

REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES

Madison County is requesting proposals from qualified applicants to provide professional services required for the **Characterization of Teton River Peak Discharge Mitigation Through Temporary Storage/Infiltration and Predicted Floodplain Benefits Project**.

Project Sponsor

The project sponsor for this project is Madison County, in coordination with The cities of Rexburg, Idaho and Sugar City, Idaho.

Background

In recent years, Madison County has been working closely with FEMA in their *Rick MAP* Program efforts to remap the floodplain for the Teton River. Preliminary flood plain maps are expected within the next year. In order to identify, and possibly complete, flood mitigation prior to the final map release, Madison County has recently completed a comprehensive flood mitigation project prioritization project under a FEMA (CTP) grant. This proposed study will build upon previous studies completed on the Teton River and will directly support anticipated future mitigation efforts. This study will focus on the opportunities of using nearby gravel pits as possible temporary flood-control structures. These large gravel pits include the following:

Gravel Pit	Acres	Latitude	Longitude
Madison County Pit	56	43°53'25.57"N	111°41'24.68"W
Walters Gravel Pit	50	43°53'36.77"N	111°42'18.39"W
H&K Pit	22	43°52'45.39"N	111°41'29.08"W
Zollinger West Pit	20	43°52'45.39"N	111°41'57.04"W
Zollinger East Pit	10	43°52'53.72"N	111°41'45.93"W
Edstrom Gravel Pit	9	43°53'40.09"N	111°41'19.50"W

Purpose

The overall objective of this proposed study is to provide infiltration rate data to support anticipated future design and construction of flood diversion procedures and structures. This study is anticipated to characterize the degree to which temporary (i.e., several days) storage and infiltration of anticipation Teton River flood waters can mitigate peak discharge curves. Storage and infiltration would take place in massive gravel pits which adjoin the Teton River near Highway 33. In addition to characterizing storage and infiltration rates, this study is anticipated to model the reduced floodplain resulting from mitigation of the peak discharge curve and manipulating flow at the “split” of the North/South Fork of the Teton River under various scenarios to minimize flood impact.

Project Area of Description

The project area consists of the Teton River in Madison County and Freemont County Idaho from the split between the North Fork and South Fork Teton River in Freemont County to their confluences with the Henry's Fork. The primary focus of the study will be in/around the split and the gravel pits near highway 33. See Appendix.

Project Description and Anticipated Scope of Work

Study to include/accomplish:

- Provide infiltration rate data to support anticipated future design and construction of flood diversion procedures and structures.
- Estimates of both vertical and horizontal infiltration rates for all gravel pits identified in the study area. These estimates will be made through use of both theoretical analysis modeling and on-site infiltration measurements.
- Results of storage/infiltration rate studies will be used to create a mitigated "Peak Discharge Curve" which will be used to model the expected benefits of flood mitigation.
- The effects of storage/infiltration will be modeled to quantify floodplain reductions.
- The effects of manipulating the Teton River "split" control structure will be modeled to determine the optimal allocation of water between the North/South Fork that matches each fork's conveyance capacity and other scenarios.
- Characterize the degree to which temporary (i.e., several days) storage and infiltration of anticipation Teton River flood waters can mitigate peak discharge curves.
- Model the reduced floodplain resulting from mitigation of the peak discharge curve and manipulating flow at the "split" of the North/South Fork of the Teton River under various scenarios to minimize flood impact.

Preferred Project Timeline

October 2022 through September 2023, or sooner if possible.

Respondents will be evaluated according to the following criteria:

- Capability to Perform Project
- Qualifications of Project Team
- Relevant Project Experience
- Project Approach and Schedule
- Local Familiarity and Presence

The County will select a firm based on the information provided in the proposal, as described above. However, the County may select one or more firms to make brief presentations covering the information listed above prior to finalizing proposal scoring and making a final selection.

Award will be made to the most qualified firm whom is deemed most advantageous to Madison County Idaho, all evaluation criteria considered.

Proposals should be directed to: Bradley Petersen, Floodplain Administrator, Madison County, 134 E Main, Rexburg, Idaho 83440. All responses must be received by 11:00 am on October 7, 2022.

Please state "Madison County Request for Professional Services Proposal – Infiltration Rate" on the outside of the response package. Firm must provide three (3) paper copies of the Proposal and a searchable electronic copy in pdf format on a USB flash drive. Emailed proposals will not be accepted.

Madison County reserves the right to negotiate an agreement based on fair and reasonable compensation for the scope of work and services proposed, as well as the right to reject any and all responses deemed unqualified, unsatisfactory or inappropriate.

For any questions or comments, contact Bradley Petersen at (208) 359-6362 or bpetersen@co.madison.id.us .

Appendix



