



Supplement to the Environmental Assessment and Finding of No Significant Impact

Auld-Brokaw Trail Repair and Marne Creek Bank Stabilization

City of Yankton, Yankton County, South Dakota

November 2022

Prepared by

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Prepared for

FEMA Region VIII, Disaster 4440-DR-SD, Project ID 108439

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FEMA

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SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

1.1 INTRODUCTION

The City of Yankton (Yankton), in cooperation with South Dakota Office of Emergency Management (SDOEM) have requested funding from the Federal Emergency Management Agency (FEMA) for the reconstruction of the Auld-Brokaw Maintenance and Recreation Trail System (Trail) and stabilization of the banks of Marne Creek.

In June of 2022, FEMA prepared an Environmental Assessment (EA) and a Finding of No Significant Impact (FONSI) was issued on August 3rd, 2022, for the project. This Supplemental EA is to document and transmit revisions made to the final design of the project. The design phase is complete, and construction is anticipated in November 2022. The project will address the purpose and need as described in the EA and approved in the original FONSI, both of which are incorporated here by reference. The overall project elements, location and approach are the same, but refinements in the final design have resulted in a more cost-effective approach than noted in the original EA. All original stipulations, mitigation measures and project conditions apply, except as noted below.

There is one project component that has been revised during the bid letting process due to recent changes in availability and cost of materials. Analysis by project engineers determined that the cost to install entirely field stone or native rock for the rip rap within Reach A to meet the National Park Service (NPS) Condition for the Missouri National Recreational River (MNRR) would exceed the budget of the project. An installation entirely of field stone or native rock would not be feasible for future development of the project.

The final design included substituting quarried pink quartzite for a portion of the riprap with an overlay of field stone or native rock. Installation of quarried pink quartzite reduced the quantity of field stone or native rock, thus reducing the cost of field stone or native rock installation. The revision is only applied to Reach A within Action Alternative 2.

The final revision for Reach A will use pink quartzite as the main material for riprap, covered by soil, field stone or native rock so the pink quartzite is not visible. Refer to Attachment 1 for the revised cross section. The revision allows for a cost-effective riprap installation by utilizing both types of material. The revision is an option for compliance under the NPS Conditions. Refer to Attachment 2.

1.2 BACKGROUND

The Trail and Marne Creek were severely damaged during a March 2019 blizzard and subsequent rapid snowmelt. Approximately 1.3 miles of Marne Creek have sustained damage at five locations (Reaches A-C, G and J) from recent flooding events. Damaged sections of the concrete paved Trail have collapsed into the creek along with sections of unstable bank material and slope protection. Some sections have intact, usable trail, but the unstable and eroding banks provide an ongoing threat the overall trail system and the public health and safety. The event was declared a major disaster by the President on June 7, 2019, in accordance with Robert T. Stafford Disaster Relief and Emergency Assistance Act, (P.L.) 93-288, and the application for FEMA assistance was signed on April 20, 2020. FEMA funding would be

provided through the Public Assistance (PA) grant program as part of FEMA Project 4440-DR-SD; PW #330, GM #108439.

The mission of the PA Program is to aid State, local, or Tribal governments and certain types of private nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the President. The PA Program provides grant assistance for debris removal, emergency protective measures, and the restoration of disaster-damaged, publicly owned facilities and specific facilities of certain private nonprofit organizations. The PA Program also encourages protection of damaged facilities from future incidents by providing hazard mitigation measures.

As part of this NEPA review and in accordance with FEMA implementing procedures, such as 44 CFR Part 9 and FEMA Directive 108-1, the EA addressed requirements of other applicable environmental laws and executive orders, including but not limited to Section 7 of the ESA, Section 106 of the NHPA, EO 11988 - Floodplain Management, EO 11990 - Protection of Wetlands, and EO 12898 – Environmental Justice.

1.3 FONSI BACKGROUND INFORMATION

The purpose and of the project remains the same.

The purpose and need the project is described in Section 1.3 of the Final EA. The purpose of the proposed action is to repair disaster-damaged infrastructure and to reduce the potential for similar damage in the future. The action is needed to restore and protect life and property due to ongoing erosion and destabilization of Marne Creek.

The need of the project remains the same.

Based on the damage that occurred from the March 2019 event and continued risk of erosion caused by Marne Creek, Yankton, SDOEM, and FEMA have identified the need to perform bank stabilization along the banks of Marne Creek along Reaches A-C, G and J. In addition to stabilizing the banks of Marne Creek, portions of the Trail would be reconstructed. This Trail provides access to the Yankton's property for maintenance and a recreational opportunity for the public.

The project elements, location, and approach remains the same.

The severity of damage varies by Reach, with the southern Reaches that are at the confluence of Marne Creek with the Missouri River sustaining the most damage. Information was gathered for each Reach, including topographic survey, wetland delineation, cultural resources survey, and any hydraulic information available. A range of alternatives for bank stabilization were reviewed. Hydrologic analysis was utilized to determine the alternative that would best stabilize the banks of Marne Creek at each Reach.

1.4 REVIEW OF SPECIFIC PROJECT DESCRIPTIONS AND COMPONENTS

The project descriptions listed in the FONSI dated August 3rd, 2022, remain the same. With the exclusion of the material proposed for riprap in Reach A.

Riprap entirely composed of field stone or native rock was proposed in Reach A to comply with the NPS MNRR Conditions. This condition had been coordinated with NPS during the EA process. During the bid letting, the cost of this material would make the project cost prohibited. Therefore, the riprap materials were revised to include pink quartzite that is covered by soil, field stone or native rock so the quartzite is not visible. The NPS has been consulted regarding the revision and concurred on October 26, 2022, that the proposed revision still meets the MNRR Conditions. Refer to Attachment 2. The United States Army Corps of Engineers (USACE) has also been notified of the revision and will use the provided information during the permitting process. Refer to Attachment 3 for the coordination that occurred. Details for each item are displayed in the table below:

Information / Assumption in EA	Final Design	Impact / Difference
Reach A		
<p>After regrading, riprap would be placed below the bottom of the channel to the 2-year water surface level; woody riparian plantings would be incorporated within the riprap. Riprap extending from the 2-year water surface to the 10-year water surface would be overlaid with 12-14 inches of soil and vegetation plantings, effectively obscuring the riprap located below the visible vegetated surface in this area. To better support the establishment of plantings, a granular filler would be used to fill in the voids of the riprap and strengthen root growth. All plant species grown between the 2-year water surface and 10-year water surface would be native to the Yankton area. Field stone or native rock would be utilized for this reach to meet Section 7a requirements of the Missouri National Recreational River (MNRR).</p>	<p>The final design included installing pink quartzite and would be covered by soil, field stone or native rock. The revision allows for a cost-effective riprap installation by utilizing both types of material. The revision is under stipulation from the NPS that no quarried pink quartzite would be visible from the surface.</p>	<p>The difference included substituting quantities of field stone or native rock with pink quartzite. Installation of pink quartzite reduced the quantity of field stone or native rock, thus reducing the cost of field stone or native rock installation.</p>
Reach B		
<p>A small segment of the eastern bank in this reach requires stabilization that extends into private property owned by a business. The area would likely require a temporary easement of the private property, which would be graded and returned to a vegetated area. Traditional riprap with the incorporation of bioengineering features was proposed due to the high energy of the flow in this Reach. The bank would be regraded to remove the steep angles, creating a more gradual bank slope. The Trail is located on the west side of Marne Creek. Approximately 1,753' of Trail would be realigned and installed and approximately 1,635' of Trail would be removed.</p>	<p>No Change</p>	<p>No Change</p>

Information / Assumption in EA	Final Design	Impact / Difference
Reach C		
<p>At the specific location of C-UL1, TRM would be utilized since the force of the stream (known as shear stress) at this location was less, allowing this more cost-efficient method to be incorporated. The remaining locations of the Reach would utilize the riprap with bioengineering features similar to Reach B. At the specific location of C-UR1, a residence located directly on the bank of the creek at 601 East 8th Street has been acquired under the Hazard Mitigation Grant Program (HMGP) in a previous FEMA action (DR-4440-SD, HMGP Project 72-R).</p>	No Change	No Change
Reach G		
<p>Within this Reach, the west bank is along Morgen Park and the east bank is along the undeveloped private property of Marne Creek. The locations of G-UL1, G-UR1, and G-UL2 would implement the riprap with bioengineering features similar to Reaches A, B, and C. At location GUL-1, a small portion of the Trail would be relocated. The locations of G-UL3 and G-UL4 would implement gabions. Although gabions are more costly than TRM and the riprap bank stabilization techniques, existing gabions are present: these locations are ideal to tie additional gabions into the existing to strengthen the banks. This would utilize the gabions that made it through the event, leveraging previous infrastructure put into place.</p>	No Change	No Change
Reach J		
<p>Reach J is adjacent to West 23rd Street and a few businesses, including the Yankton Mall. Riprap with bioengineering features would be installed on the north and south side of Marne Creek, similar to Reaches A, B, C, and G.</p>	No Change	No Change

1.5 GENERAL CONDITIONS

The general conditions listed in the FONSI are still valid. General condition 46, allows Reach A to utilize pink quartzite providing that soil, field stone or native rock cover the quartzite, so it is not visible. The stipulation meets Section 7a requirements of the MNRR. Refer to Attachment 2. During implementation of the project the following conditions must be adhered to but not limited to:

1. Obtain a SDDANR stormwater construction permit and complete a SWPPP.
2. A Section 404 permit would be obtained and required wetland and stream mitigation would be considered and identified during the Section 404 permitting process.
3. Obtain a Section 7(a) determination from NPS.

4. During construction BMPs would need to control erosion and prevent sedimentation to ensure the 30-day average total suspended solids criterion of 90 mg/L and the daily maximum total suspended solids criterion of 158 mg/L are not violated.
5. Obtain a no rise determination and follow any stipulations within the floodplain permit.
6. Project activities (including heavy equipment, pile driving, etc.) operating on the shorelines or banks of the Missouri River, or from barges or temporary work decks within the floodplain, must remain a minimum of 0.5 mile from occupied piping plover nesting habitat from April 1 through August 31.
7. No blasting may be conducted within 1 mile (1.6 km) of occupied piping plover nesting habitat from April 1 through August 31.
8. Avoid unnecessary ground disturbance in riparian and upland habitats and minimize work in the water to the extent possible.
9. Limit removal of existing vegetation and revegetate with native plant species.
10. Implement appropriate best management practices to control, erosion, sedimentation, invasive species, contamination, fuel spills, etc.
11. Obtain and comply with all required federal, tribal, state, and local permits, and project approvals (e.g., FEMA, USACE, USFWS, SDDANR, etc.)
12. The project area shall be kept clean and free from discarded material.
13. Above-ground fuel storage tanks repaired, replaced, or installed in the flood plains of rivers that may be inhabited by pallid sturgeon shall be diked, curbed or other suitable means provided to prevent the spread of liquids in case of leaking in the tanks or piping. Such dike, curbed area or device shall have a capacity at least equal in volume to that of the tanks plus 10 percent.
14. Construction activities within the Missouri River must be completely separated from the active channel by use of a temporary water barrier or cofferdam.
15. Sheet pile for temporary water barriers and cofferdams shall be installed using vibratory technology and in-place/initially de-watered prior to ice up if winter work is planned.
16. Dewatering of the workspace (within the temporary water barrier/cofferdam must be accomplished as follows:
17. Water in the chamber will be gradually released to allow visual inspection to determine if fish have been stranded in the workspace. In the unlikely event that a pallid sturgeon or other fish are present, the downstream sheet pile should be removed to allow the pallid sturgeon and/or other to escape naturally, without handling. The sheet pile may be reinstalled (vibrated back into place) once the chamber has been flushed and cleared.
18. Unrestricted fish passage (in the active channel of the Missouri River) must be provided at all times around the workspaces.
19. For repairs to existing permanent road crossings, use of a span bridge with fewer in-water piers are more favorable towards enhancing and promoting more natural river channel processes.
20. Intake screens with a mesh opening of $\frac{1}{4}$ inch or less shall be installed, inspected annually, and maintained.
21. Johnson intake screens: the maximum width between wires shall not exceed $\frac{1}{8}$ in.
22. Water velocity at the intake screen shall not exceed $\frac{1}{2}$ foot per second.
23. Only submerged intakes shall be used in all other river segment that may be inhabited by adult and juvenile pallid sturgeon. Submerged intakes shall be installed in accordance with the following criteria.

24. At the beginning of the irrigation season, the intake shall be placed at least 20 vertical feet below the existing water level.
25. The intake shall be elevated 2 to 4 feet off the bottom.
26. If the 20-foot depth is not attainable, then the intake velocity shall be limited to ¼ foot per second, with intake placed at maximum practicable attainable depth.
27. Pumping plant sound levels shall not exceed 75 dB at 50 feet.
28. Locate access routes, staging areas, etc. within previously disturbed areas.
29. Avoid disturbing or burying any existing riparian (streamside) habitat.
30. Restore any disturbed areas using native riparian plant species to prevent erosion.
31. Integrate native vegetation into rip rap slope protection.
32. Avoid fragmenting or isolating riparian corridors or wetlands.
33. Disturbance to riparian and wetland areas should be kept to absolute minimum.
34. If riparian vegetation is lost it should be quantified and replaced on site. Seeding of indigenous species should be accomplished immediately after construction to reduce sediment and erosion.
35. A site-specific sediment and erosion control plan should be part of the project.
36. A post construction erosion control plan should be implemented in order to provide interim control prior to re-establishing permanent vegetative cover on the disturbed site.
37. Stream bottoms impacted by construction activities should be restored to pre-project, it should not be conducted during fish spawning periods. Most spawning occurs April, May, and June.
38. False Map Turtles nest May and June, with eggs hatching two months later. To avoid impacts to False Map Turtles, recommend completing portion of the project that is immediately adjacent to the Missouri River confluence outside of the nesting season, which typically runs May through August.
39. Schedule vegetation removal, trimming, and grading of areas that are potential habitat for migratory birds outside of the peak bird breeding season to the maximum extent practicable. Cutting or clearing of trees or shrubs should occur between August 16th and April 30th to remove potential nesting surfaces prior to project commencement. If the construction timeframe changes and construction would be proposed within the nesting season of migratory birds, surveys for migratory birds would occur in suitable areas that have not been mowed or cleared prior to April 30th to determine if there are active nests. If active migratory bird nests are found, construction would cease until the birds hatch and fledge.
40. A survey for eagles and their nests should be conducted within 660 feet of the work zone approximately one month before construction is scheduled to start. If an eagle nest is identified, appropriate conservation measures based on the National Bald Eagle Management Guidelines would be implemented.
41. Unusable equipment, debris, and materials shall be disposed of in an approved manner and location.
42. Hazardous materials must be appropriately separated and disposed of in an approved disposal site or landfill.
43. Any petroleum products or hazardous materials discovered, generated, or used during implementation of the Project shall be disposed of and handled by the Project applicant in accordance with applicable local, state, and federal regulations.

44. Trail detour routes, if required, would be signed and well-marked to allow for continued Trail usage during construction. Trail closure areas would also be signed and barricaded to prevent the public from accessing an active construction site.
45. Utility lines would be located and marked prior to construction.
46. In Reach A, quarried pink quartzite would be utilized for riprap providing the quartzite be covered by 12-14 inches of topsoil and field stone or native rock.
47. In Reach A, from 2-year surface water line and 10-year surface water line riprap would be covered with minimum of 12-14 inches of soil.
48. In Reach A, native species of grass, trees, or shrubs would be planted between the 10-year surface water line to the 2-year surface water line.

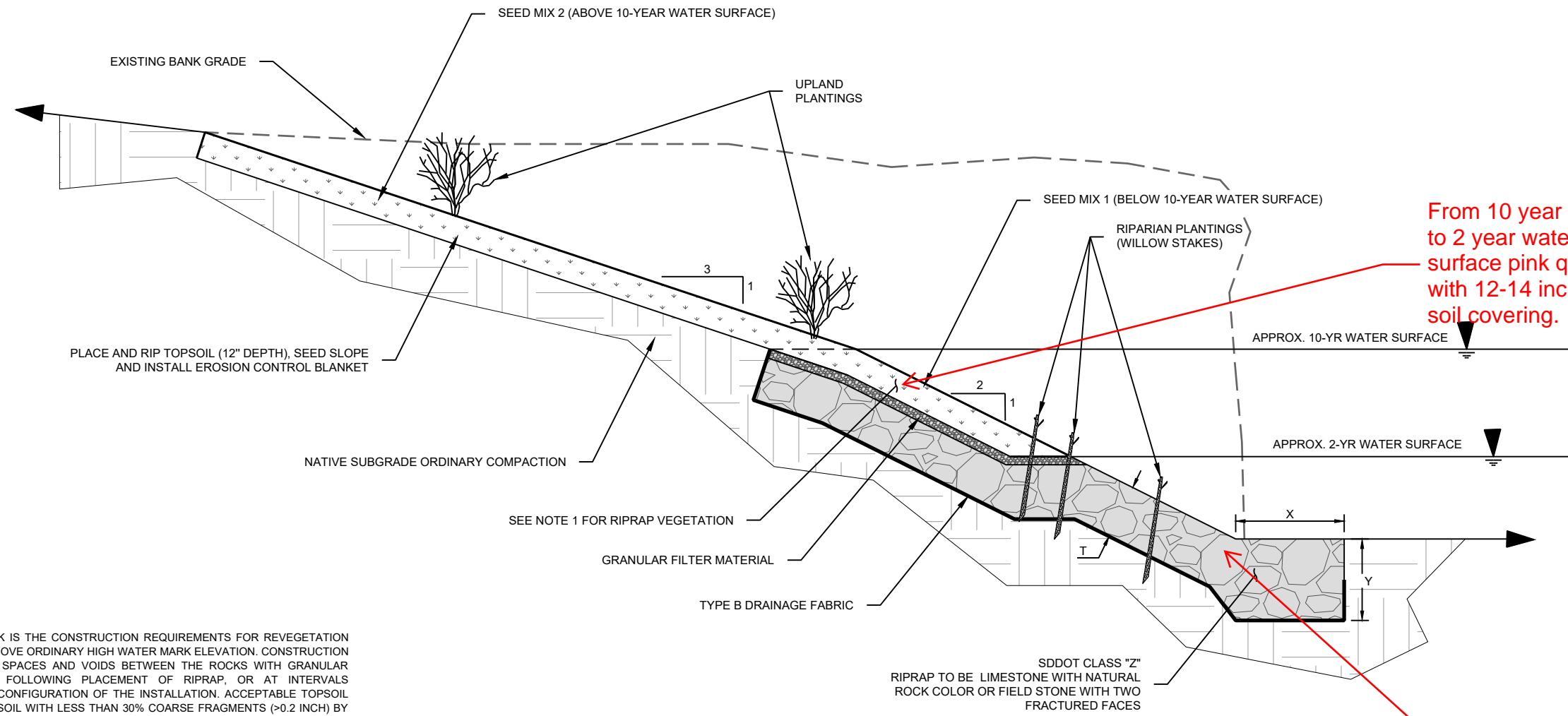
1.6 SUMMARY OF FINAL DESIGN COMPARISON

The project purpose, need, location and approach all remain the same when comparing to the information in the EA to the final design. The project components listed in the FONSI are the same and their impacts are either the same or slightly amended and have approved through the agency requesting the general condition.

The final design process of installing field stone or native rock as riprap was determined to be costly and not feasible for the project. The substitution of pink quartzite reduced the quantity of field stone or native rock, thus reducing the cost of materials. The commitment meets Section 7a requirements of the MNRR.

Based upon the information contained in the Supplemental Environmental Assessment and the referenced EA completed in accordance with the National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA) and tribal considerations, Endangered Species Act (ESA); Executive Orders (EO) addressing Floodplains (EO11988), Wetlands (EO 11990), and Environmental Justice (EO 12898); and agency guidance for implementing NEPA (FEMA Directive 108-1 and Instruction 108-01-1), it is found that the Proposed Action, with the prescribed mitigation measures and stipulations, would have no significant adverse impact on the human environment and the initial Finding of No Significant Impact (FONSI) applies.

Attachment 1 - Cross Sections



From 10 year surface to 2 year water surface pink quartzite with 12-14 inches of soil covering.

From 2 year water surface to bottom of channel, pink quartzite covered by field rock or native stone so the quartzite is not visible.

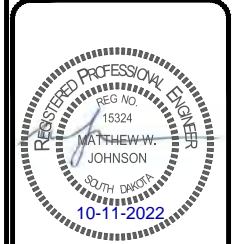
NOTE:
 1. RIPRAP REVEGETATION: THIS WORK IS THE CONSTRUCTION REQUIREMENTS FOR REVEGETATION MATERIAL ON RIPRAP SURFACES ABOVE ORDINARY HIGH WATER MARK ELEVATION. CONSTRUCTION REQUIREMENTS ARE TO FILL THE SPACES AND VOIDS BETWEEN THE ROCKS WITH GRANULAR FILTER MATERIAL AND TOPSOIL FOLLOWING PLACEMENT OF RIPRAP. OR AT INTERVALS APPROPRIATE FOR THE SIZE AND CONFIGURATION OF THE INSTALLATION. ACCEPTABLE TOPSOIL INCLUDES LOCALLY OBTAINED TOPSOIL WITH LESS THAN 30% COARSE FRAGMENTS (>0.2 INCH) BY WEIGHT. CONTRACTOR TO PLACE A SUFFICIENT AMOUNT OF GRANULAR FILTER MATERIAL OVER THE RIPRAP, SO THAT AFTER SETTLING, THE LEVEL OF GRANULAR FILTER MATERIAL COMES TO THE VERY TOP OF THE ROCK. PLACE THE TOPSOIL TO A 12-INCH DEPTH OVER THE GRANULAR FILTER MATERIAL. PLACE MATERIAL IN A MANNER THAT CREATES A SMOOTH, UNIFORM SURFACE FOR SEEDING AND PLACEMENT OF THE EROSION CONTROL BLANKET/MULCH. CONTRACTOR TO HAND BROADCAST SEED THE SOIL IMMEDIATELY AFTER PLACEMENT, REGARDLESS OF TIME OF YEAR, WITH THE SEED MIXTURE AND RATES SPECIFIED BY THE ENGINEER. SCARIFY THE SOIL IMMEDIATELY PRIOR TO AND FOLLOWING SEEDING TO INCORPORATE SEED TO A DEPTH OF 1/2 INCH INTO THE SOIL.

STREAM BANK TREATMENT TYPICAL
NOT TO SCALE

Reach A							
Riprap Design							
Site	Location	Station Start	Station End	SPECIAL SDDOT RIPRAP CLASS "Z"	"T" Thickness (ft)	"X" Thickness (ft)	"Y" Thickness (ft)
A-UR 1-3	Outside Bend	0+00.00	5+00.00	C	3	3.5	3.5
A-UR 1-3	Outside Bend	5+00.00	7+50.00	D	3.5	5	5
A-UR 1-3	Straight	7+50.00	9+50.00	C	3	3.5	3.5
A-UR 1-3	Inside Bend	9+50.00	12+50.00	B	2	2	2
A-UR 1-3	Inside Bend	12+50.00	15+00.00	C	3	3.5	3.5
A-UR 1-3	Outside Bend	15+00.00	17+50.00	C	3	3.5	3.5
A-UR 1-3	Inside Bend	17+50.00	19+75.00	C	3	3.5	3.5
A-UL3	Straight	15+50.00	16+50.00	C	3	3.5	3.5
A-UL3	Outside Bend	16+50.00	19+00.00	D	3.5	5	5



PROJECT / SHEET TITLE:		MARNE CREEK BANK STABILIZATION PROJECT	
DESCRIPTION:		STREAM BANK TREATMENT SPECIAL YANKTON, SOUTH DAKOTA	
REV.	DATE		



JOB No.:	04205 - MARNE CREEK
DATE:	10/11/2022
DESIGNED BY:	MJ
CHECKED BY:	PR
DRAWN BY:	TW

SHEET No.: (A)C-1

N:\Projects\04205_Marne_Creek\Bozeman Working\CAD\Sheets Reach_A\04205_MarneCreek-A-DETAILS.dwg:10/11/2022 12:04 PM

Attachment 2 - MNRR Conditions

Missouri National Recreational River

Bank Stabilization Information & Standard Permit Conditions

The following conditions are designed to protect the values for which the Missouri National Recreational River was included in the National Wild and Scenic River system. These conditions apply to activities authorized under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. All other federal and state regulations and requirements shall apply to the proposed activity.

The National Park Service (NPS) reviews all US Army Corp of Engineers permit applications within the 59- and 39- mile segments of the Missouri National Recreational River. The NPS is required to review water resource projects, such as bank stabilization, for their impact to the Outstandingly Remarkable Values (ORVs) for which Congress designated segments of the Missouri and Niobrara as Wild and Scenic Rivers. Each project is analyzed for its impacts to the following ORVs:

- Free-flow
- Scenic
- Recreational
- Fish and Wildlife
- Cultural and Ethnographic Resources
- Historic Resources
- Scientific

The NPS reviews each proposed project individually because local site conditions within the designated river reaches vary greatly. Adjacent stabilization, channel conditions, and the potential of the project to cause downstream erosion are all considered.

The NPS promotes the use of ‘bioengineering’ techniques utilizing native materials for stream bank protection. The NPS encourages those considering a bank stabilization project to request a site visit from our staff **prior to submitting** a permit application to the US Army Corps of Engineers to discuss alternatives and expedite the process. The US Army Corps of Engineers website has more information on the permit application process at:

http://www.usace.army.mil/CECW/Pages/reg_permit.aspx

STABILIZATION

I. BIOENGINEERING TECHNIQUES: Permit Required

Refers to the use of biodegradable material on the active streambank to prevent lateral erosion.

1. Toe protection may include tree revetments, live cribwalls, root wads, live siltation, trench pack, brush mattress, dead fascine, vegetated geogrid, coconut logs, jute-mat logs, or native fieldstone.
2. Plant materials should be native to this area. Native plants are adapted to the soils and weather of this area and should germinate and thrive.
3. All construction materials (e.g., erosion control material, stakes and anchoring systems) shall be biodegradable.
4. A Soil Bioengineering Guide (this document provides information on bioengineering techniques including materials and practices):
http://www.fs.fed.us/eng/php/library_card.php?p_num=FS-683P

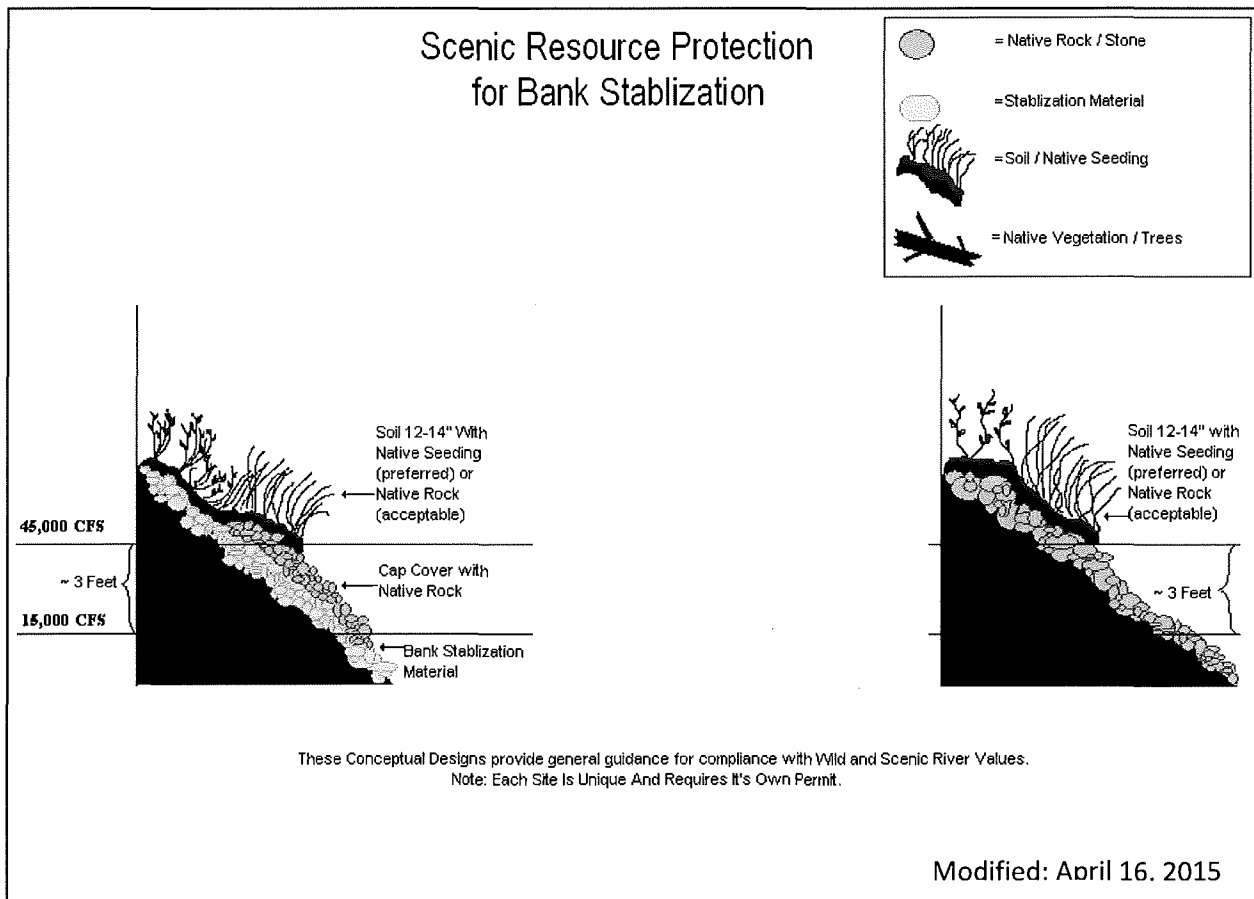
II. RIPRAP REVETMENT: Permit Required

Refers to the placement of riprap material on the active streambank to prevent lateral erosion.

1. Riprap shall consist of or be covered by fieldstone or native rock. Fieldstone is typically found in glacial till or outwash deposits and may be available from local gravel pits. Native rock is defined as any material the river would come into contact with during its natural migration within its floodplain, e.g. rock found along or within the bluffs of the river. The native rock must come from sources within or immediately adjacent to the Missouri National Recreational River. Quarried pink quartzite shall be covered with fieldstone, native rock, and a minimum of 12-14 inches of soil from the top of the structure down to the ordinary high water line and covered with fieldstone or native rock from the ordinary high water line (about 45,000 cfs level) to the low, winter flow line (about 15,000 cfs level). The soil requirement allows for the settling of soil into the rocks while still providing an adequate seed bed. A fieldstone or native rock cover is required in the water fluctuation zone (15,000 - 45,000 cfs) because wave action often washes away the soil exposing the underlying material. These practices will maintain the river's scenic value during normal river flows. Refer to conceptual design drawing below.
2. All riprap materials used shall be clean and free of concrete, metal, plaster, or other non-native materials.
3. Streambank revetment slope shall be designed to provide stability to the fieldstone; estimated to be one foot in height (rise) over a one-foot length (run) or flatter. Exceptions may apply.
4. The soil shall be seeded with a mixture of native grasses and wildflower species and preferably, incorporate native trees and shrubs. Annual rye grass or other cover crop is

recommended to reduce soil erosion and enhance the success of the native plantings. Non-native species such as smooth brome and Kentucky bluegrass shall not be used for this purpose.

5. Soil cover and plantings shall be completed immediately upon completion of revetment.
6. Clearing of on-shore and streambank vegetation shall be limited to that which is absolutely necessary for revetment construction.
7. Recommend that any trees or woody vegetation that is removed during rip-rap installation be replaced with native species and increased in quantity.



III. BURIED REVETMENT-Permit May Be Required

Refers to the placement of material in a trench excavated near the streambank. The purpose of this structure is to allow the streambank to erode to the buried revetment which then becomes the stabilized bank line.

1. Conditions for the riprap revetment apply to this practice.
2. The bottom of the trench should be located below the elevation of the ordinary high water mark to provide sufficient toe-of-slope protection.
3. Once the buried revetment becomes the newly stabilized bank, the permittee may need to re-seed to ensure that native vegetation cover exists from the top of the structure down to the ordinary high water mark.

IV. HARD POINTS: Permit Required

Refers to a wide range of deflective structures designed to force the river current to a different location. This practice is generally prohibited but may be considered on a case by case basis.

V. WINDROW REVETMENT: Inappropriate Activity

Refers to the placement of material on the streambank. The purpose of this structure is to allow the streambank to erode and launch the piled materials into the river with the intent of stabilizing the bank. This practice is inappropriate and generally ineffective.

BOAT DOCKS

Boat Dock Required Conditions

1. No permanent, habitable, or other structure will be permitted on boat docks or below the ordinary high water mark that will diminish the scenic or recreational values of the MNRR.
2. Floatation systems for boat docks must be comprised of clean (inside and out) sealed containers in sound condition.
3. Damaged docks must be repaired within 15 days or removed from the river to a location far enough away from the upper bank that they will not likely fall in due to bank erosion.
4. Material used for construction (metal, wood, coatings, etc.) must be free from pollutants in toxic amounts (see Section 307 of the Clean Water Act). The following website offers information on treated wood options and alternatives to wood construction materials:
<http://www.epa.gov/oppad001/reregistration/cca/alternativestocca.htm>.
5. Unless specific circumstances justify it, a dock shall not project more than 25 feet into the river to ensure that the scenic or recreational values of the MNRR are maintained.
6. The permittee shall take all reasonable and necessary precautions to ensure boater safety and prevent interference with general navigation.
7. All dredge or fill activities below the ordinary high water mark require a Clean Water Act Section 404 permit.

Attachment 3 - NPS and USACE Coordination

From: [Becky Baker](#)
To: [Thomas Docken](#)
Subject: FW: [EXTERNAL] Marne Creek- Confirmation of NPS Condition
Date: Tuesday, November 1, 2022 1:05:55 PM
Attachments: [image005.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)
[image010.png](#)

From: Becky Baker
Sent: Thursday, October 27, 2022 8:14 AM
To: Campbell, Carolyn A <Carolyn_Campbell@nps.gov>; Dimmick, Curt R <Curt_Dimmick@nps.gov>
Cc: Kent Johnson <kentj@bannerassociates.com>
Subject: RE: [EXTERNAL] Marne Creek- Confirmation of NPS Condition

Thank you Carolyn, I have also communicated this to USACE and will send on your response. Much appreciated!

From: Campbell, Carolyn A <Carolyn_Campbell@nps.gov>
Sent: Wednesday, October 26, 2022 1:37 PM
To: Becky Baker <beckyb@bannerassociates.com>; Dimmick, Curt R <Curt_Dimmick@nps.gov>
Cc: Kent Johnson <kentj@bannerassociates.com>
Subject: Re: [EXTERNAL] Marne Creek- Confirmation of NPS Condition

Hey Becky,

Thank you for sending the email with the diagrams. I confirmed with my supervisor and the regional expert that the revised approach will work for us.

If you can make sure the stipulation is clear about no pink quartzite being visible and every effort should be made to ensure this in addendum like you have in the drawings and the explanation, then we are good with proceeding.

Thank you again!

Carolyn Campbell

Missouri National Recreational River

Science and Resource Management Program Manager

508 East 2nd Street
Yankton, SD 57078

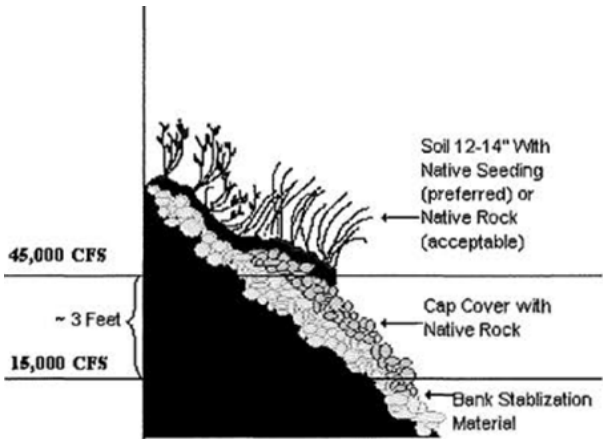
Office Phone: 605.665.0209 ext 30

From: Becky Baker <beckyb@bannerassociates.com>
Sent: Tuesday, October 25, 2022 4:19 PM
To: Campbell, Carolyn A <Carolyn_Campbell@nps.gov>
Cc: Kent Johnson <kentj@bannerassociates.com>
Subject: [EXTERNAL] Marne Creek- Confirmation of NPS Condition

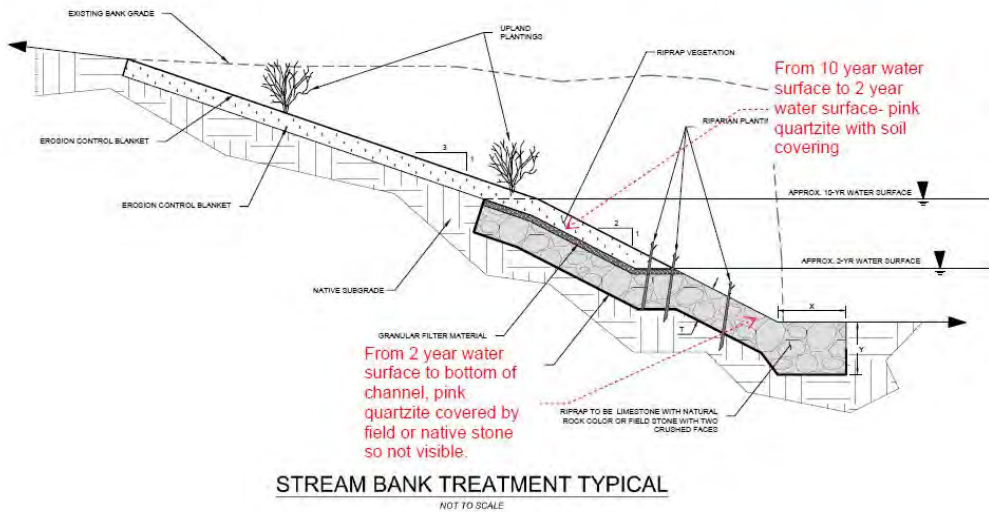
This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Carolyn,

Thanks for the discussion. As I mentioned, our original intent was to utilize native and field stone for the riprap in Reach A. We are finding costs for native and field stone to be high. So looking for ways to meet commitments and still be able to complete the project. In the NPS conditions, it notes quarried pink quartzite shall be covered with fieldstone and native rock and a minimum of 12-14 inches of soil. With the following diagram:



We are proposing to follow this and here is a marked up cross section. We note from 10 year to 2 year, it would be pink quartzite covered by soil. From 2 year to bottom of channel, pink quartzite covered by field or native stone. Both coverings would be thick enough so the pink quartzite could not be visible.



Could you please confirm if this revised approach would be acceptable to meet the NPS conditions? As I mentioned, if acceptable, we are going to issue an addendum on Friday. Bid is due next week so we want to see if we can get more cost effective bids to be able to have the project proceed. Please do not hesitate if you need further information.

Kent- I sent this out so Carolyn could coordinate internally before I could get a chance to discuss with you. Please add to this to clarify if needed.

Thanks!

Becky Baker | Environmental Department Head



Banner Associates, Inc.
 Sioux Falls, SD
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From: [Becky Baker](#)
To: [Thomas Docken](#)
Subject: FW: Marne Creek- Confirmation of NPS Condition
Date: Tuesday, November 1, 2022 1:07:31 PM
Attachments: [image005.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)
[image010.png](#)

From: Juhas, Catherine D CIV USARMY CENWO (USA) <Catherine.D.Juhas@usace.army.mil>
Sent: Thursday, October 27, 2022 9:01 AM
To: Becky Baker <beckyb@bannerassociates.com>
Cc: Kent Johnson <kentj@bannerassociates.com>; Leslie Murphy <lesliem@bannerassociates.com>
Subject: RE: Marne Creek- Confirmation of NPS Condition

Good Morning Becky,

Thank you for the information. I also received your email with the response from NPS. I'll add this information to the file and will use it moving forward with the permit process.

Thanks,

Cathy Juhas
U.S. Army Corps of Engineers
South Dakota Regulatory Office
28563 Powerhouse Road, Room 118
Pierre, South Dakota 57501

From: Becky Baker <beckyb@bannerassociates.com>
Sent: Wednesday, October 26, 2022 9:19 AM
To: Juhas, Catherine D CIV USARMY CENWO (USA) <Catherine.D.Juhas@usace.army.mil>
Cc: Kent Johnson <kentj@bannerassociates.com>; Leslie Murphy <lesliem@bannerassociates.com>
Subject: [URL Verdict: Neutral][Non-DoD Source] FW: Marne Creek- Confirmation of NPS Condition

Good morning,

Sorry one more thing popped up this week. The project is going into bid and initial feedback from contractors is that the price of fieldstone or native stone will be very high (likely \$7 million, with a overall project budget of \$3 million). So we are looking at the NPS conditions and reworking our riprap plan a bit. We are proposing to follow the stipulation in the conditions that notes the use of pink quartzite with a overlay of fieldstone or native rock. Please see my email below and the attached.

This would require additional fill deeper to stabilize the stream. This would not affect our fill calculations or impact numbers, but would the quantities.

So I believe if we made this change, to make sure we have all in line:

- We need NPS response, I will end that once I get it. I did talk with Carolyn and she did not see an issue.
- We can provide new quantity numbers.
- I will also be letting FEMA know, the condition was within the EA so I don't believe it will change anything.

Am I missing anything? Sorry I know you are very busy, I hate to ask one more thing. By doing this change though we might be able to keep the project on course and closer to the anticipated budget. So many challenges these days but good news is we can pivot and figure it out .

Thanks!

Becky Baker

From: Becky Baker

Sent: Tuesday, October 25, 2022 4:19 PM

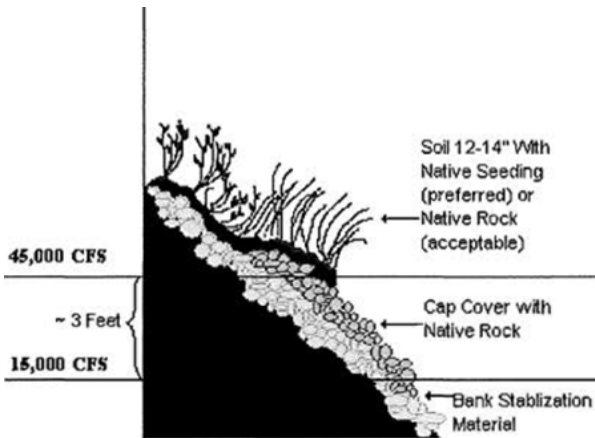
To: Campbell, Carolyn A <Carolyn_Campbell@nps.gov>

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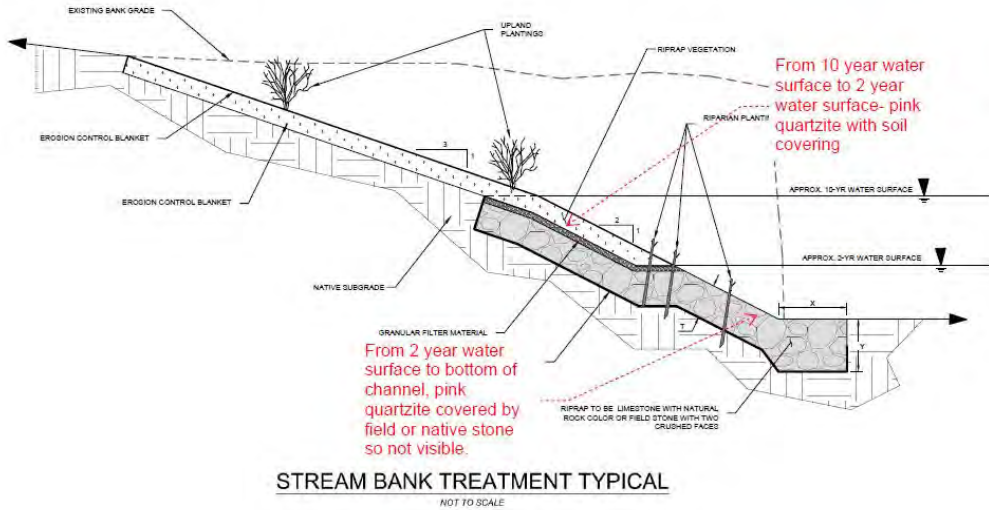
Subject: Marne Creek- Confirmation of NPS Condition

Carolyn,

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Becky Baker | Environmental Department Head



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thereto. Thank You.

Attachment 4 - Finding of No Significant Impact



FEMA

FINDING OF NO SIGNIFICANT IMPACT

AULD-BROKAW TRAIL REPAIR AND MARNE CREEK BANK STABILIZATION PROJECT

YANKTON, SOUTH DAKOTA

FEMA PROJECT 444-DR-SD PW#330 GM#108439

The City of Yankton, the grant recipient, submitted to FEMA an application under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, (P.L.) 93-288. The application for FEMA assistance was signed on April 20, 2020. FEMA funding will be provided through the Public Assistance (PA) grant program as part of FEMA Project 4440-DR-SD; PW #330, GM #108439. An Environmental Assessment (EA) was prepared to evaluate a bank stabilization and trail restoration project at various locations along Marne Creek in Yankton, South Dakota. The EA process complied with general provisions of the National Environmental Policy Act (NEPA), other Federal laws, regulations, and Executive Orders, and FEMA policies for compliance with those laws and regulations, including 44 CFR Parts 9 and FEMA Directive 108-1 & Instruction 108-1-1.

The proposed action would repair disaster-damaged infrastructure and reduce the potential for similar damage in the future. Based on the damage that occurred from a March 2019 event and continued risk of erosion caused by Marne Creek, Yankton, SDOEM, and FEMA have identified the need to perform bank stabilization along the banks of Marne Creek along Reaches A-C, G and J. In addition to stabilizing the banks of Marne Creek, portions of the Trail would be reconstructed. This Trail provides access to Yankton's property for maintenance and a recreational opportunity for the public.

Two alternatives were considered in the EA; the No Action alternative and the Proposed Action. The No Action Alternative would not repair the damage along the banks of Marne Creek or reconstruct the Trail. The No Action Alternative would not meet the needs of the Project and would allow for Marne Creek to continue to erode and damage additional public property and private property. The Proposed Action would repair the banks of Marne Creek and remove, realign, or rebuild sections of the Trail. The Proposed Action would incorporate bank stabilization methods including riprap, gabion baskets, and turf reinforcement mat. Regrading and sloping of bank slopes and bioengineering techniques would also be incorporated to allow for a more natural appearance.

ENVIRONMENTAL IMPACT EVALUATION

The EA was prepared pursuant to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321-4347 (2000), as implemented by the regulations promulgated by the President's Council on Environmental Quality (40 Code of Federal Regulations [C.F.R.] 30 §§ 1500-1508).

The Proposed Action, as described in the EA, would not result in any significant adverse impacts on the human environment. The Proposed Action is anticipated to have long-term beneficial effects on the following resources: soils and geology, water resources and water quality, terrestrial and aquatic environment, wetlands, migratory birds, zoning and land use, visual resources, environmental justice communities, and safety and security. Based on a preliminary screening of resources and the project's geographic location, the EA found that the following resources were not present in the project area and did not require a detailed assessment: coastal zone management and coastal barrier management.

During the construction period for the project, short-term impacts are anticipated on soils and geology, water resources and water quality, air quality, terrestrial and aquatic environment, wetlands, visual resources, and public services and utilities. All potential short-term impacts require conditions to avoid, minimize, and mitigate impacts. With the implementation of these conditions, none of the potential impacts will be significant.

MITIGATION COMMITMENTS AND PROJECT CONDITIONS

The recipient is responsible for obtaining all required federal, state, and local permits and clearances. While a good faith effort was made to identify all necessary permits for this EA, the following list may not include every approval or permit required for this project. Before, and no later than, submission of a project closeout package, the subrecipient will provide FEMA with a copy of the required permit(s) from all pertinent regulatory agencies. Additionally, FEMA will require the recipient to adhere to the following conditions during project implementation. Failure to comply with grant conditions may jeopardize federal funds.

GENERAL CONDITIONS

During implementation of the proposed project, the recipient (applicant) will adhere to the following General Conditions including, but not limited to:

- Obtain a SDDANR stormwater construction permit and complete a SWPPP.
- A Section 404 permit would be obtained and required wetland and stream mitigation would be considered and identified during the Section 404 permitting process.
- Obtain a Section 7(a) determination from NPS
- During construction BMPs would need to control erosion and prevent sedimentation to ensure the 30-day average total suspended solids criterion of 90 mg/L and the daily maximum total suspended solids criterion of 158 mg/L are not violated.
- Obtain a no rise determination and follow any stipulations within the floodplain permit.
- Project activities (including heavy equipment, pile driving, etc.) operating on the shorelines or banks of the Missouri River, or from barges or temporary work decks within the floodplain, must remain a minimum of 0.5 mile from occupied piping plover nesting habitat from April 1 through August 31.
- No blasting may be conducted within 1 mile (1.6 km) of occupied piping plover nesting habitat from April 1 through August 31.
- Avoid unnecessary ground disturbance in riparian and upland habitats and minimize work in the water to the extent possible.
- Limit removal of existing vegetation and revegetate with native plant species.
- Implement appropriate best management practices to control, erosion, sedimentation, invasive species, contamination, fuel spills, etc.
- Obtain and comply with all required federal, tribal, state, and local permits, and project approvals (e.g., FEMA, USACE, USFWS, SDDANR, etc.)
- The project area shall be kept clean and free from discarded material.
- Above-ground fuel storage tanks repaired, replaced, or installed in the flood plains of rivers that may be inhabited by pallid sturgeon shall be diked, curbed or other suitable means provided to prevent the spread of liquids in case of leaking in the tanks or piping. Such dike, curbed area or device shall have a capacity at least equal in volume to that of the tanks plus 10 percent.

- Construction activities within the Missouri River must be completely separated from the active channel by use of a temporary water barrier or cofferdam.
- Sheet pile for temporary water barriers and cofferdams shall be installed using vibratory technology and in-place/initially de-watered prior to ice up if winter work is planned.
- Dewatering of the workspace (within the temporary water barrier/cofferdam must be accomplished as follows:
 - Water in the chamber will be gradually released to allow visual inspection to determine if fish have been stranded in the workspace. In the unlikely event that a pallid sturgeon or other fish are present, the downstream sheet pile should be removed to allow the pallid sturgeon and/or other to escape naturally, without handling. The sheet pile may be reinstalled (vibrated back into place) once the chamber has been flushed and cleared.
- Unrestricted fish passage (in the active channel of the Missouri River) must be provided at all times around the workspaces.
- For repairs to existing permanent road crossings, use of a span bridge with fewer in-water piers are more favorable towards enhancing and promoting more natural river channel processes.
- Intake screens with a mesh opening of ¼ inch or less shall be installed, inspected annually, and maintained.
- Johnson intake screens: the maximum width between wires shall not exceed 1/8 in.
- Water velocity at the intake screen shall not exceed ½ foot per second.
- Only submerged intakes shall be used in all other river segment that may be inhabited by adult and juvenile pallid sturgeon. Submerged intakes shall be installed in accordance with the following criteria.
 - At the beginning of the irrigation season, the intake shall be placed at least 20 vertical feet below the existing water level.
 - The intake shall be elevated 2 to 4 feet off the bottom.
 - If the 20-foot depth is not attainable, then the intake velocity shall be limited to ¼ foot per second, with intake placed at maximum practicable attainable depth.
- Pumping plant sound levels shall not exceed 75 dB at 50 feet.
- Locate access routes, staging areas, etc. within previously disturbed areas.
- Avoid disturbing or burying any existing riparian (streamside) habitat.
- Restore any disturbed areas using native riparian plant species to prevent erosion.
- Integrate native vegetation into rip rap slope protection.
- Avoid fragmenting or isolating riparian corridors or wetlands.
- Disturbance to riparian and wetland areas should be kept to absolute minimum.
- If riparian vegetation is lost it should be quantified and replaced on site. Seeding of indigenous species should be accomplished immediately after construction to reduce sediment and erosion.
- A site-specific sediment and erosion control plan should be part of the project.
- A post construction erosion control plan should be implemented in order to provide interim control prior to re-establishing permanent vegetative cover on the disturbed site.
- Stream bottoms impacted by construction activities should be restored to pre-project, it should not be conducted during fish spawning periods. Most spawning occurs April, May, and June.
- False Map Turtles nest May and June, with eggs hatching two months later. To avoid impacts to False Map Turtles, recommend completing portion of the project that is immediately adjacent to the Missouri River confluence outside of the nesting season, which typically runs May through August.

- Schedule vegetation removal, trimming, and grading of areas that are potential habitat for migratory birds outside of the peak bird breeding season to the maximum extent practicable. Cutting or clearing of trees or shrubs should occur between August 16th and April 30th to remove potential nesting surfaces prior to project commencement. If the construction timeframe changes and construction would be proposed within the nesting season of migratory birds, surveys for migratory birds would occur in suitable areas that have not been mowed or cleared prior to April 30th to determine if there are active nests. If active migratory bird nests are found, construction would cease until the birds hatch and fledge.
- A survey for eagles and their nests should be conducted within 660 feet of the work zone approximately one month before construction is scheduled to start. If an eagle nest is identified, appropriate conservation measures based on the National Bald Eagle Management Guidelines would be implemented.
- Unusable equipment, debris, and materials shall be disposed of in an approved manner and location.
- Hazardous materials must be appropriately separated and disposed of in an approved disposal site or landfill.
- Any petroleum products or hazardous materials discovered, generated, or used during implementation of the Project shall be disposed of and handled by the Project applicant in accordance with applicable local, state, and federal regulations.
- Trail detour routes, if required, would be signed and well-marked to allow for continued Trail usage during construction. Trail closure areas would also be signed and barricaded to prevent the public from accessing an active construction site.
- Utility lines would be located and marked prior to construction.
- In Reach A, field stone or native rock would be utilized for the riprap.
- In Reach A, from 2-year surface water line and 10-year surface water line riprap would be covered with minimum of 12-14 inches of soil.
- In Reach A, native species of grass, trees, or shrubs would be planted between the 10-year surface water line to the 2-year surface water line.

PUBLIC AND AGENCY INVOLVEMENT

To solicit input on the project and its potential impacts, the following agencies and tribes were contacted:

- South Dakota Department of Agriculture and Natural Resources
- National Park Service
- South Dakota Department of Game, Fish and Parks
- South Dakota State Historic Preservation Office
- South Dakota Office of Emergency Management
- U.S. Army Corps of Engineers, South Dakota Regulatory Office
- U.S. Department of Agriculture – Natural Resources Conservation Service
- U.S. Fish and Wildlife Service
- Flandreau Santee Sioux Tribe
- Standing Rock Sioux Tribe
- Cheyenne River Sioux Tribe
- Crow Creek Sioux Tribe
- Lower Brule Sioux Tribe
- Oglala Sioux Tribe
- Rosebud Sioux Tribe
- Yankton Sioux Tribe

- Sisseton-Wahpeton Sioux Tribe

Correspondence was received from two state agencies, the U.S. Fish and Wildlife Service, and the National Park Service.

- South Dakota Department of Agriculture and Natural Resources responded with requirements to resources under their regulatory control, including tanks and spills, solid and hazardous waste, air quality, drinking water, surface water, groundwater and water rights.
- South Dakota Department of Game, Fish and Parks responded on search results from the Natural Heritage Database for state-listed species in the project area and best management practices to minimize impacts to fish and wildlife resources.
- The U.S. Fish and Wildlife Service responded to species effect determinations and provided input on minimization of wetland impacts and their regional policy on streambank stabilization.
- The National Park Service provided comments on the usage of rock channel protection and bioengineering techniques in reach A.

The EA was made available to agencies and the public for review and comment for a period of 15 days from November 10, 2021, to November 25, 2021. Public notice of the draft EA's availability for review was published in the Yankton Daily Press & Dakotan on July 5th, 2022 and made available on the following websites:

- City of Yankton:
<https://www.cityofyankton.org/departments-services/parks-recreation/yankton-parks/auld-brokaw-trail-system/2019-flood-reconstruction>,
- FEMA:
<https://www.fema.gov/emergency-managers/practitioners/environmental-historic/nepa-repository>
- DPS:
<https://dps.sd.gov/emergency-services/emergency-management>

No substantive comments were received during the public comment period on the draft EA.

FINDING OF NO SIGNIFICANT IMPACT

Based upon the information contained in the referenced EA completed in accordance with the National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA) and tribal considerations, Endangered Species Act (ESA); Executive Orders (EO) addressing Floodplains (EO 11988), Wetlands (EO 11990), and Environmental Justice (EO 12898); and agency guidance for implementing NEPA (FEMA Directive 108-1 and Instruction 108-01-1), it is found that the Proposed Action, with the prescribed mitigation measures and stipulations, would have no significant adverse impact on the human environment. As a result of this Finding of No Significant Impact (FONSI), an Environmental Impact Statement will not be prepared.

APPROVAL:

STEVEN E HARDEGEN Digitally signed by STEVEN E
HARDEGEN
Date: 2022.08.03 13:20:48 -06'00'

08/03/2022

Steven E Hardegen
FEMA Region VIII
Regional Environmental Officer

Date