

# **FINAL ENVIRONMENTAL ASSESSMENT CHECKLIST**

**FWP-CEA-FSH-R5-25-004**

**Dorvall Corner Bank Repairs and Stabilization**

**03/17/2025**



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## I. Compliance with the Montana Environmental Policy Act

*Before a proposed project may be approved, environmental review must be conducted to identify and consider potential impacts of the proposed project on the human and physical environment affected by the project. The Montana Environmental Policy Act (MEPA) and its implementing rules and regulations require different levels of environmental review, depending on the proposed project, significance of potential impacts, and the review timeline. § 75-1-201, Montana Code Annotated (“MCA”), and the Administrative Rules of Montana (“ARM”) 12.2.430, General Requirements of the Environmental Review Process.*

*FWP must prepare an EA when:*

- *It is considering a “state-proposed project,” which is defined in § 75-1-220(8)(a) as:*
  - (i) a project, program, or activity initiated and directly undertaken by a state agency;*
  - (ii) ... a project or activity supported through a contract, grant, subsidy, loan, or other form of funding assistance from a state agency, either singly or in combination with one or more other state agencies; or*
  - (iii) ... a project or activity authorized by a state agency acting in a land management capacity for a lease, easement, license, or other authorization to act.*
- *It is not clear without preparation of an EA whether the proposed project is a major one significantly affecting the quality of the human environment. ARM 12.2.430(3)(a));*
- *FWP has not otherwise implemented the interdisciplinary analysis and public review purposes listed in ARM 12.2.430(2) (a) and (d) through a similar planning and decision-making process (ARM 12.2.430(3)(b));*
- *Statutory requirements do not allow sufficient time for the FWP to prepare an EIS (ARM 12.2.430(3)(c));*
- *The project is not specifically excluded from MEPA review according to § 75-1-220(8)(b) or ARM 12.2.430(5); or*
- *As an alternative to preparing an EIS, prepare an EA whenever the project is one that might normally require an EIS, but effects which might otherwise be deemed significant appear to be mitigable below the level of significance through design, or enforceable controls or stipulations or both imposed by the agency or other government agencies. For an EA to suffice in this instance, the agency must determine that all the impacts of the proposed project have been accurately identified, that they will be mitigated below the level of significance, and that no significant impact is likely to occur. The agency may not consider compensation for purposes of determining that impacts have been mitigated below the level of significance (ARM 12.2.430(4)).*

*MEPA is procedural; its intent is to ensure that impacts to the environment associated with a proposed project are fully considered and the public is informed of potential impacts resulting from the project.*

## II. Background and Description of Proposed Project

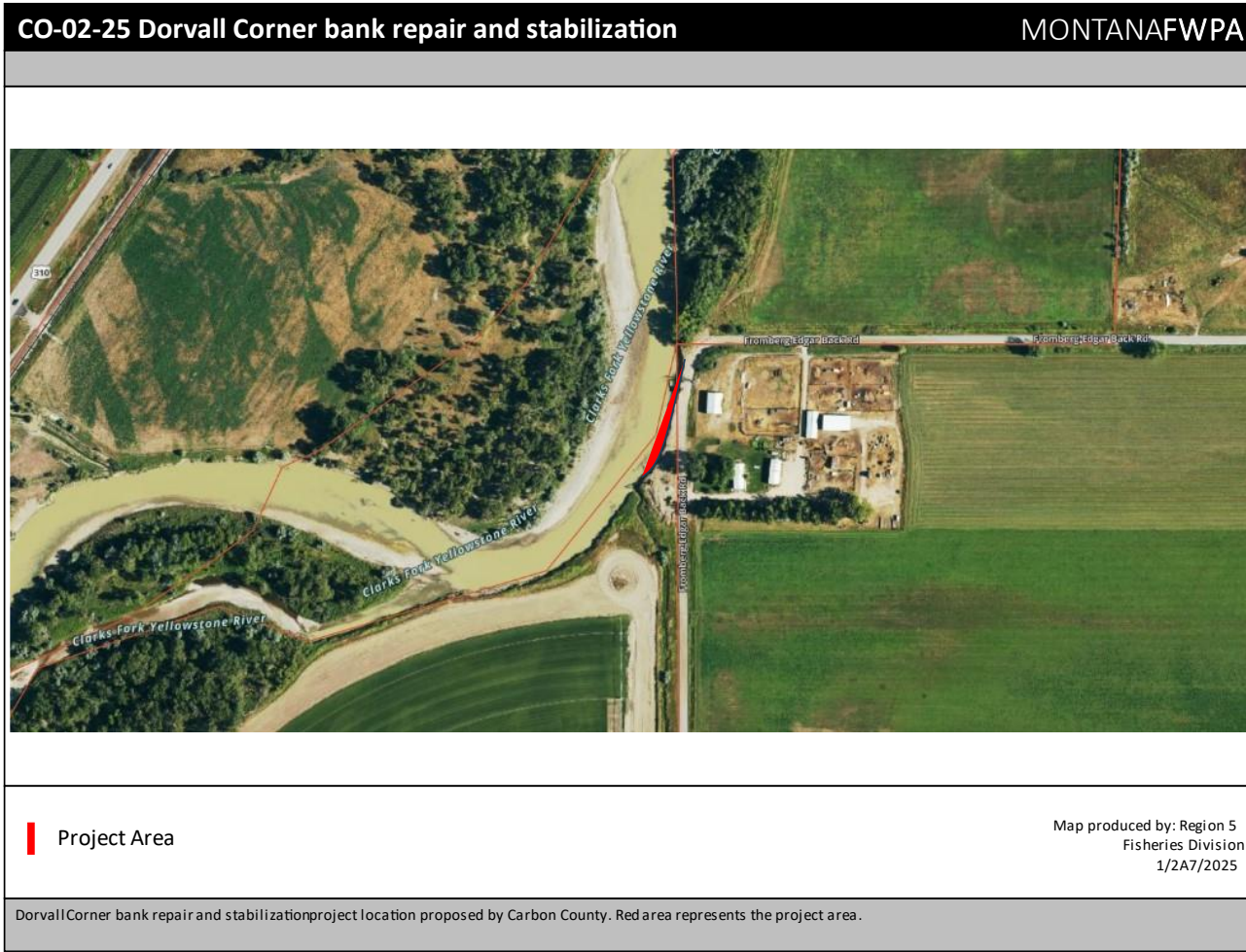
**Name of Project:** Dorvall Corner Bank Repair and Stabilization

Carbon County is planning repairs to a previous bank armoring project on Dorvall Corner along the Clarks Fork of the Yellowstone River. The original project (SPA 124# CO-06-23; 03/31/2023) was done to prevent further bank erosion along a section of river directly adjacent to an existing county road. Bank stabilization efforts consisted of placing rock-filled gabion mattresses, which are comprised of galvanized steel mesh filled with rock and/or other fill material, on a 1.5:1 (H:V) slope, on approximately 108 linear feet of riverbank. However, high flows in the spring 2024 (25-year flood event) damaged the gabion mattresses and fill material was transported downstream. Currently, the bank is at risk for additional erosion.

The proposed project entails refilling the gabion mattresses with large angular rock rather than the previous round river rock. Carbon County plans on installing Flexamat material on top of the gabion mattresses to provide additional stabilization. Flexamat is a two layered system that includes a polypropylene grid with concrete blocks cast onto non-woven geotextile fabric. The entire Flexamat will be anchored into the slope with 8-ft long steel cable earth anchors, driven and tensioned, along the 108 linear feet of the Clarks Fork of the Yellowstone River. Flexamat and gabion baskets/mattresses are not recommended by FWP and others for bank stabilization because they are prone to failure, can contribute to channel incision and localized channel widening and avulsions<sup>1</sup>. However, due to economic and timing reasons for Carbon County, FWP is permitting this project with special conditions that the county shall submit a new project design (e.g., no gabion baskets) that allows for better stream form and function, should this method fail again and/or needs substantial repairs.

**Affected Area / Location of Proposed Project:**

- Legal Description
  - Latitude/Longitude: 45.41341, -108.88188
  - Section, Township, and Range: 5S 23E 10
  - Town/City, County, Montana: Bridger, Carbon County, Montana



<sup>1</sup> Thompson, D.M., L. S. Puklin, and A.E. Marshall. The long-term impact of channel stabilization using gabion structures on Zealand River, New Hampshire. Ecological Engineering 95:779–792.

### III. Purpose and Need

*The EA must include a description of the benefits and purpose of the proposed project. ARM 12.2.432(3)(b). Benefits of the proposed project refer to benefits to the resource, public, department, state, and/or other.*

The Edgar Fromberg Road provides access to the residents who live in the surrounding area, emergency services, and agricultural producers. Action must be taken to ensure the road does not incur additional erosion from the Clarks Fork of the Yellowstone River and remains functional.

Specific: The goal should target a specific area of improvement or answer a specific need

- **M**easurable: The goal should be quantifiable, or at least allow for measurable progress
- **A**chievable: The goal should be realistic, based on available resources and existing constraints
- **R**elevant: The goal should align with other Agency objectives
- **T**ime-bound: The goal must have a deadline or defined-end

If FWP prepared a cost/benefit analysis before completion of the EA, the EA must contain the cost/benefit analysis or a reference to it. ARM 12.2.432(3)(b).

	Yes*	No
Was a cost/benefit analysis prepared for the proposed project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

\* If yes, a copy of the cost/benefit analysis prepared for the proposed project is included in Attachment A to this Draft EA

### IV. Other Agency Regulatory Responsibilities

*FWP must list any federal, state, and/or local agencies that have overlapping or additional jurisdiction, or environmental review responsibility for the proposed project, as well as permits, licenses, and other required authorizations. ARM 12.2.432(3)(c).*

*A list of other required local, state, and federal approvals, such as permits, certificates, and/or licenses from affected agencies is included in **Table 1** below. **Table 1** provides a summary of state requirements but does not necessarily represent a complete and comprehensive list of all permits, certificates, or approvals needed. Agency decision-making is governed by state and federal laws, including statutes, rules, and regulations, that form the legal basis for the conditions the proposed project must meet to obtain necessary permits, certificates, licenses, or other approvals. Further, these laws set forth the conditions under which each agency could deny the necessary approvals.*

**Table 1: Federal, State, and/or Local Regulatory Responsibilities**

Agency	Type of Authorization (permit, license, stipulation, other)	Purpose
U.S. Army Corps of Engineers	NWP 3	The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification.
Montana Department of Environmental Quality (MDEQ) DEQ	318 Authorization Short-Term Water Quality Permit	Short-term narrative water quality standards for total suspended sediment and turbidity resulting from stream-related construction activities or

		stream enhancement projects. duce the effects of turbidity on the area of impact.
DNRC – Local Floodplain Administrator	Floodplain permit	For work that will include implementing projects within the 100-year floodplain and what impacts the project may have.
DNRC – Montana Sage Grouse Habitat Conservation Program/U.S. Fish and Wildlife Service	Consultation	Required for work that may occur in Greater Sage Grouse general and critical habitat.

## V. List of Mitigations, Stipulations

*Mitigations, stipulations, and other enforceable controls required by FWP, or another agency, may be relied upon to limit potential impacts associated with a proposed Project. The table below lists and evaluates enforceable conditions FWP may rely on to limit potential impacts associated with the proposed Project. ARM 12.2.432(3)(g).*

**Table 2: Listing and Evaluation of Enforceable Mitigations Limiting Impacts**

<i>Are enforceable controls limiting potential impacts of the proposed action? If not, no further evaluation is needed.</i>			<b>Yes <input checked="" type="checkbox"/></b>	<b>No <input type="checkbox"/></b>
<i>If yes, are these controls being relied upon to limit impacts below the level of significance? If yes, list the enforceable control(s) below</i>			<b>Yes <input checked="" type="checkbox"/></b>	<b>No <input type="checkbox"/></b>
<b>Enforceable Control</b>	<b>Responsible Agency</b>	<b>Authority (Rule, Permit, Stipulation, Other)</b>	<b>Effect of Enforceable Control on Proposed Project</b>	
SPA 124 Permit - General Requirements (see Table 3)	FWP	SPA 124	SPA 124 Permit, General Conditions, provide best management practices in the form of enforceable controls to limit potential adverse impacts from the proposed project. Fines may be levied for violating these general requirements and/or corrective action may be required to remedy non-compliance.	
Water Quality	MDEQ	318 Authorization	Reduce the effects of turbidity on the area of impact.	
Limiting Fill in a Navigable Waterway	U.S. Army Corps of Engineers	NW Permit 3	The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification.	
Floodplain	DNRC/Local administrator	Floodplain permit	Limiting the amount of fill deposited into the floodplain. Description of how project will contain a 'no-rise' effect. See DNRC Permitting information.	

## VI. SPA 124 Permit Action

*Any applicable Montana stream work that is not otherwise excluded from MEPA review under the applicable requirements of ARM 12.2.454, Actions that Qualify for a Categorical Exclusion, and has the potential to alter the stream channel or bank, requires a project-specific 124 Stream Protection Act Permit or SPA 124 Permit prior to the start of work. The SPA 124 permit is issued by FWP's Fisheries Division and includes both the general conditions described in Attachment 1 and any additional Special Conditions deemed necessary to protect and preserve the affected waterway. Additional conditions deemed necessary to protect and preserve the affected stream from potential impacts associated with the proposed project are listed in Table 4 below.*

**Table 3: SPA 124 Permit Conditions the Department Will Require to Issue Permit.**

Activity	Special Condition	Description
Project Design	<p>In the event of any additional reno mattress or Flexamat repair needed, and/or project failure:</p> <ul style="list-style-type: none"> <li>- Reno mattress and Flexamat repairs will not be permitted.</li> <li>- All materials associated with this project including Flexamat, concrete, non-woven geotextile fabric, steel anchors, and mesh mattress material must be removed from the river and bank.</li> <li>- A new design that improves stream form and function and incorporates fish habitat shall be submitted to stabilize the bank and protect the road. FWP will work with the county on design concepts.</li> </ul>	<p>This project is designed with unnatural materials and with dimensions that may negatively impact stream form and function. Given the economic and timing constraints, FWP is permitting this project with the requirement that if it fails or needs repair, it shall be replaced with a more long-term, river-friendly approach.</p>
Work activity	Willow stakes and/or riparian plugs that penetrate through geotextile fabric to ensure root establishment must be incorporated	Minimize the heat sink effect of the concrete bank that can increase water temperatures. Increase stability of the project. Decrease the chance for runoff turbidity after storm events
Work activity	BMPs shall be used to reduce sedimentation during project	To ensure that turbidity is kept to a minimum during construction.
Work activity	Work shall not occur outside of the project scope outlined in permit. Failure to comply could result in violations.	Past post-flood projects have taken liberal use of SPA 124 permits and completed more work than what was designed of permitted.
Permitting action	FWP reserves the right to revisit, modify, deny, issue an amendment	Past post-flood projects have taken liberal use of SPA 124 permits and

	or violation to a previously approved permit.	completed more work than what was designed of permitted.
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## VII. Alternatives Considered

In addition to the proposed Project, and as required by MEPA, FWP analyzes the "no-action" alternative in this EA. Under the "no-action" alternative, FWP would not do the proposed project.

Under the "No Action" alternative, the proposed project would not occur. Therefore, no additional impacts to the physical environment or human population in the analysis area would occur. The "No Action" alternative forms the baseline from which the potential impacts of the proposed Project can be measured.

	Yes*	No
Were any additional alternatives considered and dismissed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

\* If yes, a list and description of the other alternatives considered, but not carried forward for detailed review is included below

### Alternative 3:

FWP requested alternatives to the proposed project. Carbon County informed FWP that they had considered another alternative to remove the non-functioning gabion baskets and implement a new design. This design would have incorporated a more suitable slope for bank protection that would have improved stream form and function and used more natural materials. While this alternative would have been preferred by FWP, it was ultimately rejected by Carbon County due to economic and timing restraints.

## VIII. Summary of Potential Impacts of the Proposed Project on the Physical Environment and Human Population

The impacts analysis identifies and evaluates **direct**, **secondary**, and **cumulative impacts**.

- **Direct impacts** are those that occur at the same time and place as the action that triggers the effect.
- **Secondary impacts** "are further impacts to the human environment that may be stimulated or induced by or otherwise result from a direct impact of the action." ARM 12.2.429(18).
- **Cumulative impacts** "means the collective impacts on the human environment of the proposed action when considered in conjunction with other past and present actions related to the proposed action by location or generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures." ARM 12.2.429(7).

Where impacts are expected to occur, the impact analysis estimates the **extent**, **duration**, **frequency**, and **severity** of the impact. The duration of an impact is quantified as follows:

- **Short-Term:** impacts that would not last longer than the proposed project.
- **Long-Term:** impacts that would remain or occur following the proposed project.

The severity of an impact is measured using the following:



- **No Impact:** there would be no change from current conditions.
- **Negligible:** an adverse or beneficial effect would occur but would be at the lowest levels of detection.
- **Minor:** the effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.
- **Moderate:** the effect would be easily identifiable and would change the function or integrity of the resource.
- **Major:** the effect would irretrievably alter the resource.

Some impacts may require mitigation. As defined in ARM 12.2.429, mitigation means:

- Avoiding an impact by not taking a certain action or parts of a project;
- Minimizing impacts by limiting the degree or magnitude of a project and its implementation;
- Rectifying an impact by repairing, rehabilitating, or restoring the affected environment; or
- Reducing or eliminating an impact over time by preservation and maintenance operations during the life of a project or the time period thereafter that an impact continues.

A list of any mitigation strategies including, but not limited to, design, enforceable controls or stipulations, or both, as applicable to the proposed project is included in **Section VI** above.

FWP must analyze impacts to the physical and human environment for each alternative considered. The proposed project considered the following alternatives:

- **Alternative 1: No Action. Evaluation and Summary of Potential Impacts on the Physical Environment and Human Population**

Under the “No Action” alternative, the proposed project would not occur. Therefore, no additional impacts to the physical environment or human population in the analysis area would occur. The “No Action” alternative forms the baseline from which the potential impacts of the proposed Project can be measured.

- **Alternative 2: Proposed Project. Evaluation and Summary of Potential Impacts on the Physical Environment and Human Population**

See **Table 4** (Impacts on Physical Environment) and **Table 5** (Impacts on Human Population) below.

**Table 4 - Potential Impacts of the Proposed Project on the Physical Environment**

PHYSICAL ENVIRONMENT	Duration of Impact			Severity of Impact					Summary of Potential Direct, Secondary, and Cumulative Impacts and Mitigation Measures
	None	Short-Term	Long-Term	None	Negligible	Minor	Moderate	Major	
Terrestrial, avian, and aquatic life and habitats	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	FWP does not expect significant adverse impacts to terrestrial, avian, and aquatic life and habitats because of the proposed project. The proposed project will refill existing gabion mattresses with large angular rock and install Flexamat material that includes a polypropylene grid with concrete blocks cast onto non-woven geotextile fabric anchored into the slope with 8-ft long steel cables along 108 linear feet of riverbank on the Clarks Fork of the Yellowstone River. These actions cumulatively add to a loss of natural bank and aquatic habitat. Bank armoring using gabion mattresses and polypropylene may negatively affect fish communities by reducing the availability of diverse lateral habitats and contributing plastics into the water. Although the impacts from this project would contribute to the long-term loss of terrestrial and aquatic habitats, the area has been previously rip rapped and impacts are likely minor. However, if the gabion mattresses design fails again, it will deposit polypropylene, concrete, non-woven geotextile fabric, and metal into the river and have major impacts to terrestrial, avian, and aquatic life and habitat. As such, FWP has issued special conditions to minimize these impacts should they occur.
Water quality, quantity, and distribution	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant adverse impacts to water quality, quantity, and distribution because of the proposed project. The proposed project of refilling the gabion mattresses and install concrete blocks over geotextile fabric, which is likely to contribute to higher water temperatures and turbidity levels during rain and/or runoff events as the project location is directly parallel to a moderately travelled, gravel county road with

PHYSICAL ENVIRONMENT	Duration of Impact			Severity of Impact					Summary of Potential Direct, Secondary, and Cumulative Impacts and Mitigation Measures
Resource	None	Short-Term	Long-Term	None	Negligible	Minor	Moderate	Major	
									limited vegetation. Gabion mattresses are highly efficient transporters of sediment, which creates incision areas locally and downstream which may also impact turbidity. It is unknown to what extent the mattresses coupled with Flexamat and polypropylene may impact water quality. Thus, there are likely both short- and long-term, moderate impacts to water quality in the event of heavy rainfall or runoff events. The contractor proposes to use appropriate BMPs for minimizing turbidity during construction. A special condition requiring willow stakes and/or riparian plugs in a portion of the project area to minimize the heat sink effect of the concrete bank and reduce turbidity from runoff after storm events.
Geology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect any significant impacts to the geology because of this project. The proposes project will refill existing gabion mattresses with large angular rock and install Flexamat material that includes a polypropylene grid with concrete blocks cast onto non-woven geotextile fabric anchored into the slope with 8-ft long steel cables along 108 linear feet of riverbank on the Clarks Fork of the Yellowstone River. There are no known unique geologic features, and the project is occurring in a relatively small area that would not pick up any geologic impact.
Soil quality, stability, and moisture	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant adverse impacts to soil quality, stability, and moisture in the affected area because of the proposed project. The project will refill gabion mattresses with large angular rock, and then install Flexamat material that includes a polypropylene grid with concrete blocks cast onto non-woven geotextile fabric that will be anchored into the slope with 8-ft long steel cables along 108 linear feet of riverbank. This area is already highly disturbed and soils in the affected area are

PHYSICAL ENVIRONMENT	Duration of Impact			Severity of Impact					Summary of Potential Direct, Secondary, and Cumulative Impacts and Mitigation Measures
Resource	None	Short-Term	Long-Term	None	Negligible	Minor	Moderate	Major	
									primarily comprised of Haverson silty clay loam, 0 to 2 percent slopes, which are well-drained, farmland of statewide importance soils <sup>2</sup> . These activities will likely have long-term, moderate impacts to soil stability, moisture and quality associated with the bank stabilization, especially as these soils are identified as contributing to high erosion rates on steel and concrete <sup>1</sup> . Furthermore, fine silts and clay can infiltrate voids between rocks within the gabion mattresses and cause additional stress on the bank, leading to failure. The selected contractor will not permanently remove the native soil material from the proposed project.
Vegetation cover, quantity, and quality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant adverse impacts to vegetation cover, quantity, and quality in the affected area because of the proposed project. The project will refill existing gabion mattresses with large angular rock and install Flexamat material that includes a polypropylene grid with concrete blocks cast onto non-woven geotextile fabric anchored into the slope with 8-ft long steel cables along 108 linear feet of riverbank on the Clarks Fork of the Yellowstone River. This area has been highly disturbed and is currently void of vegetation cover. The special condition requiring the planting of willows and other suitable riparian vegetation to mitigate turbidity and increase vegetation cover, quantity, and quality for additional bank stabilization and provide some fish habitat could have beneficial long-term, minor impacts.
Aesthetics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant adverse impacts to aesthetics because of the proposed project. The project proposes to refill gabion mattresses with large angular

<sup>2</sup> Natural Resource Conservation Service. Web Soil Survey Report for Carbon County Area, Montana. Date Retrieved on 1/31/2025.

PHYSICAL ENVIRONMENT	Duration of Impact			Severity of Impact					Summary of Potential Direct, Secondary, and Cumulative Impacts and Mitigation Measures
	None	Short-Term	Long-Term	None	Negligible	Minor	Moderate	Major	
									rock, and then install Flexamat material that includes a polypropylene grid with concrete blocks cast onto non-woven geotextile fabric that will be anchored into the slope with 8-ft long steel cables. Even with vegetation plantings, the concrete blocks and polypropylene will likely be visible on the bank and from the road, creating long-term minor impacts to aesthetics.
Air quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant adverse impacts to air quality because of the proposed project. The project proposes to refill gabion mattresses with large angular rock, and then install Flexamat material that includes a polypropylene grid with concrete blocks cast onto non-woven geotextile fabric that will be anchored into the slope with 8-ft long steel cables. Fugitive dust and vehicle exhaust emissions resulting from the movement of heavy equipment and materials for the proposed project may directly impact air quality in the area. Any impacts would be short-term, and minor, lasting only as long as the proposed project.
Unique, endangered, fragile, or limited environmental resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant impacts to unique, endangered, fragile, or limited environmental resources because of the proposed project. Yellowstone cutthroat trout, swamp milkweed, bald eagle, great blue heron, snapping turtle, spiny softshell, dwarf bulrush, and spearleaf rabbitbrush may be present. In addition, the project area is listed as General Greater Sage Grouse habitat <sup>3</sup> . However, FWP expects short-term, minor impacts to any unique or endangered species/habitats as the proposed project area is already highly disturbed and construction will take place in the winter when many of

<sup>3</sup> Montana Natural Heritage Program. Environmental Summary Report for Latitude 45.39972 to 45.41737 and Longitude -108.87226 to -108.89615. Retrieved on 1/27/2025.

PHYSICAL ENVIRONMENT	Duration of Impact			Severity of Impact					Summary of Potential Direct, Secondary, and Cumulative Impacts and Mitigation Measures
	None	Short-Term	Long-Term	None	Negligible	Minor	Moderate	Major	
									the unique, endangered, fragile or limited environmental resources are dormant and will last only as long as the project.
Historical and archaeological sites	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant impacts to historical and archaeological sites because of this project. There are no known historic sites in the immediate project area. Work will be performed on already disturbed areas.
Demands on environmental resources of land, water, air, and energy	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant adverse impacts to demand on the environmental resources of land, water, and air because of the proposed project. The project proposes to refill gabion mattresses with large angular rock, and then install Flexamat material that includes a polypropylene grid with concrete blocks cast onto non-woven geotextile fabric that will be anchored into the slope with 8-ft long steel cables along 108 linear feet on riverbank. Fuel would be required to operate heavy machinery and vehicles. There are no other demands on the environmental resources of land, water, air, and energy because of the proposed project. Therefore, any impacts to demands on environmental resources of land, water, air, and energy in the affected area would be short-term and negligible.

**Table 5 - Potential Impacts of the Proposed Project on the Human Population**

HUMAN POPULATION		Duration of Impact			Severity of Impact					Summary of Potential Direct, Secondary, and Cumulative Impacts and Mitigation Measures
Resource		None	Short-Term	Long-Term	None	Negligible	Minor	Moderate	Major	
Social structures and mores		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant adverse impacts to social structures and mores in the affected area because of the proposed project. The proposed project of refilling gabion mattresses and covering the baskets with concrete, polypropylene, and geotextile fabric anchored into the bank, would not impact current land use; therefore, the proposed project would not impact any pre-project social structures, customs, values, or conventions in the affected area.
Cultural uniqueness and diversity		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant adverse impacts to cultural uniqueness and diversity in the affected area because of the proposed project. Therefore, no impacts to the existing cultural uniqueness and diversity of the affected area would be expected because of the proposed project.
Access to and quality of recreational and wilderness activities		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant impacts to access to and quality of recreational and wilderness activities because of the proposed project. The project will refill existing gabion mattresses with large angular rock and install Flexamat material that includes a polypropylene grid with concrete blocks cast onto non-woven geotextile fabric anchored into the slope with 8-ft long steel cables along 108 linear feet of riverbank on the Clarks Fork of the Yellowstone River. The project area is a steep embankment off a county road that provides little to no access to recreational or wilderness activities.
Local and state tax base and tax revenues		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant adverse impacts to the local and state tax base and tax revenues because of the proposed project. The proposed project will refill existing gabion mattresses with large angular rock and install Flexamat material that includes a polypropylene grid with concrete blocks cast onto non-woven geotextile fabric anchored into the slope with 8-ft long steel cables along

HUMAN POPULATION		Duration of Impact			Severity of Impact					Summary of Potential Direct, Secondary, and Cumulative Impacts and Mitigation Measures
Resource		None	Short-Term	Long-Term	None	Negligible	Minor	Moderate	Major	
										108 linear feet of riverbank on the Clarks Fork of the Yellowstone River. FWP anticipates the proposed project would increase state and local tax revenues from the sale of fuel, supplies and/or equipment to complete the project. Any impacts to the local and state tax base and tax revenue would be short-term and negligible, lasting only as long as the proposed project.
Agricultural or Industrial production		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant adverse impacts to agricultural, industrial and commercial activity. The refilled gabion mattresses with reinforced Flexamat concrete block mat, anchored to the slope with 8-ft steel cable earth anchors. The addition of the Flexamat mat could make the project area less prone to failure from debris impacts during high velocity flow events and provide a measure of bank stabilization for the road to support industrial and agricultural activities in this area. Therefore, impacts would be long-term, moderate and beneficial to agricultural production in the area.
Human health and safety		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant impacts to the human health and safety because of the proposed project. The project proposes to refill gabion mattresses with large angular rock, and then install Flexamat material that includes a polypropylene grid with concrete blocks cast onto non-woven geotextile fabric that will be anchored into the slope with 8-ft long steel cables would provide better protection than current conditions to the bridge and road. There will be long-term, minor beneficial effects to human health and safety by repairing and reinforcing the damaged gabion baskets, which helps prevent erosion towards the road during high flow events and allows continued access for residents and emergency services east of the river.



HUMAN POPULATION	Duration of Impact			Severity of Impact					
Resource	None	Short-Term	Long-Term	None	Negligible	Minor	Moderate	Major	Summary of Potential Direct, Secondary, and Cumulative Impacts and Mitigation Measures
Quantity and distribution of employment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect impacts to the quantity and distribution of employment in the affected area because of the proposed project. The action of the project includes refilling and reinforcing gabion mattresses alongside the Clarks Fork of the Yellowstone River and, when completed would not impact the quantity and distribution of employment in the affected area. Short-term and minor impacts to the local quantity and distribution may be realized because of the need for contracted services to complete maintenance activities. Any impacts the quantity and distribution of employment in the affected area would be short-term and negligible.
Distribution and density of population and housing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant impacts to the distribution and density of population and housing in the affected area because of the proposed project. The actions of the proposed project to refill existing gabion mattresses with large angular rock and install Flexamat material that includes a polypropylene grid with concrete blocks cast onto non-woven geotextile fabric anchored into the slope with 8-ft long steel cables along 108 linear feet of riverbank on the Clarks Fork of the Yellowstone River and, when completed, would not impact the distribution and density of population and housing in the affected area.
Demands for government services	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant impacts to the demands for government services in the affected area because of the proposed project. The action of the project includes refilling and reinforcing gabion mattresses alongside the Clarks Fork of the Yellowstone River which when completed, would not impact demands for government services. However, should the project fail again, additional conversations between the county and regulatory agencies are expected.

HUMAN POPULATION	Duration of Impact			Severity of Impact					Summary of Potential Direct, Secondary, and Cumulative Impacts and Mitigation Measures
	None	Short-Term	Long-Term	None	Negligible	Minor	Moderate	Major	
Industrial, agricultural, and commercial activity	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect significant adverse impacts to agricultural, industrial and commercial activity. The actions of the project to refill and reinforce gabion mattresses along 108 linear feet of the Clarks Fork of the Yellowstone River which when completed, will provide a measure of bank stabilization for the road to support industrial and agricultural activities in this area. Therefore, project impacts would be long-term, minor and beneficial to industrial, agricultural, or commercial activity.
Locally adopted environmental plans and goals	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP does not expect the proposed project to have any significant effects to locally adopted environmental plans and goals. FWP is unaware of any environmental plans or goals implemented by Carbon County.
Other appropriate social and economic circumstances	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	FWP is unaware of any other appropriate social and economic circumstances that may be impacted by the proposed project.

**Table 6: Determining the Significance of Impacts on the Quality of the Human Environment**

If the EA identifies impacts associated with the proposed project FWP must determine the significance of the impacts. ARM 12.2.431. This determination forms the basis for FWP's decision as to whether it is necessary to prepare an environmental impact statement. An impact may be adverse, beneficial, or both. If none of the adverse effects of the impact are significant, an EIS is not required. An EIS is required if an impact has a significant adverse effect, even if the agency believes that the effect on balance will be beneficial. ARM 12.2.431.

According to the applicable requirements of ARM 12.2.431, FWP must consider the criteria identified in this table to determine the significance of each impact on the quality of the human environment. The significance determination is made by giving weight to these criteria in their totality. For example, impacts identified as moderate or major in severity may not be significant if the duration is short-term. However, moderate or major impacts of short-term duration may be significant if the quantity and quality of the resource is limited and/or the resource is unique or fragile. Further, moderate or major impacts to a resource may not be significant if the quantity of that resource is high or the quality of the resource is not unique or fragile.

**Criteria Used to Determine Significance**

1	<p>The <b>severity, duration, geographic extent, and frequency</b> of the occurrence of the impact</p> <p><b>“Severity”</b> describes the density of the potential impact, while <b>“extent”</b> describes the area where the impact will likely occur, e.g., a project may propagate ten noxious weeds on a surface area of 1 square foot. Here, the impact may be high in severity, but over a low extent. In contrast, if ten noxious weeds were distributed over ten acres, there may be low severity over a larger extent.</p> <p><b>“Duration”</b> describes the time period during which an impact may occur, while <b>“frequency”</b> describes how often the impact may occur, e.g., an operation that uses lights to mine at night may have frequent lighting impacts during one season (duration).</p>
2	The probability that the impact will occur if the proposed project occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur
3	Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts
4	The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values
5	The importance to the state and to society of each environmental resource or value that would be affected
6	Any precedent that would be set as a result of an impact of the proposed project that would commit FWP to future actions with significant impacts or a decision in principle about such future actions
7	Potential conflict with local, state, or federal laws, requirements, or formal plans

## IX. Private Property Impact Analysis (Takings)

*The 54<sup>th</sup> Montana Legislature enacted the Private Property Assessment Act, now found at § 2-10-101. The intent was to establish an orderly and consistent process by which state agencies evaluate their proposed projects under the "Takings Clauses" of the United States and Montana Constitutions. The Takings Clause of the Fifth Amendment of the United States Constitution provides: "nor shall private property be taken for public use, without just compensation." Similarly, Article II, Section 29 of the Montana Constitution provides: "Private property shall not be taken or damaged for public use without just compensation..."*

*The Private Property Assessment Act applies to proposed agency projects pertaining to land or water management or to some other environmental matter that, if adopted and enforced without due process of law and just compensation, would constitute a deprivation of private property in violation of the United States or Montana Constitutions.*

*The Montana State Attorney General's Office has developed guidelines for use by state agencies to assess the impact of a proposed agency project on private property. The assessment process includes a careful review of all issues identified in the Attorney General's guidance document (Montana Department of Justice 1997). If the use of the guidelines and checklist indicates that a proposed agency project has taking or damaging implications, the agency must prepare an impact assessment in accordance with Section 5 of the Private Property Assessment Act.*

**Table 7: Private Property Assessment (Takings)**

	Yes	No	
Is FWP regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Does the proposed regulatory action restrict the use of the regulated person's private property? If not, no further analysis is required.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Does FWP have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If so, FWP must determine if there are alternatives that would reduce, minimize, or eliminate the restriction on the use of private property, and analyze such alternatives. Have alternatives been considered and/or analyzed? If so, describe below:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>PRIVATE PROPERTY ASSESMENT ACT (PPAA)</b>			
<b>Does the Proposed Action Have Takings Implications under the PPAA?</b>	<b>Question #</b>	<b>Yes</b>	<b>No</b>
Does the project pertain to land or water management or environmental regulations affecting private property or water rights?	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action result in either a permanent or an indefinite physical occupation of private property?	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action deprive the owner of all economically viable uses of the property?	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 4a and 4b and continue with question 5)	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is there a reasonable, specific connection between the government requirement and legitimate state interest?	4a	<input type="checkbox"/>	<input type="checkbox"/>
Is the government requirement roughly proportional to the impact of the proposed use of the property?	4b	<input type="checkbox"/>	<input type="checkbox"/>

Does the action deny a fundamental attribute of ownership?	5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action have a severe impact of the value of the property?	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public general? (If the answer is NO, skip questions 7a-7c.)	7	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is the impact of government action direct, peculiar, and significant?	7a	<input type="checkbox"/>	<input type="checkbox"/>
Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?	7b	<input type="checkbox"/>	<input type="checkbox"/>
Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?	7c	<input type="checkbox"/>	<input type="checkbox"/>
<b>Does the proposed action result in taking or damaging implications?</b>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Taking or damaging implications exist if <b>YES</b> is checked in response to Question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if <b>NO</b> is checked in response to question 4a or 4b.			
If taking or damaging implications exist, the agency must comply with MCA § 2-10-105 of the PPAA, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.			
<b>Alternatives:</b> The analysis under the Private Property Assessment Act, §§ 2-10-101 through -112, MCA, indicates no impact. FWP does not plan to impose conditions that would restrict the regulated person's use of private property to constitute a taking.			

## X. Public Participation

*The level of analysis in an EA will vary with the complexity and seriousness of environmental issues associated with a proposed action. The level of public interest will also vary. FWP is responsible for adjusting public review to match these factors (ARM 12.2.433(1)). Because FWP determines the proposed action will result in limited environmental impact, and little public interest has been expressed, FWP determines the following public notice strategy will provide an appropriate level of public review:*

- *An EA is a public document and may be inspected upon request. Any person may obtain a copy of an EA by making a request to FWP. If the document is out-of-print, a copying charge may be levied (ARM 12.2.433(2)).*
- *Public notice will be served on the Montana Fish, Wildlife and Parks website at:  
<https://fwp.mt.gov/aboutfwp/public-comment-opportunities>*
- *FWP maintains a mailing list of persons interested in a particular action or type of action. FWP will notify all interested persons and distribute copies of the EA to those persons for review and comment (ARM 12.2.433(3)).*

Comments must be addressed to the FWP contact, as listed below.

○ **Where to Mail or Email Comments on the Draft EA:**

Name: BRYAN GIORDANO

Email: [bryan.giordano@mt.gov](mailto:bryan.giordano@mt.gov)

Mailing Address:

Attn: Dorvall Corner Bank Repairs and Stabilization  
 2300 Lake Elmo Drive  
 Billings, MT 59105

## XI. Recommendation for Further Environmental Analysis

<b>NO</b> further analysis is needed for the proposed action	<input checked="" type="checkbox"/>
FWP must conduct <b>EIS</b> level review for the proposed action	<input type="checkbox"/>

## XII. EA Preparation and Review

	<b>Name</b>	<b>Title</b>
<b>EA prepared by:</b>	Shannon Blackburn	Region 5 Fisheries Manager
<b>EA reviewed by:</b>	Bryan Giordano	Region 5 Fisheries Biologist

# Attachment 1

## SPA 124 Permit General Conditions

FWP.MT.GOV



THE **OUTSIDE** IS IN US ALL.

### **Stream Protection Act 124 Permit General Conditions**

1. Complete work affecting a streambed or stream bank in an expeditious manner to avoid unnecessary impacts to the stream.
2. Limit the clearing of vegetation to that which is absolutely necessary for construction of the project. Take precautions to preserve existing riparian vegetation. Salvage and reuse native vegetation where possible.
3. Install and maintain erosion control measures where appropriate to protect aquatic resources. Do not clear and grub land adjacent to streams prior to installing proper erosion and sedimentation controls. Conduct all work in a manner that minimizes turbidity and other disturbances to aquatic resources.
4. Plan temporary construction facilities to:
  - a. Minimize disturbance to stream banks, stream bank vegetation, and the streambed by locating staging or storage facilities at least 50' horizontally from the highest anticipated water level during construction;
  - b. not restrict or impede fish passage in streams; and
  - c. not restrict any flow anticipated during use.
5. Provide sediment controls for drainage from topsoil stockpiles, staging areas, access roads, channel changes, and instream excavations.
6. Isolate work zones from flowing and standing waters to prevent turbid water and sediments from being discharged into streams or other drainages that flow directly into the stream. Divert flowing waters around the work zone.
7. Do not spill or dump material into streams. Store and handle petroleum products, chemicals, cement and other deleterious materials in a manner that will prevent their entering streams.
8. Do not permit wash water from cleaning concrete-related equipment or wet concrete to enter streams.
9. Do not operate mechanized equipment in any stream or flowing water unless special authorization is obtained. If special authorization is granted, the following conditions apply:
  - a. Power-wash all equipment allowed in a stream prior to entering the stream channel.
  - b. Clean and maintain all equipment so that petroleum-based products and hydraulic fluids do not leak or spill into the waterway.
10. Reclaim streambeds and stream banks as closely as possible to their pre-disturbed condition.
11. Restore disturbed stream banks to their natural or pre-disturbed configuration to match adjacent ground contours or as specified in the project plans. Stabilize, reseed, and re-vegetate disturbed areas. Install and maintain long-term biodegradable erosion-control measures to protect these areas until adequate vegetation has been established.
12. Restore temporary access routes and any temporarily disturbed areas to original conditions, including original contours and vegetation.
13. Dispose of any excess material generated from the project above the ordinary high-water mark and in an area not classified as a wetland.