

BLAINE COUNTY BOARD OF COMMISSIONERS
PUBLIC HEARING on September 6, 2022 at 1:30 p.m.

REGARDING AN APPLICATION OF: Greg Skjonsby for a Stream Alteration Permit (SAP) on the Big Wood River.	Staff Report Kristine Hilt Dated August 23 2022
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REQUESTED ACTION: Public hearing and consideration of an application by Greg and Hanna Skjonsby to stabilize an eroding streambank on the Big Wood River. Project activities include stabilizing 180 linear feet of bank by regrading, revegetating legacy rock riprap, and discharging approximately 59 cubic yards of rock riprap and woody debris to halt further erosion. This project is located within Section 7, T3N, R18E, B.M., Blaine County and is zoned Low Density Residential (R-1) with areas of Floodplain (F), Floodway (FW), Riparian (R) and potential Wetland (WE) Overlay Districts.

PROPERTY OWNERS/APPLICANTS: Greg Skjonsby

REPRESENTATIVE: Charles G. Brockway, PLCC Brockway Engineering

NAME/REACH OF STREAM: Big Wood River

PROPERTY LOCATION: 106 West Channel Lane, Tax Lot 7799 (T3N, R18E, Sec 7)

APPLICABLE REGULATIONS: Title 9 (Zoning Regulations): 10, 17, & 19
Title 8 (Comprehensive Plan)

I. APPLICATION, NOTICE, EXHIBITS & GENERAL FACTS

1. Application: Blaine County Stream Alteration Permit Application received May 26, 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 31, 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 May 26, 2022, unless indicated otherwise.

- A-1:** Blaine County SAP Application
- A-2:** Vicinity Map/Property Owners Map
- A-3:** Project Narrative
- A-4:** Design Drawings
- A-5:** Photo Exhibit
- A-6:** No Rise Certification and HEC-RAS Cross-Sections
- A-7:** No Adverse Impact Statement
- A-8:** Joint Application
- A-9:** James Laski letter re: legally non-conforming use rec'd 06-09-22

Exhibit B—Agency Comments

- B-1:** Department of the Army (USACE) NWP: 13; received 07-22-22
- B-2:** Idaho Dept. of Water Resources – received 06-27-22
- B-3:** County Engineer Comments; received 07-30-22
- B-4:** Idaho Dept. of Water Quality – received 08-22-22

Exhibit C—Blaine County Supplemental Documents

- C-1:** Site Visit Photos; dated 08-17-22

Exhibit D—Public Comments

None received to date.

5. SUMMARY: This application outlines a streambank stabilization proposal for approximately 180 linear feet of bank, some of which eroded during the 2017 spring flood event. The proposed project includes approximately 55 linear feet of revegetating existing riprap, which “is in need of revegetation to stabilize and enhance the riparian value at that location.” A maximum of 100 feet of bank will be regraded to a 2.5:1 slope and enhanced with toe logs and woody shrubs below the ordinary high-water mark. Finally, riprap is proposed within approximately 35 linear feet of bank to fill a large hole under an existing cottonwood tree. The application states that work will be done in live water, meaning that the work area will not be dewatered or coffered to isolate main channel flows. The application also states that a revegetation plan is forthcoming although the proposal will not include any native riparian grasses or shrubs landward of the reconstructed/regraded bank. See Exhibits A-5 and C-1, photos, for photographs of the riparian setback and bank as it exists today.

6. EXISTING BANK CONDITIONS: The majority of the bank is manicured yardscape with portions of this turf hanging over old rock riprap and riverbed cobble. See Exhibit C-1, staff photos. According to Exhibit A-9, Laski letter, the applicant is claiming that the lawn within the entire 75’ riparian setback is a legally non-conforming use since it existed prior to the adoption of Blaine County’s riparian setback regulations (July 1991). Exhibit A-9 includes photographs dating back to the 1980’s which show portions of the property along the river and also a legal memorandum from a judge stating essentially that a legally non-conforming use is allowed unless it has been deemed as a public nuisance. The aerial imagery shown below in this staff report contradicts the applicant’s position on the yard. It remains staff’s opinion that Exhibit A-9 is inconclusive as to whether or not the entire yard along the length of riverbank on this parcel is considered a legally non-conforming use. The lawn may have extended throughout the riparian setback in various locations, however, trees were abundant within the riparian setback beyond 1991 as shown below.

According to aerial imagery collected by the county in 2002 (below), the land between the house (built in 1981) and the river is heavily forested:



According to a 2003 aerial image, it appears that several trees were removed by the owners, perhaps to allow for a viewing "corridor". See below:



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 – Approved permit received 07-22-22
 - Idaho Dept. of Water Resources – Approved permit received 06-27-22

Comments on the IDWR approval:

- Condition #2 requires that work be conducted in the dry. Refer to proposed condition of approval #4 at the end of this staff report.
- Condition #6 requires substantial plantings along the reconstructed banks. A final revegetation plan should ensure compliance with this condition.
- Condition #7 requires that any geotextile fabric used for construction, must be a non-woven natural fiber. The applicant should clarify what the “staples” are proposed in the design drawings.

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-7. Staff commends the design team in presenting an alternative to additional rock riprap and bank hardening. Revegetation of the existing rock riprap is highly desirable and regrading a portion of the bank to incorporate woody shrubs is the County's preferred approach for bank stabilization. Rock riprap should be a last resort method in all cases. The overall project design seems reasonable but could be improved. Staff notes the following observations regarding this proposal:

- The toe footer logs are not anchored into the bank. Wood is susceptible to buoyancy and flotation during high water events.
- Horizontal placement of wood creates a smoother bank toe face, which can increase velocities along the bank. Staff recommends increased bank roughening, i.e. exposed root wads and additional woody debris racking with appropriate anchoring. This can slow local water velocities, reduce scour and improve shading and aquatic habitat.
- The project is proposed in live water. The IDWR permit requires that all work be conducted in low water and in the dry. A final dewatering plan with appropriate erosion and sediment control devices should be provided to staff for final review and approval. See proposed condition of approval 4.
- The design will not accommodate much scour since the proposed rock riprap below the existing cottonwood tree would be placed directly on the existing riverbed. This can lead to instability of the rocks as they fall into scour holes around them.

- A revegetation plan was not provided as part of the application. The application states, “[t]he existing grass will be retained and no change in vegetation is proposed landward of the regraded bank. It is staff’s opinion that the lack of vegetation along the bank and throughout the riparian setback is indeed a public nuisance. The existing state of this riverbank and riparian setback is concerning. The sluffing of the turf material indicates an increased sediment load to the river which contributes to increased erosion and adversely impacts water quality. There is currently no vegetation to filter pollutants and fertilizers from the lawn. Additionally, the lack of vegetation contributes to increased water temperatures as there is no shading.

According to historic aeriels, cottonwoods have been a central part of the river ecology through this reach of river. A final revegetation plan should be provided to staff for final review and should incorporate native woody shrub and cottonwood plantings to restore the riparian corridor through this project reach. The cottonwood plantings could be spaced out to allow for a continued viewing corridor. See proposed conditions of approval 3. Two alternate conditions have been provided for Board consideration. These proposed conditions of approval are based on recommendations from the Big Wood River Atlas (2020), below:

“The presence of riparian vegetation is an important factor in a river systems morphology because vegetation can influence channel form, migration and erosion rates, and the formation of stable channels and islands. Streamside vegetation can decrease the number of active channels in braided rivers by increasing bank stability and reducing lateral migration rates. The resulting channels are generally deeper, narrower, and with a greater distribution of depths (Gran and Paola 2001; Tal and Paola 2007). Important lateral habitats including backwaters, eddies, and side channels are created by the interaction of flow with vegetation and woody debris (Gregory et al. 1991). The removal of riparian vegetation can destabilize riverbanks, which facilitates erosion, and ultimately increases sediment delivery into the Big Wood River (Poole and Berman 2001). Vegetation aids in bank stabilization by increasing soil cohesion through the spatial distribution of roots that physically bind the soil together (Simon and Collison 2002). Trees have been found to have the greatest capacity to increase bank stability under a wide range of conditions compared to grass species (Simon and Collison 2002).

Riparian buffers have been widely accepted as a best management practice for water quality protection because of their ability to reduce sediment inputs, filter surface runoff, and reduce pollutant concentrations (Dosskey et al. 2010; Osborne and Kovacic 1993). The buffers are also effective at reducing in-stream temperatures by shading the river and trapping cool air near the water surface (Tabacchi et al. 1998; Poole and Berman 2001). These functions are particularly important for much of the Big Wood River and its tributaries, whose water quality has been federally listed as impaired for sediments, total phosphorus, bacteria, and temperature in some locations (DEQ 2017). The Big Wood River has been impacted by urban development in the central valley, which has encroached upon or eliminated riverside vegetation in many locations. Re-introducing a multi-species forested riparian corridor may be a promising solution to the water quality impairments, as these corridors have been shown to remove greater than 90% of sediment and 80% of phosphorus from overland flow in some conditions. Forested buffers have been shown to be more effective at pollutant reduction than herbaceous or grass zones (Daniels and Gilliam 1996).

The importance of maintaining a forested riparian zone along the Big Wood River cannot be understated. Given the high migration and erosion rates which are characteristic of the river, private properties that have removed vegetation are likely at a higher risk of flooding, erosion, and bank failure. Revegetation of riparian zones should be considered as a cost-effective alternative to bankside stabilization, which has the added benefit of improving aquatic habitat and reducing water quality impairments. Riparian habitat is an important feature of any healthy river and should be prioritized to maintain the holistic, ecological, and economic abundance of the Big Wood River.”

- **COUNTY ENGINEER COMMENTS:** The County Engineer has done a thorough review of this project and makes several observations regarding this bank’s susceptibility to future erosion, anchoring of footer logs, and future instability of the existing cottonwood tree. See Exhibit B-3 for complete county engineer comments.

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:** Charles G. Brockway, Ph.D, PE has included a “no-rise” certification statement and summary of site-specific measurements and calculations supporting this statement. Upon completion of the project per approved construction plans and specifications, this “no-rise” certification indicates 100-year flood levels during the occurrence of the 100-year flood discharge in compliance with FEMA’s “no-rise” certification procedures. See Exhibit A-6.

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 9-17-9A of this Chapter).*

- **STAFF COMMENT:** The challenge presented to homeowner’s living along the river is complex. They must protect their investments while also limiting land use development that could adversely impact other property owners and the entire river ecosystem. The purposes of both programs are such that a compromise must be made by each land owner. Significant channelization of the river through rock riprap has occurred in efforts to protect expanding agricultural and urban areas into historic floodplain. “Though riprap can be quite effective in achieving its objectives of limiting channel migration and reducing flooding on a reach scale, it also alters stream morphology and aquatic habitat in manners that lead to degradation of fish populations and exacerbate flooding and erosion in untreated reaches.” (Atlas 2020)

This project proposes to halt erosion, stabilize the bank and incorporate a minimal number of riparian plantings. The key to a successful project, that meets the purposes of both programs, is incorporating bank roughening techniques. The Big Wood River Atlas (2020) includes a library of additional roughening techniques that the property owner and design team should consider. The impacts of rock and bank hardening are well documented and the continuation of applying these techniques, without the inclusion of substantially roughening and riparian restoration, will no doubt lead to additional adverse impacts downstream.

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.*

- **STAFF COMMENT:** It is staff’s opinion that this project should be further enhanced with bank roughening woody debris and additional tree and riparian plantings to ensure that this standard is met. 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.”*

Chapter 5 of the Comprehensive Plan, Natural Environment, further states that clean air and water and high-quality habitat for fish and wildlife are listed as core values of Blaine County residents. Chapter 5 goes on to further state, “[w]hile riparian and wetland areas proportionally comprise a very small portion of the County, they are productive and valuable natural resources. Riparian areas recharge the aquifer, store water, and provide plant diversity and habitat for common and sensitive species. Cavity-nesting birds, songbirds, and raptors utilize riparian tree and shrub habitat.”

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:** Compliant. E applies to this project.

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 Greg Skjonsby for a Stream Alteration Permit (SAP) on the Big Wood River, 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.

Alternative #3: The applicant shall submit a more detailed revegetation plan that includes details regarding quantity, spacing and species of plantings for administrative approval. The plan shall include the entire seventy-five feet (75') of the riparian setback and shall indicate that vegetation within this setback shall not be mowed or removed in perpetuity per Blaine County Code §9-17-7, Riparian Setback District Use Regulations. 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, 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 notify the County's Floodplain Manager prior to start of work.
6. 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.