May 2025

Request for Proposals

2025 French Creek Flood Mitigation Scoping Project

Introduction

Custer County, South Dakota, is seeking proposals from qualified and experienced consulting engineering firms to provide flood mitigation services. This project builds upon the County's ongoing flood resilience planning efforts, initiated in 2023, and the recently completed **French Creek Flood Mitigation Study (2024)**. The study highlighted the need for hydraulic improvements and increased floodplain capacity to better protect the community from future flooding.

The proposed scoping project will refine these findings by prioritizing mitigation projects, conducting feasibility and benefit-cost analyses, and developing engineering designs. The ultimate goal is to identify and design high-priority flood mitigation projects while assisting the community in securing funding for final design and implementation.

This project is funded through the Federal Emergency Management Agency (FEMA) Building Resilient Infrastructure and Communities (BRIC) Grant Program. As a recipient of BRIC funding, Custer County is committed to ensuring that all aspects of this project comply with FEMA's grant requirements, including but not limited to federal procurement standards, reporting obligations, and compliance with applicable federal, state, and local laws.

All proposals submitted in response to this RFP must acknowledge that the funding for this project is made possible through a grant from FEMA BRIC. The successful bidder will be required to adhere to all grant conditions and provide any necessary documentation to support compliance with FEMA regulations.

General Background

Custer County is a rural county of 8,360 people (2021 American Community Survey) in southwestern South Dakota. After experiencing devastating flooding in 2019, the County started to take a more holistic, watershed-scale approach to building flood resilience. The proposed scoping project is the next step in this effort.

Flood Mitigation Plan Study Area

French Creek Watershed in Custer County above Stockade Lake.

Scope of Work

Custer County's French Creek Watershed Flood Mitigation Scoping Project is the next step in a flood resilience planning process that the county began in 2023. The project began with the French Creek Flood Mitigation Study (Phase 1 and Phase 2 Summary Reports attached), which identified the need for hydraulic improvements and additional floodplain capacity. Building upon this work, the proposed scoping project will prioritize projects, conduct feasibility and benefit-cost analyses, and result in engineering designs. The goal of this project is to identify and design priority flood mitigation projects through 60% design, and assist in obtaining funding for final design and construction.

Task 1 – Project Prioritization

a. Identify potential projects – The existing conditions 2D hydraulic model will be used to identify potential flood mitigation projects. An initial community meeting will be held to review simulations from the updated existing conditions model using the updated flow estimates, including the recent 2019 flooding event.
b. Community meeting – Community input will be gathered directly at the community meeting to understand the public's experiences with recent flooding, problematic locations, and ideas for potential solutions. A discussion-based question-and-answer session will aid in the community's understanding of flood risk and potential mitigation solutions and establish expectations. An online community survey will be hosted to gather community input from community members unable to attend.
c. Community official meetings – A meeting will be held with community officials to review the existing conditions model and discuss and prioritize potential projects. It is anticipated that a meeting with community officials will be required following the public meeting to disseminate results and gain concurrence on the projects of focus.
d. Preliminary flood reduction benefits – A preliminary analysis of the flood reduction benefits of the potential flood mitigation projects will be carried out. Limited hydraulic modeling will be completed during this sub task and will focus on the ideal or optimal outcome of project implementation with the generation of qualitative ranking information that can be used to inform community officials.
e. Preliminary opinion of probable construction costs – A planning-level opinion of probable construction costs will be developed for each potential flood mitigation project. Limited data will be used during this sub task with an anticipated qualitative outcome that can be used in ranking projects and informing community officials.
f. Community official meetings – Following the initial community and official meetings and the generation of qualitative-level flood reduction benefits and probable construction costs, the project team will inform community officials of findings and results for the officials' determination and prioritization of projects for analysis during the feasibility analysis task.

Task 2 – Project Feasibility Analysis

Three to five projects identified in Task 1 Project Prioritization will undergo alternatives development and feasibility analysis. This is dependent upon the Task 1 Project Prioritization outcome. Project Feasibility Analysis sub tasks are described below.

a. Identify constraints and potential alternatives at each project location – It is assumed that each culvert replacement project and each floodplain capacity promotion project will have unique alternatives. These unique project alternatives have not yet been identified.
    i. Constraints of each project will be examined and used to identify an alternative or alternatives for that project.

ii. Current identified constraints for culvert replacement projects include the existence of sewer lines above or below culvert sections. Culvert replacement shape sections will require evaluation for suitability and viability and the need for alternate sewer conveyance evaluated as applicable and if necessary.
iii. Current identified constraints for the promotion of floodplain capacity projects exist in the spatial variability and availability of areas suitable to provide necessary attenuation.

b. Conceptual opinion of probable construction costs – The qualitative opinion of probable costs generated in Task 1 will be updated to include additional detail for the potential projects and their alternatives for use at the quantitative feasibility analysis level. Cost information generated during the feasibility analysis will be used to inform project viability.
c. Conceptual alternatives hydraulic modeling – The proposed conceptual projects developed during Task 1 and alternatives identified during Task 2 will each undergo hydraulic modeling at a conceptual level to inform feasibility and flood reduction benefits.
d. Conceptual quantification of flood reduction benefits – Flood reduction benefits will be quantified as appropriate for each project and inform alternative effectiveness.
e. Final project selection – An engineering recommendations report will be produced at the end of Task 2 documenting alternatives development and the feasibility analysis. The report will include conceptual cost information and relative flood reduction benefit information to present the community viable projects and their alternatives. The outcome of Task 2 will be an engineering recommendation for a project for which construction funding should be pursued after completing a FEMA Benefit Cost Analysis (BCA) in Task 3 for the selected project.

Task 3 – Selected Alternative Development and Benefit Cost Analysis

a. Conceptual flood mitigation model – The selected project will be simulated to create a proposed conditions model from the existing conditions model. It is assumed that the selected alternatives will exist as a singular project that is a collection of the alternatives analyzed and recommended in Task 2.
b. Design advancement – The selected project will be advanced up to the approximate 60% design level and as necessary to conduct hydraulic modeling included in this sub task and subsequent BCA task.
c. Following formalization, advancement, and modeling, the existing conditions and proposed conceptual flood mitigation alternatives will be shared at a second (communitywide) project meeting to gather additional input on the simulated flood mitigation concepts.
d. A formal Benefit Cost Analysis (BCA) using the FEMA BCA Toolkit and estimates of probable construction costs for the project will be developed. A technical memorandum will be developed documenting the BCA methodology.
iv. Flood-prone areas that would benefit from mitigation projects will be identified.
v. State of South Dakota, City of Custer, and/or Custer County data will be used to inform value.
vi. Simulations will be completed at the 10-year, 25-year, 50-year, and 100-year flood recurrence intervals for existing and proposed conditions.
vii. Losses will be calculated based on depth for existing and proposed conditions using standard depth damage functions developed by U.S. Army Corps of Engineers (USACE).
viii. Pre- and post-mitigation expected damages will be determined.

Task 4 - Environmental

Projects considered under this application will be designed to comply with the requirements set forth under the National Environmental Policy Act (NEPA) of 1969, in accordance with regulations of the Council on Environmental Quality (CEQ) for implementing NEPA (40 Code of Federal Regulations [CFR] parts 1500-1508).

a. Environmental Resource Review – Create project location maps, to include:
    i. Identification of environmental resources with the project's area of potential effect. A legend shall be included describing the environmental resources identified.
    ii. Identify any Section 4(f)/6(f) eligible properties, such as public parks, recreation areas, and wildlife/waterfowl refuges, or historic sites of local, state, or national significance.
        - If Section 4(f) or 6(f) resources are present, determine if the project can be included as an exemption or would have a de minimis impact. The appropriate documentation letter would be prepared for agency review and concurrence.
    iii. Desktop delineation of wetland or other waters of the United States (OWUS).
b. Agency coordination – Determine level of agency involvement based on environmental resources identified within the Environmental Resources Review task.
    i. If a grant is obtained, federal monies will be utilized for projects, necessitating compliance, at a minimum, with the Endangered Species Act and Section 106 of the National Historic Preservation Act. Coordination with the U.S. Fish and Wildlife Service and the South Dakota State Historic Preservation Office, and USACE would occur.
    ii. For projects occurring in FEMA-mapped floodplain resources, coordination with the local floodplain manager would also be required.
c. Wetland delineation
    i. For culvert replacement projects, the project area to be surveyed and delineated will be a 400-foot-wide corridor based on the roadway centerline (200 feet on either side) to ensure adequate data collection for any scope or design changes.
    ii. For floodplain capacity-building projects, such as reconnection of the floodplain to a stream or the creation of detention or attenuation basins, the project area to be surveyed will be dependent upon the location and footprint of the project.
    iii. A field wetland delineation would be conducted for each project location in accordance with the 1987 U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual and the appropriate Regional Supplement. A wetland delineation report would be completed for each project location to be utilized in the Section 404 permitting process.
        - Field data would be collected with a Global Positioning System (GPS) unit capable of sub-meter accuracy and delivered in datum as appropriate based on the project location.
        - Wetland delineations remain valid for a five-year timeframe which would need to be considered prior to fieldwork occurring as compared to the proposed construction timeline.

Task 5 - Design

Estimate cost of this task assuming the outcome of Task 3 results in the identification of three culvert replacement projects and two floodplain capacity projects.

a. Topographic survey – A detailed topographic survey will be completed for each project area for use in hydraulic modeling verification and design.
b. Detailed hydraulic modeling – The detailed hydraulic modeling component included in this task will be completed to meet 90% design and permitting requirements.
c. Plans and specifications – Plans and specifications will be developed to a level sufficient to meet requirements for future construction grant application development. It is assumed that plans and specifications developed up to the 90% level will be sufficient to meet these requirements.

d. Cost estimate – Unit costs and quantities will be developed to produce an estimated cost for construction.
e. Hydraulics and BCA update – Depending on the degree of design refinements, the proposed conditions hydraulic model will be updated, as will the FEMA BCA.

Task 6 – Future Construction Grant Application Development

a. Final requirements – The project scoping activity will result in the development and design of projects to mitigate flooding along French Creek. The outcome of this activity will be the development and design of projects that will require future construction funding for implementation.
b. Grant application development – It is anticipated that this activity will result in the information required by an application for a project construction grant. Final design, permitting, and construction requirements including the development of construction plans, construction bid package, and construction contract documents will be (submitted?) with an application for project construction.
    i. Work occurring in wetlands adjacent to French Creek will likely require authorization under Section 404 of the Clean Water Act. If wetland areas can be avoided (i.e., basins strategically located in upland areas not mapped as wetland), Section 404 authorization would not be needed. Culvert replacement activities would likely be authorized under a Nationwide Permit for Maintenance Activities or Linear Transportation Projects.
    ii. The grantee will prepare permit or approval applications with supporting documentation and plans to satisfy the applicable state and federal environmental regulation requirements, as necessary, or as specified in future scopes of work.

Consultant Responsibilities and Deliverables

The selected consultant will work under the direction of the County Emergency Management Director and will be responsible for consultation with the major stakeholder groups and public engagement. In addition, the consultant is responsible for the following items and activities:

a. General management of the project
b. All materials needed for public presentations, provided to the County in reproducible formats
c. Drafting and preparation of the plan documents, graphics, and mapping for stakeholder groups and County Commissioner review
d. Data collection, analysis and presentation
e. Organization and facilitation of public meetings
f. Public comment summary
g. Presentations at public community meetings and County Commissioner meetings.

Task-specific deliverables are detailed below.

<u>Task 1 – Project Prioritization</u>

a. Preliminary analysis of flood risk-reduction benefits.
b. List of prioritized projects.
c. Preliminary construction cost estimates.

<u>Task 2 – Project Feasibility Analysis</u>

a. Conceptual alternatives hydraulic model.

<u>Task 3 – Selected Alternative Development and Benefit-Cost Analysis (BCA)</u>

a. 60% Design plans and specifications.
b. Benefit-cost analysis.
c. Technical Memorandum detailing final project selection.

Task 4 – Environmental Review

a. Environmental Resources Map – Identification of environmental constraints and compliance requirements.
b. Agency Coordination Plan – Summary of required regulatory agency involvement.
c. Wetland Delineation Report – GPS-mapped delineations for permitting purposes.
d. Section 404 Permitting Documentation – Compliance report for Clean Water Act requirements (if applicable).

Task 5 – Design

a. Topographic Survey Data – Collected field data for hydraulic modeling and design verification.
b. 90% Hydraulic Modeling Report – Detailed modeling results supporting project design and permitting.
c. Plans and Specifications – Construction-ready design documents at 90% completion.
d. Final Cost Estimate – Unit cost breakdown and total construction cost projection.
e. Updated FEMA BCA and Hydraulic Model – Adjusted analysis based on design refinements.

Task 6 – Future Construction Grant Application Development

a. Final Project Scoping Report – Comprehensive summary of project design and environmental considerations.
b. Grant Application Package – Submission-ready materials including project plans, cost estimates, and regulatory compliance documentation.
c. Permit and Approval Applications – Drafts of required permits (e.g., Section 404, floodplain development permits).

Respondents to the Request for Proposal (RFP) must be prepared to meet all requirements for work funded by the Federal Emergency Management Agency (FEMA) Building Resilient Infrastructure and Communities (BRIC) Grant Program. As well as meeting all Environmental Review standards required by Federal & State agencies, in addition to the Federal Water Pollution Control Act, Protection of Wetlands, and the Endangered Species Act of 1973. Consultants who are Minority, Women, Disadvantaged, Small Businesses, and/or Small Businesses in rural areas are strongly encouraged to apply. The items listed in the scope of services are representative of the services and items that may be required but are not meant to comprise an exclusive list of services and items that may be required.

Proposed Project Schedule

The project timeline will be approximately 24 months (not including the adoption process) from the notice to proceed. At a minimum, monthly progress meetings shall be held and may be conducted through video conferencing and/or webinars, set up and organized by the consultant. The consultant is expected to schedule and attend public participation activities and present to the City Council as detailed in the scope of work.

The County anticipates the following general timeline for receiving and evaluating the proposals, selecting a consultant, and completion of the plan. This schedule is subject to change if it is in the County's best interest to do so:

Advertise for Consultant Proposals	May 21, 2025
Proposals Due	June 6, 2025, 5:00 p.m.
Evaluation of Proposals	June 7 - 13, 2025
Notice of Award	June 16, 2025
Project Completion	24 months from Notice to Proceed

Qualifications

The chosen consultant must have extensive multidisciplinary experience in hydrology, hydraulics, stormwater management, civil engineering, GIS analysis, community engagement, and hazard mitigation planning, with demonstrated experience on projects of a similar nature. The ideal consultant will bring both technical expertise and stakeholder coordination skills to ensure that flood mitigation solutions are data-driven, feasible, and publicly supported. Strong communication and public engagement skills are essential, as the consultant will be expected to collaborate effectively with developers, engineers, and community members. Additionally, the consultant must be able to develop solutions that align with the County's requirements while taking a comprehensive approach to the overall community flood resilience.

Proposal Content

Proposals should address the following items in numerical order and must not exceed 25 pages in length. Electronic submissions are encouraged to incorporate hyperlinks when referencing work samples.

1. **Qualifications** – Provide a detailed background on the firm, including its history, expertise, and experience. Include biographies or resumes of key team members assigned to the project.
2. **Relevant Experience** – Outline previous experience with projects of a similar nature.
3. **References** – Supply at least three references, including contact details, for comparable projects. References should specifically relate to the proposed project manager and key personnel. The County reserves the right to contact any listed references.
4. **Review of Scope of Work and Schedule** – Evaluate the scope of work and provide insights into the consultant's understanding of the project, their role in fulfilling the outlined tasks, and any suggested additional services that may enhance project outcomes. Include a schedule aligned with key project milestones, incorporating any recommended changes.
5. **Project Approach and Community Engagement** – Describe the methodology and activities required to achieve the project's objectives. Include details on community engagement strategies, including the use of social media or web-based platforms for public input and approaches to conducting public meetings.
6. **Cost Proposal** – Present a detailed cost breakdown for professional services and related expenses, categorized by project components and hours allocated per task. Provide an itemized list of reimbursable expenses. The cost proposal must be submitted separately in a sealed envelope.

Custer County will not be responsible for any costs incurred by consultants in the preparation and submission of their proposals, including travel expenses for pre-award interviews.

Proposers must submit one (1) PDF proposal for items one through five above via email to sesser@custercountysd.com and one (1) separate PDF cost proposal via email to mzerfas@custercountysd.comSubmissions must be received no later than 5:00 p.m. local time on **Friday, June 6, 2025.**

Late submissions will not be considered.

Any questions or requests for additional information must be submitted via email to **Steve Esser, County Emergency Management Director, at sesser@custercountysd.com** no later than **1:00 p.m. local time on May 30, 2025**.

Custer County reserves the right to reject any or all proposals, waive any technical or legal deficiencies, and accept the proposal deemed to be in the County's best interest.

Evaluation of Proposals and Selection Process

Following the submission deadline, the County will promptly begin reviewing proposals. The County reserves the right to request further details and to reject any or all submissions. As part of the review process, applicants may be invited to present their proposals to County representatives.

Proposals will be assessed based on the following key factors:

1. The overall quality and responsiveness of the proposal, including its completeness, clarity, conciseness, and understanding of the project scope.
2. The qualifications of the consulting team demonstrated through their knowledge, skills, and relevant experience.
3. Proven experience in developing master drainage plans or handling similar projects.
4. A track record of effective public engagement strategies across diverse community groups.
5. References from past clients for projects of comparable scope.
6. The proposed timeline for completion and budget considerations.

Consultants should note that services may be discontinued if the project is canceled for any reason.

County-Furnished Materials

The following data or documentation will be available for use by the selected consultant team:

- Flood Mitigation Study Phase 1 Memorandum with Summary of Documents Reviewed and Hydraulic Structure Inventory (dated November 8, 2023)
- French Creek Flood Mitigation Study Phase Two – Hydrology and Hydraulics (dated August 13, 2024)
- Flood frequency analysis for USGS Station 06402995
- 2D Hydrologic Engineering Center River Analysis System (HEC-RAS), Version 6.4 hydraulic model for French Creek above Stockade Lake