

City Council Agenda Item Memo

From: Charlie Richter, City Engineer

Council Meeting: September 24, 2024

Subject: Presentation: Six-Mile Creek Feasibility Study

Presenter: Charlie Richter, City Engineer

Summary:

Public Works and the City's consultant, RESPEC, worked over the past 3 years to develop the Six-Mile Creek Feasibility Study. Public Works and RESPEC presented informational meetings to the Community on March 4 and May 20, 2024 to present findings and solicit input into this guiding document for future improvements to Six-Mile Creek. The final study is presented to City Council to outline the options for improving flooding in the future along the creek.

Item Details:

In June 2021, the City was awarded a FEMA Hazard Mitigation Grant to study the flood effects of Six-Mile Creek. To assist the City with this project, RESPEC Engineering from Rapid City, SD was hired to help develop the Six-Mile Creek Feasibility Study.

The scope of the work included: survey of various hydraulic structures along the creek, review and revision of the effective FEMA hydraulic modeling of Six-Mile Creek; development of mitigation alternatives; development of high-level benefit cost analysis for the options chosen to assist in future grant applications; public outreach; and exploration of possible FEMA grant options.

To achieve these objectives, the consultant collected and analyzed data from a variety of sources, including: previous studies; historical data including photos of past flooding events; public meetings; FEMA floodplain modeling; meetings with FEMA; flow gauge metering; and property owner meetings.

The final Plan, as presented today, will be utilized as a resource and road map to guide the City's future capital improvement investments along with grant opportunities and maintenance of the creek.

The Plan includes:

- Hydraulic analysis of the existing conditions of the creek including inundation mapping;
- Summary of possible flood mitigation options;
- Summary of public engagements;

- Benefit - Cost Analysis for mitigation options;
- Recommendation for future channel maintenance;
- Recommendation of the most feasible flood mitigation options based on flooding model results, public comment, and analysis of the cost-benefit ratio for each option; and
- Examination of possible funding sources for future projects.

Legal Consideration:

None.

Strategic Plan Consideration:

- Fiscal Responsibility – The City of Brookings will responsibly manage resources through transparency, efficiency, equity, and exceptional customer service.
- Safe, Inclusive, Connected Community – The City of Brookings will create an environment for inclusive programs, gathering places, and events where the community can safely live, work and come together to participate in opportunities for learning, recreation and enjoyment.
- Service and Innovation Excellence – The City of Brookings will provide an accessible environment committed to ongoing innovation and outstanding service through listening and engagement.
- Sustainability – The City of Brookings will meet environmental, community and economic desires and needs without compromising future generations' quality of life by strategically planning, implementing and maintaining infrastructure and facilities.
- Economic Growth – The City of Brookings will support effective diversified community investment and equitable opportunities for prosperity.

Financial Consideration:

Not at this time.

Supporting Documentation:

Executive Summary

Presentation