

**BLAINE COUNTY BOARD OF COMMISSIONERS**  
**PUBLIC HEARING on September 6, 2022 at 2:30 p.m.**

<b>REGARDING AN APPLICATION OF:</b> Briana Swette for a Stream Alteration Permit (SAP) on the Big Wood River.	<b>Staff Report</b> Kristine Hilt Dated August 24, 2022
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**REQUESTED ACTION:** Public hearing and consideration of an application by Pale Gem, LLC (Briana Swette) to stabilize an eroding streambank on the Big Wood River. Project activities include stabilizing 662 linear feet of bank by constructing large wood structures, revegetating, and discharging approximately 383 cubic yards of rock riprap to halt further erosion. This project is located within Section 1, T1N, R18E, B.M., Blaine County and is zoned Residential Agricultural (R-5) with areas of Floodplain (F), Floodway (FW), Riparian (R) and potential Wetland (WE) Overlay Districts.

**PROPERTY OWNERS/APPLICANTS:** Pale Gem, LLC (Briana Swette)

**REPRESENTATIVE:** Ryan Colyer, Biota Research & Consulting

**NAME/REACH OF STREAM:** Big Wood River

**PROPERTY LOCATION:** 11038 State Highway 75; T1N, R18E, Sec 1

**APPLICABLE REGULATIONS:** Title 9 (Zoning Regulations): 7, 17, & 19  
Title 8 (Comprehensive Plan)

**I. APPLICATION, NOTICE, EXHIBITS & GENERAL FACTS**

**1. Application:** Blaine County Stream Alteration Permit Application received July 12, 2022 and certified as generally complete that same day.

**2. Notice:** Public notice for this application was as follows:

- A. Legal notice was published in the Idaho Mountain Express on August 17, 2022;
- B. Notice was mailed on August 18, 2022 to all Blaine County political subdivisions;
- C. Notice was mailed on August 18, 2022 to surrounding landowners within 300' of the exterior boundaries and 1,000' downstream of the project site;
- D. An on-site notice was posted on or by August 30, 2022, as supported by affidavit on file.

► **Motion:** Upon motion by Commissioner \_\_\_\_\_, second by Commissioner \_\_\_\_\_, and by a vote of \_\_ to \_\_, the Board finds notice to be adequate.

**3. Any disclosures** (i.e. conflicts of interest, site visits or *ex parte* communications)?

**4. Exhibits:** Attached to this report are the following exhibits:

**Exhibit A—Application Materials**

All application materials were received on July 12, 2022, unless indicated otherwise.

- A-1:** Blaine County SAP Application and cover letter
- A-2:** Vicinity Map/Property Owners Map
- A-3:** Project Narrative
- A-4:** Design Drawings
- A-5:** No Adverse Impact Statement & No Rise Certification
- A-6:** Joint Application

#### **Exhibit B—Agency Comments**

- B-1:** Department of the Army (USACE): 13; Pending
- B-2:** Idaho Dept. of Water Resources – Pending
- B-3:** County Engineer Comments; received 08-08-22
- B-4:** Idaho Dept. of Fish & Game – received 08-17-22

#### **Exhibit C—Blaine County Supplemental Documents**

#### **Exhibit D—Public Comments**

None received to date.

- 5. SUMMARY:** This application outlines a streambank stabilization proposal for approximately 660 lineal feet of streambank, most of which eroded during the 2017 spring flood event. The project narrative, Exhibit A-3, states the following:

*“The project is intended to stabilize the channel banks and improve fish habitat conditions by utilizing bioengineered bank restoration techniques. The following project objectives were identified based upon existing site conditions, land use constraints, and restoration potential.*

- 1. Stabilize the river bank with revegetation and bioengineering techniques*
- 2. Repair a damaged rock barb structure*
- 3. Implement treatments that reduce, or leave unaltered, the flood hazard proximate to development*
- 4. Identify self-maintaining treatments that maximize the ecological values of the Big Wood River*

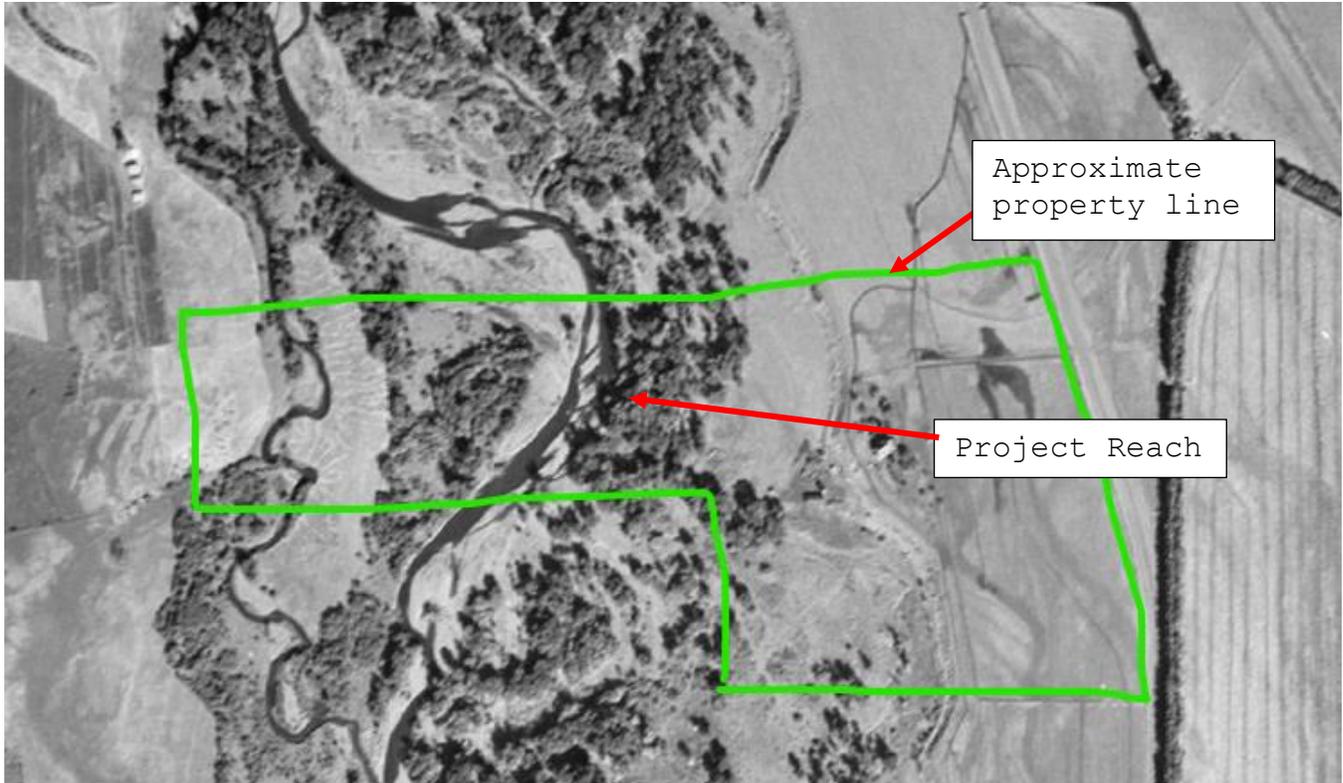
*The primary strategy to meet project objectives is to restore bank stability through application of established river restoration techniques and revegetation strategies.”*

The proposed project treatments are broken down below:

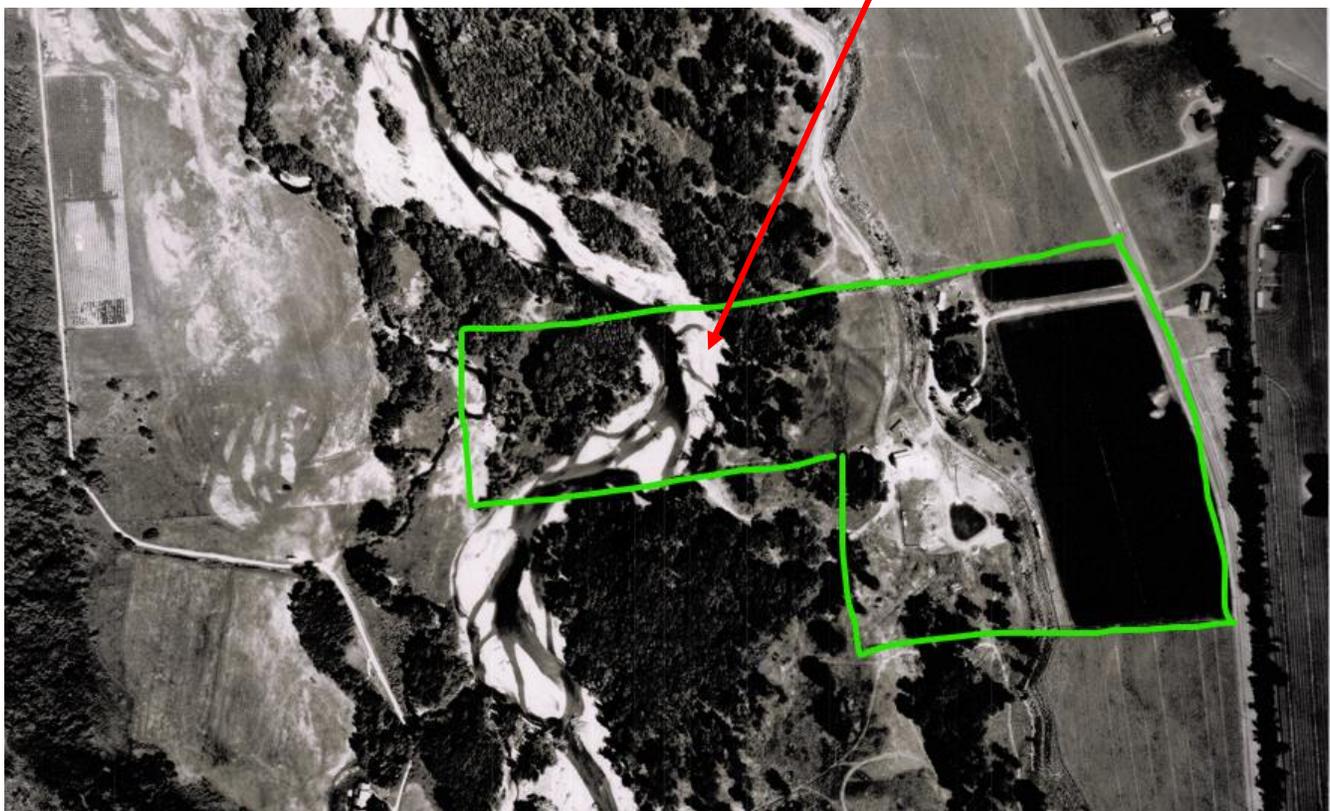
- 440 lineal feet of willow plantings from the toe of the bank to the “bankfull” elevation (1200cfs) with little or no streambank regrading
- 105 lineal feet of three large woody debris “deflector jams” with streambank riprap and regrading. The rock is proposed from the toe of the bank to the same “bankfull” elevation as noted above.
- 75 lineal feet of just rock riprap and regrading in an effort to repair existing legacy riprap installed at some point in the past.
- Mid channel gravel bar regrading/excavation down to the “bankfull” elevation. Once excavated to this vertical grade, it will be revegetated with “brush trenches” or bunches of willow treatments.

The reach is located downstream of a highly confined and hardened section of river. As such, this is a very dynamic reach of the river with large channel avulsions and high loads of sediment deposition.

6. **HISTORICAL RIVER DATA:** According to historical aerial imagery on file, the river has reclaimed a historic channel visible below in 1943 imagery:



In 1983 aerials (post flood of record in spring of 1983), this channel location was slowly shifting westward and vegetation has been growing to reclaim the gravel bar to the east leading up to the 2017 event:



In stream woody debris jams have historically been observed within the Big Wood River and staff commends the design team for leaving them intact. See below in 1983 aerial:



## II. STREAM ALTERATION PERMIT APPLICATION (SAP): STANDARDS OF EVALUATION Blaine County Code §9-17-11D

1. *The applicant has applied for permits from the Army Corps of Engineers and the Idaho Department of Water Resources. If the watercourse runs through a neighboring city, they shall be sent a copy of the application, at the direction of the Administrator, to notify them of possible stream alterations. Copy shall be sent if the project is within one thousand feet (1,000') downstream or one mile upstream.*

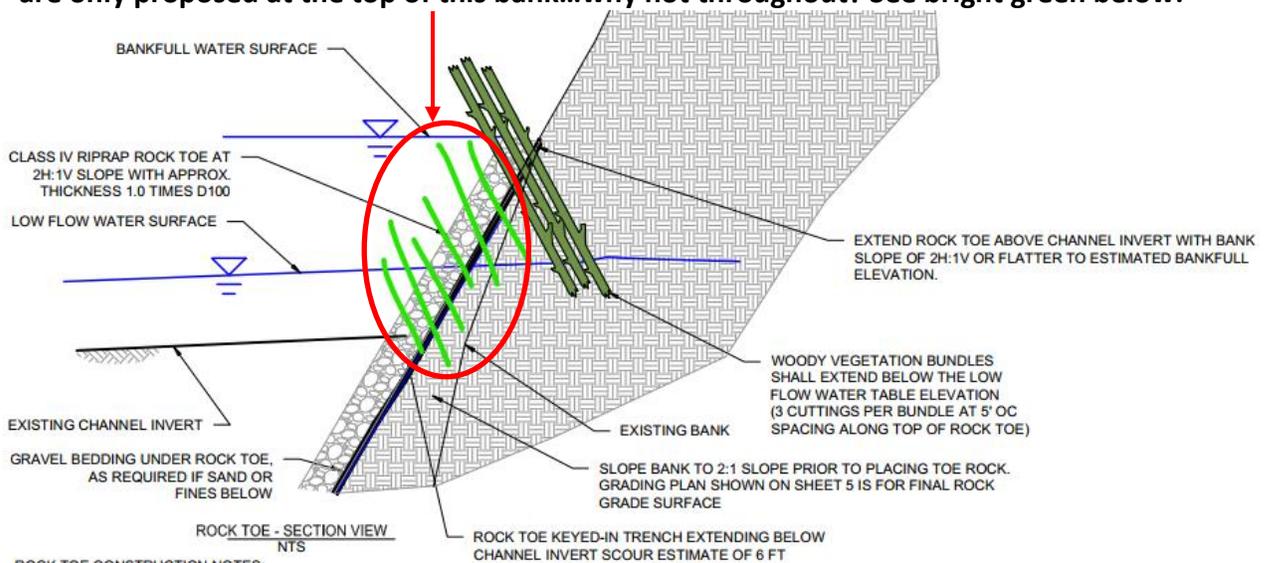
- **STAFF COMMENT: Approvals have been granted as follows:**
- **Army Corps of Engineers – Pending**
  - **Idaho Dept. of Water Resources – Pending**

**The City of Bellevue was provided a summary of this application on August 11, 2022.**

2. *Other Property Not Adversely Affected: The proposed stream alteration shall have no adverse impact on the property of another person or entity, including the areas upstream, downstream and across the stream. "No adverse impact" means that the proposed use or activity will not have any deleterious impacts in terms of increased flood peaks, flood stage, flood velocity, erosion and sedimentation, or water quality or that such impacts have been identified and mitigated to the maximum extent feasible.*

➤ **STAFF COMMENT:** A No Adverse Impact Statement has been provided by the Engineer in charge, see Exhibit A-5. Staff commends the design team in presenting an alternative to solely utilizing rock riprap and bank hardening. Rock riprap should be a last resort method in all cases. The overall project design seems reasonable and staff recommends conditions of approval #3, #4 and #5 to ensure compliance. Staff notes the following observations regarding this proposal:

- The County Engineer did not comment on scour or stability calculations so staff assumes that there are no concerns regarding scour depth of stability of the debris jams.
- The County Engineer did not comment on the bankfull elevation so staff assumes that there is an agreement on this calculation.
- The design team should consider whether or not simply revegetating the bank in between the debris jams can be a viable solution to meeting project goals. Limiting the amount of rock on the face of the banks of the Big Wood River would reduce downstream impacts associated with bank hardening (i.e. increased potential of erosion/sedimentation in untreated reaches.) Installation of rock riprap would also remove critical habitat (overhanging banks and cover) for fish.
- The design team should consider whether rock riprap implementation is necessary all the way up to the bankfull elevation. The majority of our annual flows stay below this elevation, which means that the water will almost constantly be in contact with a hardened rock face. Plantings are only proposed at the top of this bank...why not throughout? See bright green below:



➤ **IDFG COMMENT:** IDFG appreciates that the proponent plans an alternative to “standard rip rapping of the existing bank face” (JAP Block 17). We note that the application includes the discharge of 383 cubic yards of stone and 23 cubic yards of alluvium below the ordinary high water mark; generally, IDFG encourages rip rap be used for stabilization only as a last resort. Rip rap is one of several factors that have historically limited riverine forest and riparian quality within the Wood River Valley (Idaho Department of Fish and Game 2017, p.376); please minimize the amount and scope of rip rap to the extent possible. . . IDFG appreciates the applicant’s proposals of willow cuttings, and specifications that erosion and sediment controls will be implemented (Design Plans; Grading & Erosion Control Notes). Please describe these controls in JAP Block 26b; furthermore, please incorporate mandatory work stoppages to implement corrective measures if a significant construction-caused turbidity plume is observed (contacting IDEQ is suggested for details regarding turbidity standards and monitoring procedures).

3. *The stream alteration desired will not involve placing an encroachment, structure, fill, deposit, obstruction, storage of materials or equipment in the floodway, all of which are prohibited by subsection 9-17-5B3 of this Chapter, unless certification by a registered engineer is provided and accepted by the County Engineer, demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the 100-year flood discharge and other standards of this Section are met.*

- **COUNTY ENGINEER COMMENT:** This application proposes no work in the FEMA delineated floodway, so a “no-rise” certification is not required. However, Chad Bailey, PE (Biota) has included a summary of the hydraulic modeling completed indicating the project will not change calculated 100-year flood water surface elevations from those modeled for the existing conditions.

4. *The stream alteration desired shall not have any adverse impacts or go against the stated purposes of the Floodplain Management District (Section 9-17-2) and the Stream Alteration Permit program (subsection 9-17-11A of this Chapter).*

9-17-2 A. *Protect members of the public and public resources and facilities from injury, loss of life, property damage or financial losses due to flooding or erosion;*

B. *Protect and restore unique, fragile and valuable elements of floodplain and riparian areas including wildlife habitat;*

C. *Mitigate avoidable impacts to aquatic systems by regulating alterations in and adjacent to riparian areas;*

D. *Prevent cumulative adverse environmental impacts to water availability, water quality, wetlands and streams;*

E. *Augment the requirements of the National Flood Insurance Program (NFIP) and maintain the County as an eligible community for Federal flood insurance benefits;*

F. *Alert members of the public, such as appraisers, owners, real estate companies, individuals, potential buyers or lessees, to the development limitations of riparian areas and floodplains;*

G. *Provide County officials with sufficient information to protect floodplains, watercourses and riparian areas;*

H. *Implement the County comprehensive plan, as amended, and all County functional and community plans;*

I. *Minimize prolonged adverse impacts due to flooding and post-flood recovery;*

J. *Minimize the need for, and excessive costs borne by, rescue and emergency services associated with flooding;*

K. *Ensure that property owners within areas of special flood hazard are held accountable for the impacts from their private development; and*

L. *Ensure that all development is reasonably safe from flooding.*

5. *Local Public Interests: The proposed application (use) does not conflict with the local public interest, i.e., the affairs of the people in the area directly affected by the proposed use. This includes, but is not limited to, property values, fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, water quality or an impact upon a locally important factor. The burden of proof always rests with the applicant.*

9-17-11: *The Board of County Commissioners hereby finds that in order to more adequately control hazards from flooding existing lands within the Floodplain Overlay District, to ensure that the important environmental features of the State and localities are protected and enhanced, to*

*protect life and property in areas subject to natural hazards at flooding, to protect, preserve and enhance fish, wildlife habitat and recreation resources, to avoid undue water and air pollution, to ensure that residents of the County continue to qualify for the national flood insurance program and to ensure that all persons desiring to undertake any stream alteration are afforded equal protection and procedural due process of law, this section is adopted establishing a formal stream alteration permit system and establishing appropriate standards and criteria to govern the issuance or denial of such permits.*

- **STAFF COMMENT:** The majority of project components meet the stated purposes (above), however, additional consideration should be given to further decreasing the amount of rock riprap (383 cubic yards or roughly 38 dump trucks) proposed for the downstream project reach. The revegetation treatment proposed along the majority of the bank is a highly desirable technique in the Big Wood River. In natural conditions, streamside forests protect rivers and streams effectively. Benefits of riparian restoration include flood resiliency, water quality, erosion control, property protection, ecological/habitat benefits, and aesthetics. These treatments also have no direct impact on the channel. The large woody debris jams are a technique that is also highly desirable. They provide scour/erosion protection while also increasing bank “roughness” which reduces velocities and creates critical habitat necessary for healthy trout populations.

*5. Local Public Interests: The proposed application (use) does not conflict with the local public interest, i.e., the affairs of the people in the area directly affected by the proposed use. This includes, but is not limited to, property values, fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, water quality or an impact upon a locally important factor. The burden of proof always rests with the applicant.*

**According to the Big Wood River Atlas (2020), the following is stated: “The Big Wood River watershed is valued both locally and regionally as a high quality, freestone fishery supporting abundant trout species. Beyond the intrinsic ecological value of functional aquatic habitat, the tourism generated from trout fishing is a significant contributor to the economic health of the Big Wood community, with bigger and more plentiful fish leading to increased tourism.**

...

- ***The most critical factor limiting the trout population in the Big Wood River is the amount and quality of fish habitat.***
- ***Trout densities were eight to ten times larger in unaltered reaches where cover (riparian vegetation/woody debris) components were present than in reaches with no cover, or in reaches with rock revetments.***
- ***Large woody debris were the most preferred cover component for wild rainbow trout.***
- ***The presence of riprap decreased trout densities to the same level as river reaches with no cover habitat.”***
- **STAFF COMMENT:** According to A-3, “The project is intended to stabilize the channel banks and improve fish habitat conditions by utilizing bioengineered bank restoration techniques.” Would it be possible to bury a rock revetment behind the lower bank to still achieve the goal of bank stabilization? The design team should further consider limiting the rock along the entire bank face up to the bankfull elevation. If the Board approves the full amount of rock rip rap, the design team should revegetate the entire face of the bank. See proposed condition of approval # 5.

6. *The following extraordinary circumstances may favor the granting of a stream alteration permit:*
- a. *If the river tries to change to a channel outside of the floodway.*
  - b. *If the viability of an irrigation structure or water delivery system is threatened.*
  - c. *If a road or bridge which provides access to homes or businesses is threatened.*
  - d. *If an existing home or building envelope in a platted subdivision is threatened.*
  - e. *If severe erosion or severe sedimentation of land is threatened.*
  - f. *If a public facility (sewer plant, school, etc.) and/or any other use which would affect the chemical quality of the river is threatened.*

➤ **STAFF COMMENT:** E may apply to this project. No structures are threatened.

7. *If the applicant or landowner with respect to an application for a stream alteration permit under this chapter is the State of Idaho, or any agency, board, department, institution, or district thereof, the Commission or the Board, in addition to all other applicable standards and criteria hereunder, shall take into account the plans and needs of the State, or any agency, board, department, institution or district thereof, as required by Idaho Code §67-6528.*

➤ **STAFF COMMENT:** Not applicable.

### III. DECISION OPTIONS AND CONDITIONS

▶ **Suggested Motion:** I move to approve with conditions (or) deny the application by Briana Swette (Pale Gem, LLC) for a Stream Alteration Permit (SAP) on the Big Wood River at 11038 State Highway 75, finding the proposal complies (or) does not comply with the applicable criteria set forth under Title 9, Chapter 17, Floodplain Overlay District and Riparian Setback District, subject to the following conditions:

Possible conditions of approval:

1. The project shall comply with Idaho Department of Water Resources (IDWR), US Army Corps of Engineers (USACE), Department of Environmental Quality (DEQ), Blaine County and applicant's specifications, conditions and standards. The work shall be done by appropriate construction equipment according to conditions placed on the State and Federal permits.
2. The work shall be done as specified in application; no work outside that applied for and approved under this permit shall be done.
3. The applicant shall submit a detailed and comprehensive revegetation plan that includes native grass, shrub and tree planting for all disturbed upland areas, portions of regraded bank, and vegetative treatments for the existing rock riprap area. Financial Security in the amount of 30% of the estimated cost of the approved revegetation plan approved by the administrator, or a minimum of \$1,500, shall be collected and held for up to four (4) growing seasons to ensure at least 80% establishment of the plants.
4. All work shall be completed in the dry. A final dewatering plan with appropriate erosion and sediment control devices (TESC), in compliance with Idaho DEQ standards, shall be provided to staff for final review and approval prior to start of construction.

5. The applicant shall revegetate the entire bank face with native woody shrubs and trees, including the rock riprap areas in the downstream reach of this project area.
6. The applicant shall notify the County's Floodplain Manager prior to start of work.
7. The county shall receive an annual report for a period of 3 years. This report is to include information regarding the current state of the constructed wood structures, vegetation, and rock riprap. The report shall also address each of the project goals.