have failed or are known to be insufficient to accommodate annual flood/high water events. In addition to on the ground review, the USGS Stream Characteristics online tool https://streamstats.usgs.gov/ss/ has been used to determine site specific stream flows (see Appendix A) and culverts sizing has been projected using a nomograph, Idaho's guidance within the Forest Practices Act and established Best Management Practices for forest road management. The project development team has estimated excavation of 42.6 cubic yards of materials in conjunction with the removal/replacement each of the eleven 18" culverts and for each of the open bottom culverts the project proposes to install range from 47 cubic yards (4' x3'x50') to 148 cubic yards (7'x5'x45') with a total projected excavation of 580 cubic yards.

The project detailed engineering will be finalized as part of project implementation.

Easement/Right of Way

The proposed project lies within PotlatchDeltic landholdings and all project activities will take place within existing PotlatchDeltic landholdings/rights of way.

Cost Estimate

Material cost detail

Item	Qty	Item Cost	Total
18" Culverts	11	$ 610	$ 6,710
Open Bottom Culverts			
8'x6'x55'	1	$ 19,800	$ 19,800
8'x6'x48'	1	$ 19,000	$ 19,000
7'x5'x45	2	$ 17,500	$ 35,000
6'x4'x40'	1	$ 11,240	$ 11,240
5'x4'x50'	1	$ 11,100	$ 11,100
4'x3'x50'	1	$ 8,600	$ 8,600

Total Project Costs

Activity	PotlatchDeltic	IDWR	TOTAL
Project design	$ 7,500		$ 12,500
Culverts	$ 87,010		$ 87,010
Culvert bedding rock (yards)	$ 39,734	$ 39,734	$ 79,468
Culvert installation contract		$ 108,740	$ 108,740
Cultural-Historic Monitoring	$ 4,500		$ 4,500
Seeding/Erosion Control		$ 2,500	$ 2,500
Project oversight	$ 16,475		$ 12,490
Administration/Reporting		$ 4,245	$ 3,231
TOTAL PROJECT	**$ 155,219**	**$ 155,219**	**$ 310,439**

Implementation Schedule

Project components include: Design, Permitting, Contract procurement, Materials procurement, Construction/Monitoring and Reporting.

The Design and Permitting will be conducted by PotlatchDeltic and follow the ID Dept. of Lands Forest Practices Act- Stream Channel Alteration Compliance procedure. It is estimated the project design and permitting process will be complete in thirty (30) days post award.

Contract and Materials procurement will be streamlined by the project partnership. The District will advertise and award based on the Idaho Procurement process and PotlatchDeltic will secure culvert materials. The project team expects to have a construction contract awarded no later than end of August 2018.

Construction monitoring, close out and reporting are expected to be complete by the end of calendar year 2018 (12/31/18).

Financial Feasibility

The Quartz Creek Flood Management project will provide 1:1 private sector funding to ID Water Resource Board funding. See appendix B. PotlatchDeltic pledge of project support (see Attachment C).

BOISE RIVER FLOOD CONTROL DISTRICT #10
PO Box 140396
Garden City, Idaho 83714-0396

June 15, 2018

Idaho Water Resource Board
322 East Front Street, Statehouse Mail
Boise, ID 83720

ATTN: Grant Fund Committee

Please find attached an application for the Flood Management Grant Funding Program. The application has been completed pursuant to the criteria listed in the Flood Management Grant Funding Guidelines. The Boise River Flood Control District #10 Board of Commissioners has approved and supports this project.

If you have questions or need further information, please contact Mike Dimmick, District Manager, at projectmgr@boiseriver.org or (208) 861-2766. Also available for additional information, contact Steve Sweet at steve@quadrant.cc or (208) 850-3452.

Thank you for your consideration of this application. Your support is appreciated.

Mike Dimmick

Mike Dimmick, District Manager
Boise River Flood Control District #10

IWRB Flood Management Grant Application

II. GENERAL INFORMATION

A. Type of Organization:

☒ Flood District ☐ Municipality ☐ County ☐ Other

Flood Control District #10 (FCD10) Organization Name	Mike Dimmick, District Manager Contact Person, Name & Title
PO Box 140396 PO Box/Street Address	208-861-2766 Contact Telephone Number
Garden City, ID, 83714-0396 City, County, State, Zip Code	projectmgr@boiseriver.org E-Mail Address
82-0419262 Taxpayer ID#	

Project location/ legal description: Boise River, River Mile 32.5

Latitude: 43°40'40.90"N Longitude: 116°32'36.23"W See attached plans.

B. Is your organization registered with the Idaho Secretary of State's office?

☐ **Yes** ☒ **No**

C. Purpose and name of project for this grant application.

- ☐ Stream Channel Repair
- ☒ Stream Channel Improvement
- ☒ Flood Risk Reduction
- ☐ Flood Prevention
- ☒ Other: Gravel Removal

III. WATER PROJECT/ACTIVITY

A. Source of Water

☒ Surface ☐ Reservoir ☐ Other

B. Describe the Flood Management Project/Activity - What is the primary purpose of this grant application?

Project is designed to reduce erosion to ranch lands and the sides of the river channel. Continued accumulation of gravel in the reach has caused serious erosion and flooding of adjacent property owner's fields.

C. Does this project/activity address multiple objectives? If so explain.

Yes, this project will reduce erosion to river bank adjacent to gravel accumulation, and minimize out of bank flooding at high flows. This project reduces the flood risk to the City of Middleton.

D. Will this flood management project/activity be implemented in a single year, or phased over multiple years?

☒ 1-Year ☐ Multiple-Years (Phased)

E. Project start and completion date:

The project will be started during low flow in the Boise River. The start date will be November 2018 and will be completed by Spring of the following year (2019).

F. Project detailed cost estimate, including all labor and materials:

Cost estimate is $44,000. See attached itemized cost estimate.

G. Has your organization performed stream channel or stream bank repair and/or improvement projects in the past?

Yes, FCD10 has performed ongoing stream channel, stream bank repair, and improvement projects during low river flows since 1972.

H. Provide the required regulatory approval and permit documents for this project.

Permitting and letters of authorization from County, USACE, IDWR, and any other organizations will be accomplished after the project has been awarded. FCD10 secures required permits from regulatory agencies as standard operating procedure for the District.

IV. FINANCIAL INFORMATION

A. Does your organization have a regular assessment for a reserve or special needs fund?

☐ Yes ☒ No

B. Does your organization have prior experience in working with the Idaho Water Resource Board?

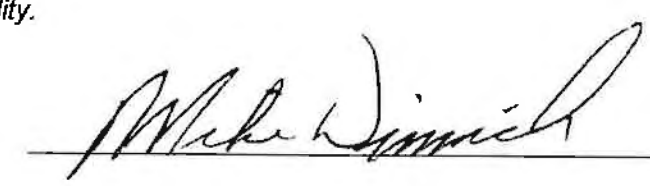
☒ Yes ☐ No

C. What other sources of funding have been explored to fund the project? (e.g. U.S. Army Corps of Engineers, NRCS, FEMA, Banks, Local Government, etc.)

Yes, landowners adjacent to project will provide majority of the match in cooperation with FCD10.

Amount of Funds Requested: $22,000

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

Authorized signature & date: 

2.1 Project Background Information

2.1.1 Purpose

Reducing flood risk by improving channel flow.

2.1.2 Project Area Description

Canyon County, Boise River Mile 30, Latitude: 43°40'40.90"N Longitude: 116°32'36.23"W

2.1.3 Previous Projects and Studies

See attachment for list of multiple projects.

2.2 Project Sponsor

a. Dawn Wells
b. Flood Control District #10
c. Trace Leighton (Cooperating landowner)

2.4 Project Description

a. Project Description – Gravel Removal See Plan Set Attachment
b. Map – See Attachment
c. Conceptual Plan/Cross Section –See Attachment
d. Conceptual Design and Repair Features –See Attachment
e. Right-of-Way/Easement – Cosponsors own land, no right-of-way or easement required

2.4.2 Cost Estimate

See attached itemized cost estimate.

2.4.3 Implementation Schedule

Low water fall 2018, completion by April 2019.

2.5 Financial Feasibility Analysis

- **Amount of IWRB Grant Funding Requested**

The total estimated project cost is $44,000. The amount of grant funding requested is $22,000.

- **Financing Sources –**

In addition to the IWRB matching funds, the project matching financing will be provided by FCD10 and the adjacent landowners, Dawn Wells and Trace Leighton.

Effectiveness of Project *(60 points)*

- **What is the urgency of the project and anticipated costs? (10 points)**

  The urgency of the project is to mitigate immediate flood risk to the adjacent landowners and City of Middleton. See attachment of cost estimates.

- **What are the objectives and benefits of the project? (10 points)**

  The objective is to increase channel capacity by removing excess bedload. The benefit of the project is reducing flood risk and property loss.

- **How does the proposed project solution address the objectives? (10 points)**

  Improving channel capacity reduces out of bank flooding at less than flood stage river flows.

- **How will the project measure success of its objectives, and describe the proposed monitoring plan. (5 points)**

  A sediment monitoring station has been installed by University of Idaho, Center for Ecohydraulics Research through a contract with FCD10 to provide continuous measurement and monitoring of sediment transfer and will be compared to previous studies for this reach.

- **Is the proposed budget and schedule realistic and is the budget appropriate for the scope of work provided? Has the applicant provided detailed construction expenses documenting how money will be spent to complete the project? (15 points)**

  The proposed budget is within FCD10 recent costs for gravel management projects. This project's budget is significantly less than FCD10's most recent gravel removal project at the Head of Eagle Island in December 2017. This lower cost is appropriate due to shorter haul distance and less road construction. FCD10 will submit invoices from the Contractor as work is completed and invoices for admin. and engineering costs upon project completion per guidelines for the grant funding program.

- **Are project sponsors using relevant and appropriate information to develop the proposed project? (Sponsor should include references to relevant studies, assessments, reports, management plans, etc.) How will the project account for expected future changes to hydrology, sediment regimes, or water supply? *(10 points)***

  FCD10 is acutely aware of sediment management issues in this area. As a result, FCD10 is presently contracted with the University of Idaho to complete a sediment management study in this reach of the Boise River.

Readiness of Project *(50 points)*

- **Lead sponsor of project is identified and there is a description of other affected stakeholders and jurisdictions. *(10 points)***

  Flood Control District #10 is the lead, Canyon County, and affected landowners (cosponsors) are active cooperators in this project.

- **Project sponsors will provide documentation that affected local stakeholders and jurisdictions have been consulted. If the project is**

located within a Flood Control District, the sponsor must provide documentation showing the Flood Control District supports the project, otherwise the project will be declared ineligible. ***(10 points)***
Boise River Flood Control District #10 supports this project, see application cover letter. Adjacent landowners are directly involved in the project and are providing matching funds.

- **Specify cash matching funds that will be provided for the project, including any in-kind services. Indicate what funding sources are secured or pending. The applicant must provide at least 50% matching cost share funding with non-state dollars. In-kind services can be used for 30% of the total projects costs. Legal/Administrative in-kind services are limited to 5% of total project costs.** ***(10 points)***
  See attached matched funding breakout.

- **Projects that propose matching cost-share amounts above 50% will receive additional points in the ranking** ***(1 point for each additional 1% increase up to 70% to receive up to 20 additional points).***
  The proposed match for this project is 50%/50%.

Organization Capacity *(20 points)*

- **What is the sponsor's history of successful accomplishments on projects similar to this one? The sponsor shall provide several past project examples, if possible.** *(10 points)*

  See attached Permitting History Summary, which lists successfully completed projects.

- **What level of sponsor and consultant staffing will be directed toward the implementation of the proposed project? Discuss the number of sponsor and consultant staff and amount of time dedicated for each for the project. Will the project utilize volunteers? If so, how? Include brief resumes or list of qualifications for each member of the project team.** ***(10 points)***
  One FCD10 staff member and engineering support will provide regular oversight up to 2 hours per day. No volunteers will be utilized.

Attachments supporting this application are available at the following cloud site:

https://app.box.com/s/42neu3gzagwvfr8z6s8dqakvz748uvti

Leighton & Wells Cost Estimate				
Item	Cost	Unit Price	Units	Quantity
Mobilization/Demob	$ 2,000	$ 2,000	LS	1
Site Preparation	$ 6,000	$ 200	HR	30
Excavation (2 Scrapers)	$ 15,400	$ 96	HR	160
Operater and Fuel	$ 16,000	$ 100	HR	160
Permit/Design	$ 2,500	$ 2,500	LS	1
Admin	$ 2,100	$ 2,095	LS	1
Total	**$**			**44,000**

Matching Funds	
State	$ 22,000
Wells	$ 20,000
FCD10	$ 2,000

LEIGHTON/WELLS

GRAVEL REMOVAL

HIGHWATER PHOTO: APRIL 21, 2017
Q=8600 CFS @ GLENWOOD
LATITUDE: 43°40'40"N
LONGITUDE: 116°32'36"W

DESIGNED BY: SS DRAWN BY: JJR CHECKED BY: SS PLOT DATE: 6/14/18	FLOOD CONTROL DISTRICT #10 WATER MANAGEMENT FUND PROJECT		
SHEET 1	SCALE: 1"=500'	PROJECT NO. 168-01	STAR IDAHO

Quadrant Consulting, Inc.
1904 W. Overland Rd
Boise, Idaho 83705
(208) 342-0091 PHONE (208) 342-0092 FAX
CIVIL ENGINEERING-SURVEYING

LEIGHTON/WELLS

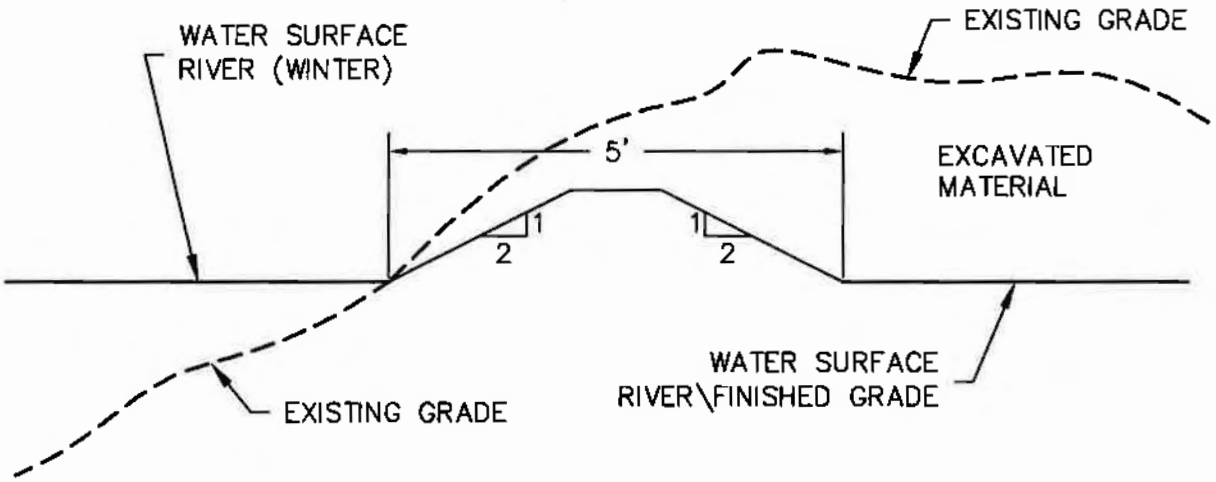
GRAVEL REMOVAL

GRAVEL REMOVAL:
AREA - 198,500 SF (4.6 ACRES)
VOLUME - 22,000 CY

DESIGNED BY: SS DRAWN BY: JJR CHECKED BY: SS PLOT DATE: 6/14/18	FLOOD CONTROL DISTRICT #10 WATER MANAGEMENT FUND PROJECT			Quadrant Consulting, Inc. 1904 W. Overland Rd Boise, Idaho 83705 (208) 342-0091 PHONE (208) 342-0092 FAX CIVIL ENGINEERING-SURVEYING
SHEET 2	SCALE: 1"=500'	PROJECT NO. 168-01	STAR IDAHO	

LEIGHTON/WELLS

GRAVEL REMOVAL



GRAVEL BERM SEPARATING BOISE RIVER FROM SITE OPERATIONS.

DESIGNED BY: SS DRAWN BY: JJR CHECKED BY: SS PLOT DATE: 6/14/18	FLOOD CONTROL DISTRICT #10 WATER MANAGEMENT FUND PROJECT		
SHEET 3	SCALE: NTS	PROJECT NO. 168-01	STAR IDAHO

Quadrant
Consulting, Inc.
1904 W. Overland Rd
Boise, Idaho 83705
(208) 342-0091 PHONE (208) 342-0092 FAX
CIVIL ENGINEERING--SURVEYING

BOISE RIVER FLOOD CONTROL DISTRICT #11
PO Box 729
Parma, Idaho 83660

June 18, 2018

Idaho Water Resource Board
322 East Front Street, Statehouse Mail
Boise, Idaho 83720

ATTN: Grant Fund Committee

Please find attached an application for the Flood Management Grant Funding Program. The application has been completed pursuant to the criteria listed in the Flood Management Grant Funding Guidelines. The Boise River Flood Control District #11 Board of Commissioners has approved and supports this project.

If you have questions or need further information, please contact Jim Thorpe, District Commissioner, at jim@thorpe.bix or (208) 859-2765. Also available for additional information, contact Steve Sweet at steve@quadrant.cc or (208) 850-3452.

Thank you for your consideration of this application. Your support is appreciated.

Steve Sweet, District Engineer
Boise River Flood Control District #11

IWRB Flood Management Grant Application

II. GENERAL INFORMATION

A. Type of Organization:

☒ Flood District ☐ Municipality ☐ County ☐ Other

Flood Control District #11 (FCD11) Organization Name	Jim Thorpe, District Commissioner Contact Person, Name & Title
PO Box 729 PO Box/Street Address	208-859-2765 Contact Telephone Number
Parma, ID, 83660 City, County, State, Zip Code	jim@thorpe.biz E-Mail Address
 Taxpayer ID#	

Project location/ legal description: Boise River Mile 2 - 8.5

Latitude: 43°47'12.63"N Longitude: 116°56'59.08"W See Attachment for KMZ

B. Is your organization registered with the Idaho Secretary of State's office?

☐ **Yes** ☒ **No**

C. Purpose and name of project for this grant application.

☐ Stream Channel Repair
☐ Stream Channel Improvement
☒ Flood Risk Reduction
☐ Flood Prevention
☒ Other: Tree/Debris Removal

III. WATER PROJECT/ACTIVITY

A. Source of Water

☒ Surface ☐ Reservoir ☐ Other

B. Describe the Flood Management Project/Activity – What is the primary purpose of this grant application?

The primary purpose of this project is to remove trees and debris from the Boise River that is causing out of bank flows and damage to river banks, adjacent farm lands, and irrigation diversions.

C. Does this project/activity address multiple objectives? If so explain.

Yes, the project will maintain the river in the normal channel and relieve pressure on damaged banks, adjacent farm lands, and irrigation diversions.

D. Will this flood management project/activity be implemented in a single year, or phased over multiple years?

☒ 1-Year ☐ Multiple-Years (Phased)

E. Project start and completion date:

The project will be started during low flow in the Boise River. The start date will be November 2018 and will be completed by Spring of the following year.

F. Project detailed cost estimate, including all labor and materials:

Cost estimate is $115,350. See Attached Itemized Cost Estimate.

G. Has your organization performed stream channel or stream bank repair and/or improvement projects in the past?

Yes, FCD11 has performed ongoing stream channel, stream bank repair, and improvement projects during low river flows since 1972.

H. Provide the required regulatory approval and permit documents for this project.

Permitting and letters of authorization from Canyon County, USACE, IDWR, and other organizations will be accomplished after the project has been awarded. FCD11 secures required permits from regulatory agencies as standard operating procedure for the District.

IV. FINANCIAL INFORMATION

A. Does your organization have a regular assessment for a reserve or special needs fund?

☐ Yes ☒ No

B. Does your organization have prior experience in working with the Idaho Water Resource Board?

☒ Yes ☐ No

C. What other sources of funding have been explored to fund the project? (e.g. U.S. Army Corps of Engineers, NRCS, FEMA, Banks, Local Government, etc.)

FCD#11 will provide matching funds.

Amount of Funds Requested: $57,675

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

Authorized signature & date: Steve Sweet June 15, 2018

Steve Sweet, PE
FCD11 District Engineer

2.1 Project Background Information

1. Purpose
   Reducing flood risk by removing tree and debris that is blocking the normal flow of the river.
2. Project Area Description
   Canyon County, Boise River Mile 2 – 8.5,
   Start - Latitude: 43°43'57.91"N Longitude: 116°53'14.22"W
   End - Latitude: 43°48'13.29"N Longitude: 117° 0'6.73"W
3. Previous Projects and Studies
   FCD11 has been conducting limited and regular debris maintenance since formation in 1972. In 2018, FCD11 commissioned Quadrant Consulting Inc. (Jared Richardson, EIT) to inventory the entire district for debris accumulation, bank erosion, and gravel deposits. The district's entire study is attached.

2.2 Project Sponsor

a. Flood Control District #11

2.4 Project Description

a. Project Description – Remove trees and debris from section of Boise River.
b. Map – See Attached KMZ file for location of Tree and Debris.
c. Conceptual Plan/Cross Section –Return the river a functioning channel.
d. Conceptual Design and Repair Features –Remove and dispose of debris outside of the regulatory floodway.
e. Right-of-Way/Easement –FCD11 has jurisdiction within the Boise River to remove trees and debris that is restricting the normal flow of the river.

2.4.2 Cost Estimate

See attached Cost Estimate.

2.4.3 Implementation Schedule

Begin work during low water after October 2018, and complete by April 2019.

2.5 Financial Feasibility Analysis

- **Amount of IWRB Grant Funding Requested**
  The total estimated project cost is $115,350. The amount of funding requested is $57,675.

- **Financing Sources**
  In addition to the State funds, the project match financing will be provided by FCD11.

Effectiveness of Project ***(60 points)***

- **What is the urgency of the project and anticipated costs? (10 points)**

  The urgency of the project is to mitigate flood risk to adjacent property owners from trees and debris that are blocking the channel and causing the river to flow out of bank. The trees are also a hazard for recreational users of the Boise River.

- **What are the objectives and benefits of the project? (10 points)**

  The primary objective of this project is to prevent bank erosion from blockage in channel that is putting more pressure on the side channels of the river. A secondary objective is to reduce the flood risk to protect adjacent and protect those using the river recreationally.

- **How does the proposed project solution address the objectives? (10 points)**

  Removing trees and debris will reduce the potential for out of bank flow.

- **How will the project measure success of its objectives, and describe the proposed monitoring plan. (5 points)**

  Periodic inspections by FCD11 staff and contract Engineer will assure project is maintained in a functional state. Following this project, maintenance work will continue to be performed as needed.

- **Is the proposed budget and schedule realistic and is the budget appropriate for the scope of work provided? Has the applicant provided detailed construction expenses documenting how money will be spent to complete the project? (15 points)**

  The proposed budget is based upon best business practices and estimates provided by experienced river work contractors and consulting engineers. See attached cost estimates. Invoicing will follow Grant Application criteria.

- **Are project sponsors using relevant and appropriate information to develop the proposed project? (Sponsor should include references to relevant studies, assessments, reports, management plans, etc.) How will the project account for expected future changes to hydrology, sediment regimes, or water supply?** ***(10 points)***

  FCD11 is using the most relevant and appropriate information that was obtained in the winter following the 2017 flood. FCD11 contracted with their engineer to float the entire district and inventory trees, debris, bank erosion, and gravel bars. The results of the inventory have been used to identify locations where trees can be removed from the channel. The inventory database is attached to this application as a KMZ file.

Readiness of Project ***(50 points)***

- **Lead sponsor of project is identified and there is a description of other affected stakeholders and jurisdictions.** ***(10 points)***

  Flood Control District #11 is the lead for this project.

- **Project sponsors will provide documentation that affected local stakeholders and jurisdictions have been consulted. If the project is**

located within a Flood Control District, the sponsor must provide documentation showing the Flood Control District supports the project, otherwise the project will be declared ineligible. ***(10 points)***
Boise River Flood Control District #11 supports this project, see application cover letter.

- **Specify cash matching funds that will be provided for the project, including any in-kind services. Indicate what funding sources are secured or pending. The applicant must provide at least 50% matching cost share funding with non-state dollars. In-kind services can be used for 30% of the total projects costs. Legal/Administrative in-kind services are limited to 5% of total project costs.** ***(10 points)***
  We are applying for 50/50 match. See attached Match Funding Breakout in the cost estimate.
- **Projects that propose matching cost-share amounts above 50% will receive additional points in the ranking** ***(1 point for each additional 1% increase up to 70% to receive up to 20 additional points).***

Organization Capacity *(20 points)*

- **What is the sponsor's history of successful accomplishments on projects similar to this one? The sponsor shall provide several past project examples, if possible.** *(10 points)*

  FCD11 has been maintaining the lower Boise River channel since being organized by the IDWR in 1972. The removal of flood debris is part of the normal maintenance conducted by the flood district. Funding is being sought for clearing due to 101 days of flood flows in 2017 that put an inordinate amount of debris into the river.

- **What level of sponsor and consultant staffing will be directed toward the implementation of the proposed project? Discuss the number of sponsor and consultant staff and amount of time dedicated for each for the project. Will the project utilize volunteers? If so, how? Include brief resumes or list of qualifications for each member of the project team.** ***(10 points)***
  One FCD11 staff member with consulting engineering support will provide regular oversight up to 2 hours per day. No volunteers will be utilized.

Attachments supporting this application are available at the following cloud site:

https://app.box.com/s/pnb12lczz61mxjar21ezoq0jc008pkox

Quadrant Consulting, Inc.

FCD #11
Tree/Debris Locations

Site #	Point/ Photo #	Location	Size	Description	Duplicate	Time to Dispose (Hrs)	Cost per Tree	*Access	Time/Access (Hrs)	Access Cost	Burning/Chipping (Hrs)	Burning/Chipping Cost	Total Cost per Group
121	8752	LT Bank	Medium	Multiple		3	$ 450	Moderate	3	$ 450	3	$ 450	$ 1,350
122	8756	RT Bank	Large	Single		3	$ 450	Good	2	$ 300	5	$ 750	$ 2,700
	8757	Middle	Large	Multiple		5	$ 750						
	8759	RT Bank	Medium	Multiple		3	$ 450						
	8760	Middle	Small	Multiple			$ -						
123	8762	Middle	Small	Multiple			$ -	Moderate	3	$ 450	3	$ 450	$ 1,800
	8763	RT Bank	Large	Single		3	$ 450						
	8766	LT Bank/River	Medium	Multiple		3	$ 450						
124	8767	RT Bank	Large	Single		3	$ 450	Moderate	3	$ 450	3	$ 450	$ 1,800
	8768	RT Bank/River	Medium	Mulitple		3	$ 450						
125	8770	Middle	Large	Trees with Root Wads		5	$ 750	Moderate	3	$ 450	5	$ 750	$ 3,750
	8771	Middle	Small	Multiple			$ -						
	8772	Middle	Large	Tree still Rooted		5	$ 750						
	8773	LT Bank/River	Medium	Mutliple		3	$ 450						
	8774	LT Bank/River	Large	Multiple		4	$ 600						
126	8775	LT Bank/River	Large	Multiple	8775		$ -	Moderate	3	$ 450	5	$ 750	$ 3,300
	8776	Middle	Large	Tree with Root Wad		5	$ 750						
	8777	RT Bank	Large	Single		3	$ 450						
	8779	RT Bank/River	Medium	Multiple		3	$ 450						
	8780	RT Bank	Large	Single		3	$ 450						
127	8781	RT Bank	Medium	Multiple		3	$ 450	Moderate	3	$ 450	5	$ 750	$ 3,000
	8782	LT Bank/River	Medium	Single		2	$ 300						
	8783	LT Bank/River	Large	Multiple		4	$ 600						
	8784	Middle	Medium	Single		3	$ 450						
128	8786	LT Bank	Small	Single			$ -	Moderate	3	$ 450	4	$ 600	$ 3,000
	8787	River Right	Large	Multiple		5	$ 750						
	8788	LT Bank	Large	Multiple		4	$ 600						
	8789	RT Bank	Large	Multiple		4	$ 600						
129	8795	RT Bank	Large	Single		3	$ 450	Good	2	$ 300	3	$ 450	$ 2,250
	8796	RT Bank	Large	Multiple		4	$ 600						
	8797	LT Bank/River	Medium	Multiple		3	$ 450						
130	8798	Middle	Large	Tree with Root Wad		5	$ 750	Good	2	$ 300	3	$ 450	$ 1,500
131	8800	River Right	Large	Tree still Rooted		5	$ 750	Good	2	$ 300	3	$ 450	$ 1,500
132	8804	RT Bank	Large	Multiple		4	$ 600	Good	2	$ 300	3	$ 450	$ 1,800
	8805	Middle	Medium	Single		3	$ 450						

Quadrant Consulting, inc.

FCD #11
Tree/Debris Locations

Site #	Point/ Photo #	Location	Size	Description	Duplicate	Time to Dispose (Hrs)	Cost per Tree	*Access	Time/Access (Hrs)	Access Cost	Burning/Chipping (Hrs)	Burning/Chipping Cost	Total Cost per Group
133	8809	LT Bank	Medium	Single		2	$ 300	Good	2	$ 300	3	$ 450	$ 2,250
	8810	River Right	Medium	Trees with Root Wads		4	$ 600						
	8812	RT Bank	Large	Trees Leaning but Rooted		4	$ 600						
134	8814	RT Bank	Medium	Single		2	$ 300	Good	2	$ 300	4	$ 600	$ 2,850
	8816	RT Bank/River	Medium	Multiple		3	$ 450						
	8817	River Left	Large	Tree still Rooted		5	$ 750						
	8818	RT Bank	Medium	Multiple		3	$ 450						
135	8819	RT Bank/River	Large	Multiple		4	$ 600	Good	2	$ 300	4	$ 600	$ 2,550
	8820	RT Bank	Medium	Multiple		3	$ 450						
	8822	LT Bank	Small	Single			$ -						
	8823	LT Bank	Large	Tree Leaning but Rooted		4	$ 600						
136	8826	RT Bank/River	Large	Trees with Root Wads		4	$ 600	Moderate	3	$ 450	3	$ 450	$ 1,950
	8827	RT Bank	Large	Single		3	$ 450						
137	8833	RT Bank	Medium	Multiple		3	$ 450	Good	2	$ 300	3	$ 450	$ 1,200
138	8840	Middle	Medium	Single		3	$ 450	Good	2	$ 300	3	$ 450	$ 1,200
139	8844	Middle	Medium	Single		3	$ 450	Good	2	$ 300	5	$ 750	$ 2,400
	8845	Middle	Medium	Single	8844		$ -						
	8849	LT Bank	Medium	Multiple		3	$ 450						
	8850	RT Bank	Medium	Multiple		3	$ 450						
140	8851	LT Bank	Medium	Multiple		3	$ 450	Moderate	3	$ 450	3	$ 450	$ 1,350
	8852	RT Bank	Small	Single			$ -						
141	8855	RT Bank/River	Large	Single		3	$ 450	Moderate	3	$ 450	3	$ 450	$ 1,800
	8856	RT Bank/River	Large	Single		3	$ 450						
142	8858	LT Bank/River	Small	Single			$ -	Moderate	3	$ 450	3	$ 450	$ 1,500
	8859	RT Bank	Large	Tree Leaning but Rooted		4	$ 600						
143	8861	LT Bank	Medium	Multiple		3	$ 450	Good	2	$ 300	3	$ 450	$ 1,800
	8862	LT Bank	Large	Tree Leaning but Rooted		4	$ 600						
144	8865	RT Bank	Large	Single		3	$ 450	Good	2	$ 300	3	$ 450	$ 1,200
145	8866	RT Bank	Large	Tree Leaning but Rooted		4	$ 600	Good	2	$ 300	3	$ 450	$ 1,950
	8867	RT Bank/River	Large	Multiple		4	$ 600						
146	8869	RT Bank	Small	Single			$ -	Good	2	$ 300	3	$ 450	$ 1,950
	8870	RT Bank	Medium	Multiple		3	$ 450						
	8871	River Left	Large	Tree with Root Wad		5	$ 750						
147	8873	LT Bank	Medium	Multiple		3	$ 450	Good	2	$ 300	3	$ 450	$ 1,200
148	8877	LT Bank	Medium	Multiple		3	$ 450	Good	2	$ 300	3	$ 450	$ 1,800
	8878	River Left	Large	Single		4	$ 600						
149	8879	LT Bank	Medium	Multiple		3	$ 450	Difficult	4	$ 600	3	$ 450	$ 1,500
150	8882	RT Bank	Medium	Single		2	$ 300	Moderate	3	$ 450	3	$ 450	$ 1,500
	8883	RT Bank	Medium	Single		2	$ 300						
160	8887	RT Bank	Large	Multiple		4	$ 600	Moderate	3	$ 450	3	$ 450	$ 1,500
	8888	RT Bank	Large	Multiple	8887		$ -						

Quadrant Consulting, Inc.

FCD #11
Tree/Debris Locations

Site #	Point/ Photo #	Location	Size	Description	Duplicate	Time to Dispose (Hrs)	Cost per Tree	*Access	Time/Access (Hrs)	Access Cost	Burning/Chipping (Hrs)	Burning/Chipping Cost	Total Cost per Group
161	8892	RT Bank	Medium	Multiple		3	$ 450	Moderate	3	$ 450	3	$ 450	$ 2,550
	8893	RT Bank	Large	Multiple		4	$ 600						
	8894	LT Bank	Large	Tree Leaning but Rooted		4	$ 600						
162	8895	LT Bank	Large	Multiple		4	$ 600	Moderate	3	$ 450	3	$ 450	$ 1,950
	8899	RT Bank	Large	Single		3	$ 450						
163	8901	RT Bank	Medium	Multiple		3	$ 450	Good	2	$ 300	3	$ 450	$ 1,200
	8902	RT Bank/River	Small	Multiple			$ -						
164	8905	RT Bank/River	Large	Single		3	$ 450	Good	2	$ 300	3	$ 450	$ 1,200
165	8912	LT Bank/River	Large	Tree Leaning but Rooted		4	$ 600	Good	2	$ 300	3	$ 450	$ 1,350
166	8916	LT Bank	Large	Multiple		4	$ 600	Moderate	3	$ 450	3	$ 450	$ 2,400
	8917	LT Bank	Medium	Single		2	$ 300						
	8918	RT Bank/River	Large	Multiple		4	$ 600						
167	8922	RT Bank	Large	Multiple		4	$ 600	Difficult	4	$ 600	4	$ 600	$ 3,300
	8928	RT Bank	Large	Multiple		4	$ 600						
	8930	LT Bank/River	Medium	Multiple		3	$ 450						
	8931	RT Bank	Medium	Multiple		3	$ 450						
168	8933	LT Bank	Medium	Multiple		3	$ 450	Moderate	3	$ 450	3	$ 450	$ 1,800
	8934	RT Bank	Medium	Multiple		3	$ 450						
169	8936	RT Bank	Large	Single		3	$ 450	Moderate	3	$ 450	4	$ 600	$ 2,400
	8937	LT Bank	Large	Multiple		4	$ 600						
	8938	LT Bank	Medium	Single		2	$ 300						
	8939	RT Bank	Small	Single			$ -						
170	8947	LT Bank	Small	Single			$ -	Moderate	3	$ 450	4	$ 600	$ 1,650
	8948	LT Bank	Medium	Single		2	$ 300						
	8950	Middle	Small	Single			$ -						
	8951	RT Bank	Medium	Single		2	$ 300						
171	8952	LT Bank	Small	Single			$ -	Good	2	$ 300	3	$ 450	$ 1,350
	8953	RT Bank	Large	Multiple		4	$ 600						
	8954	Middle	Small	Single			$ -						
172	8959	LT Bank	Medium	Multiple		3	$ 450	Moderate	3	$ 450	3	$ 450	$ 1,950
	8961	RT Bank/River	Large	Leaning Tree still Rooted		4	$ 600						
173	8963	LT Bank	Large	Leaning Tree still Rooted		4	$ 600	Moderate	3	$ 450	4	$ 600	$ 2,550
	8964	LT Bank	Large	Single		3	$ 450						
	8965	RT Bank/River	Large	Single		3	$ 450						
174	8968	RT Bank	Medium	Multiple		3	$ 450	Moderate	3	$ 450	4	$ 600	$ 2,700
	8971	LT Bank	Large	Multiple		4	$ 600						
	8973	RT Bank	Large	Multiple Trees with Root Wads		4	$ 600						
175	8981	LT Bank	Medium	Multiple		3	$ 450	Difficult	4	$ 600	3	$ 450	$ 1,500
176	8986	River Left	Large	Multiple		5	$ 750	Difficult	4	$ 600	3	$ 450	$ 1,800
	8988	River Left	Large	Multiple	8986		$ -						

Quadrant Consulting, Inc.

FCD #11
Tree/Debris Locations

Site #	Point/ Photo #	Location	Size	Description	Duplicate	Time to Dispose (Hrs)	Cost per Tree	*Access	Time/Access (Hrs)	Access Cost	Burning/Chipping (Hrs)	Burning/Chipping Cost	Total Cost per Group
177	8991	RT Bank/River	Large	Multiple		4	$ 600	Difficult	4	$ 600	3	$ 450	$ 1,650
	8994	RT Bank/River	Large	Multiple	8991		$ -						
178	8995	RT Bank/River	Large	Multiple		4	$ 600	Difficult	4	$ 600	3	$ 450	$ 2,100
	8996	RT Bank/River	Medium	Multiple		3	$ 450						
	9001	LT Bank	Small	Multiple			$ -						
179	9003	RT Bank	Medium	Multiple		3	$ 450	Moderate	3	$ 450	3	$ 450	$ 1,350
180	9005	RT Bank/River	Large	Multiple		4	$ 600	Moderate	3	$ 450	4	$ 600	$ 3,000
	9006	RT Bank	Medium	Multiple		3	$ 450						
	9007	RT Bank	Medium	Single		2	$ 300						
	9009	RT Bank	Large	Multiple		4	$ 600						
181	9023	RT Bank	Medium	Single		3	$ 450	Moderate	3	$ 450	4	$ 600	$ 1,950
	9024	LT Bank	Medium	Multiple		3	$ 450						
	9025	RT Bank	Small	Multiple			$ -						
	9026	RT Bank/River	Small	Multiple			$ -						
182	9027	LT Bank	Small	Multiple			$ -	Good	2	$ 300	4	$ 600	$ 1,800
	9028	RT Bank	Medium	Multiple		3	$ 450						
	9029	LT Bank	Medium	Multiple		3	$ 450						
183	9032	LT Bank	Large	Multiple		4	$ 600	Moderate	3	$ 450	3	$ 450	$ 2,100
	9033	LT Bank	Large	Multiple	9032	4	$ 600						
184	9040	River Right	Medium	Multiple		4	$ 600	Difficult	4	$ 600	3	$ 450	$ 1,650
	9042	RT Bank/River	Small	Multiple			$ -						
185	9047	RT Bank/River	Medium	Multiple		3	$ 450	Good	2	$ 300	3	$ 450	$ 2,250
	9050	LT Bank	Large	Multiple		4	$ 600						
	9051	LT Bank	Medium	Multiple		3	$ 450						
186	9055	RT Bank/River	Medium	Multiple		3	$ 450	Good	2	$ 300	3	$ 450	$ 1,200
187	9060	RT Bank	Medium	Multiple		3	$ 450	Good	2	$ 300	3	$ 450	$ 1,200
188	9062	LT Bank	Small	Multiple			$ -	Moderate	3	$ 450	3	$ 450	$ 900
	9064	LT Bank	Small	Multiple			$ -						
190	9065	LT Bank	Small	Multiple			$ -	Moderate	3	$ 450	3	$ 450	$ 1,350
	9068	LT Bank	Medium	Multiple		3	$ 450						

* See notes on Page 1

Total Cost of Project	$ 115,350
Match by State	$ 57,675
Match by FCD11	$ 57,675

IDAHO WATER RESOURCE BOARD
322 East Front Street, Statehouse Mail
Boise, Idaho 83720
Tel: (208) 287-4800
FAX: (208) 287-6700

APPLICATION FOR FLOOD MANAGEMENT GRANT

Answer the following questions and provide the requested material as directed. All pertinent information must be provided. Additional information may be requested by the Idaho Water Resource Board (IWRB) depending on the scope of the project and amount of funding requested.

Incomplete documents will be returned and no further action will be taken by IWRB staff. All paperwork must be submitted within twenty-eight (28) working days prior to the next IWRB meeting.

Board meeting agendas can be found at: http://www.idwr.idaho.gov/IWRB/meetings/

I. Overview:

This form applies to the *IWRB Flood Management Grant Program*. The Flood Management Grant Program provides financial assistance to eligible entities interested in pursuing flood damaged stream channel repair, stream channel improvements, flood risk reduction, or flood prevention projects. Pursuing flood management improvement and repair projects can assist in maintaining flow capacities in major waterways, prevent bank and channel erosion, and reduce property damage during flood events.

The grant funding shall require a 50% funding match by the sponsor of the total project costs. In-kind services can account for up to 30% of the total project costs. Legal/Administrative in-kind services are limited to 5% of total project costs.

Funds will be distributed by sponsor submitting funding reimbursement requests, which shall include:

1. Cover letter formally requesting a funding reimbursement, description of project activities, dates of project activities, and contractor or supplier invoices. Funds shall be distributed within 15-days of receipt of reimbursement request.

Upon completion of the project, sponsor and/or consultant, shall submit a notice of completion to the IWRB, and that the improvements and/or repairs were constructed in substantial conformance with the approved plans and specifications.

Prepare and attach a "Grant Document" to this application.

The Grant Application Document requirements are outlined in the IWRB Flood Management Grant Program Guidelines. The guidelines can be found at:
http://www.idwr.idaho.gov/waterboard/Financial%20program/financial.htm
You can also obtain a copy by contacting IWRB staff.

II. General Information:

A. Type of organization: (Check box)

- [x] Flood District
- [ ] Municipality
- [ ] County
- [ ] Other

Twin Lakes Creek Flood Control District #17
Organization name

Gordon Stephenson
Name and title of Contact Person

5416 W. Village Blvd
PO Box/Street Address

208-687-1906
Contact telephone number

Rathdrum, ID 83858
City, County, State, Zip Code

gorjon@suddenlink.net
e-mail address

20-8239145
Taxpayer ID#

Project location/ legal description Twin Lakes dam/outfall

B. Is your organization registered with the Idaho Secretary of State's office? Yes [x] No [ ]

C. Purpose and name of project for this grant application.

- [ ] Stream Channel Repair
- [ ] Stream Channel Improvement
- [x] Flood Risk Reduction
- [ ] Flood Prevention
- [ ] Other _____

III. WATER PROJECT/ACTIVITY:

A. Source of water:

- [x] Surface
- [ ] Reservoir
- [ ] Other

B. Describe the Flood Management Project/Activity - What is the primary purpose of this grant application?

Procurement and installation of electronics to allow remote monitoring of lake level, flow, sluice gate position, rainfall, and atmospheric conditions.

C. Does this project/activity address multiple objectives? If so explain.

Yes, this equipment will allow district operators to monitor stream flows in real time. This will help them to take a more proactive approach to controlling flows and reducing flood risks.

D. Will this flood management project/activity be implemented in a single year, or phased over multiple years?

[x] 1-year [ ] Multiple-years (Phased)

E. Project start and completion date:

Start August 2018

Complete November 2018

F. Project detailed cost estimate, including all labor and materials:

Total project cost is estimated at $15,500

See attached

G. Has your organization performed stream channel or stream bank repair and/or improvement projects in the past?

Yes, the District has completed many projects to repair, maintain, and improve the stream channel.

H. Provide the required regulatory approval and permit documents for this project.

None required.

IV. FINANCIAL INFORMATION:

A. Does your organization have a regular assessment for a reserve or special needs fund?

Yes [X] No [ ]

B. Does your organization have prior experience in working with the Idaho Water Resource Board?

Yes [X] No [ ]

C. What other sources of funding have been explored to fund the project? (e.g. U.S. Army Corps of Engineers, NRCS, FEMA, Banks, Local Government, etc.)

None

Amount of funds requested: $7,750

By signing this document you verify that all information provided is correct and the document is filled out to the best of your ability.

Authorized signature& date: Bill Huneiger 6/13/18
See Treasurer

Twin Lakes Creek Flood Control District
Grant Application
ENGINEER's OPINION OF PRELIMINARY PROJECT COSTS

Prepared By:	SBC	Date:	June 13, 2018		
Project Manager:		Date:			
Item No.	Description	Unit	Quantity	Unit Price	Total
					$0.00
	E-Tracker		1	$1,045.00	$1,045.00
	Stevens Connect Fee		1	$450.00	$450.00
	Software		1	$325.00	$325.00
	Enclosure		1	$390.00	$390.00
	Gage Height Sensor		2	$750.00	$1,500.00
	Ultrasonic Level Sensor		1	$449.00	$449.00
	Weather Station		1	$2,750.00	$2,750.00
	Heated Rain Gage		1	$1,018.00	$1,018.00
	Installation/Programming		1	$3,500.00	$3,500.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
				Subtotal =	$ 11,427.00
				15% Contingency =	$2,000.00
				Total Estimated Construction =	**$ 13,427.00**
ENGINEERING					
	Preliminary Engineering				$500.00
	Design Phase Services				$500.00
	Geotechnical Subconsultant Materials Testing				$0.00
	Electrical Subconsultant				$500.00
	Test Holes/Exploratory Excavation				$0.00
	Reimbursable Expenses				$0.00
	Bidding Phase Services				$0.00
	Construction Phase Services				$500.00
ESTIMATED TOTAL PROJECT COST					**$ 15,427.00**
	Assumptions:				

Twin Lakes Creek Flood Control District

Grant Application Document

Project Background Information

Purpose:

The District is seeking grant funding to assist with the implementation of a flood control project. The District would utilize the funding to procure and install instrumentation that would allow them to more precisely monitor and control lake levels, weather, gate positions, and stream flow at the Twin Lakes dam.

The dam controls the rate of flow entering Twin Lakes creek. The proposed monitoring equipment would be connected to a telemetry system that would allow the District and its operators to monitor the situation in real-time and react more quickly to changing conditions to reduce or prevent flooding.

The District is seeking grant assistance funding for ½ of the estimated project cost. The total estimated cost is $15,500.

Project Area:

The work would take place at the existing Twin Lakes dam, which is at the bottom of Lower Twin, shown in the enclosed map.

Project Sponsor:

The Twin Lakes Creek Flood Control District has been operating the Twin Lakes dam since 1991.

Twin Lakes/Rathdrum Creek Flood Control District #17 operates under Idaho Code Title 42, Chapter 31.

Twin Lakes/Rathdrum Creek Flood Control District #17 uses property tax revenue for its operation. Annual revenue is $32,600 from those tax revenues.

Responsibilities are to construct, operate, and maintain structural works to prevent floodwaters and sediment damage, conservation, development utilization and disposal of water within the District; to annually fix and determine the amount of money to be raised by taxation for operation of the District.

The original dam constructed in 1906 was used to provide irrigation water to Greenacres Water District. In 1970, Greenacres Irrigation converted to groundwater wells and the dam's

purpose was changed to control flooding, improve recreation, and benefit fish and wildlife. The Flood Control District #17 was formed in 1991. The dam was replaced 2003/2005.

MISSION STATEMENT

"To encompass the watershed top to bottom. To evaluate weather and conditions to minimize water damage while maximizing the best use management of water resource, through dam and waterway maintenance, and operation to best serve ALL watershed interests."

Project Description:

The intent of the project is to be able to accurately monitor lake levels, stream flows, and gate position in real time. This will allow the operators to monitor changing conditions more closely and make adjustments to reduce flooding risks.

Specifically, the project will include the following:

- 2 Gage Height Sensors. These will most likely be pressure transmitters mounted in stilling wells. One will be mounted in the lake upstream of the dam and the other in the stream. They will collect data every minute. They will be a Stevens Smart PT or similar.
- 1 Ultrasonic Level Sensor. This will be mounted immediately downstream of the control gate and be used to monitor the position of the gate in real time to more accurately control flow. Data will be collected in one minute increments. This will be a Stevens SDI-12 Ultrasonic Level Sensor or similar.
- 1 Weather Station. In addition to precipitation, the weather station will also measure wind, temperature, humidity, barometric pressure. Being able to see weather conditions in real time will help alert operators to conditions such as rapid snow melt that may affect water flows.
- 1 Heated Rain Gage
- Software
- Weathertight Enclosure
- Installation & Programming
- Connection to Cloud Based Monitoring System. The information collected by this equipment will be available for viewing on the District's web site.

No alterations to the dam structure or stream channel are planned.

Right of Way:

All work will take place at the dam, which is owned by the District.

Cost Estimate:

The total Estimated cost for the project is $15,500. A breakdown of this estimate is included.

Implementation Schedule:

If funded, the District would immediately begin procuring the equipment. The installation would take place in the fall of 2018. They anticipate that the work would be complete in November of 2018.

Financial Feasibility Analysis:

The total estimated project cost is $15,500. The District is seeking grant funding for ½ of that amount. The District has sufficient cash available to fund the other ½ of the project cost.

ATTACHMENT 2

BOUNDARY MAP