



REQUEST FOR PROPOSAL STORMWATER MASTER PLAN UPDATE

August 3, 2023

Nibley City desires to retain the services of a Professional Consulting Engineering Firm to update the Nibley City Stormwater Master Plan. The City has been awarded a CIB matching reimbursement grant to assist with the cost of this update. The selected consultant will be aware of and adhere to grant requirements.

BACKGROUND

The Nibley City stormwater system is diverse and changing over time. As development occurs, existing canals, ditches, and fields are being replaced with the development of homes, businesses, and roadways. Nibley City has grown quickly over the last 10 years with a 3.1% growth rate and over 8% the last 2 years alone. The new development is increasing runoff from previously undeveloped areas of the City adding to the need for additional stormwater infrastructure.

The City's Stormwater Master Plan was last updated in September 2015. Survey and mapping of canals, irrigation conveyances, irrigation points of diversion, and the interface of these items with the City's stormwater system will be a priority in this update. One of the main tasks will be to update/create topographic information of the City and to map land drains, canals, irrigation conveyances, diversion points, and other elements of the irrigation/canal systems that run through and interface with Nibley City's stormwater system.

Previous Nibley City Stormwater Master Plans and recent updates promoted regional stormwater ponds as a primary Best Management Practice (BMP) for long term post construction stormwater management. Since development of the Stormwater Master Plan, the State of Utah Department of Environmental Quality, Division of Water Quality changed municipal stormwater management practices disallowing regional ponds as a primary BMP. The selected consultant will review the Utah Municipal Separate Storm Sewer System (Ms4) permit and update recommended stormwater management plans/practices accordingly. The selected consultant will become familiar with existing and planned regional ponds, evaluate them for current and future capacity, and make recommendations for future use, maintenance, and/or expansion needs.

Nibley City is participating with the Cache County Stormwater Coalition in development of an update to the Cache Valley Stormwater Design Standards, adopted by most communities in Cache Valley. The selected consultant will coordinate recommendations of Nibley City Stormwater Master Plan update with forthcoming Stormwater Design Standards as applicable.

Existing and future Operations and Maintenance, and Capital Improvements costs for the City's stormwater system will be evaluated. The selected consultant will provide an analysis and recommendation for maintenance costs and capital improvement costs. The selected Consultant will provide direction for construction of system improvement to continue serving the residents of Nibley City and will perform a rate study to determine appropriate user fees now and recommended fee adjustments over the next 15 years.



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OBJECTIVES

1. Survey and map the existing stormwater collection system.
2. Survey and map canal conveyance, distribution, diversion points, and other elements of canal/irrigation system to determine capacity and how they interface with the City's stormwater system.
3. Develop and update the City's stormwater model to include canal elements and evaluate the existing stormwater system capacity status of conveyances, canals, and local and regional ponds.
4. Determine canal capacity/flows and determine stormwater contribution into canals (determine a percentage or ratio of stormwater contribution).
5. Identify problem areas and projects to address potential flooding and water quality deficiencies.
6. Evaluate Best Management Practices (BMPs) for compliance with State requirements.
7. Forecast future stormwater capacity needs.
8. Provide an overall list of conclusions and recommendations drawn from the master plan study.
9. Provide direction for the construction of system improvements to continue serving the residents of Nibley City in the future.
10. Identify and recommend 5-year, 10-year, 20-year, and build-out plan of stormwater capital projects needed to serve the City.
11. Evaluate maintenance and capital improvements costs to determine user utility fees and scheduled modifications to said fees.
12. Perform a rate study and recommend appropriate user fees now and recommended fee adjustments through the next 15 years.

SCOPE OF WORK

1. Project Initiation
 - 1.1. Meet with City Staff to:
 - Review objectives of the Stormwater Master Plan, scoping, schedule, and deliverables
 - Discuss previous master planning efforts
 - Identify known deficiencies and problem areas
 - Identify and prioritize specific stormwater related goals (water quality and flood control)
 - Discuss existing and proposed regional ponds
 - Review previously identified deficiencies with City Staff
 - Review CIB reimbursement grant requirements
 - 1.2. Review previous master plan, stormwater design standards, ordinances, state requirements, and policies and guidelines
 - 1.3. Review the City's stormwater and GIS information
 - Stormwater facilities (pipe material sizes and locations)
 - Natural topography and drainage areas



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- Existing and planned regional and local stormwater ponds
 - Local slopes and topography
 - Local groundwater and soil types
 - Landscape features and vegetative cover
 - Street design standards related to stormwater management
 - Review and develop an understanding of the Nibley City Water Source Protection Plan and updates
 - Develop an understanding of Nibley City's Source Protection zones and existing and planned well locations
 - Develop an understanding of the local watersheds and their impact on City water resources, flooding, groundwater, existing and potential flooding issues
 - Develop an understanding of canal and irrigation system and their interface with stormwater conveyance and management
- 1.4. Review the following (City Provided) and coordinate with:
- 2015 Storm Drain Master Plan
 - Existing Storm Drain Model and GIS mapping
 - GIS Information
 - Drainage basin boundaries and characteristics
 - Stormwater facilities (pipe material and size, installation dates where applicable, and invert elevations)
 - Existing stormwater uses and outfalls or discharge locations
 - Soil types (erodibility and infiltration capacity)/ Soil Survey
 - Landscape features and contour data for steep slopes
 - Vegetative cover and impervious surface cover
 - Wetland and flood plain maps, watertable depths
 - Hazards including faults, liquefaction, dam break inundation potential map
 - City Drinking Water Source Protection Plan, Watershed Master Plan and Conservation Plan for consistency between them and the Stormwater Master Plan
 - O&M Manual and Storm System Inspection Reports
 - State of Utah MS4 Stormwater Regulations
 - Nibley City Land Development Code
- 1.5. Develop an understanding of where flows leave the City and the City's impact on downstream water quality and flooding. Also, develop an understanding of water sheds entering the City and their impact on City water resources and contribution to flooding within the City
2. Data Collection
- 2.1. Collect existing stormwater system information
- Survey and map existing stormwater system



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- Work with City staff to gather existing stormwater data using past master plans and approved subdivision construction drawings
- 2.2. Delineate watershed boundaries contributing to the Nibley city areas based on available USGS topographic maps, GIS contours, available DEM, and LiDar models
 - 2.3. Conduct a watershed inspection to locate and verify major natural and man-made runoff paths (channels, culverts, and bridges, etc.) and observe the land cover conditions of the watershed
 - 2.4. Work with available topographic information of the City and calibrate the datum of any additional survey work performed
 - 2.5. Survey and completely map Irrigation Field Data for the following irrigation systems to determine capacity of channels and how irrigation systems interface with the City's stormwater system.
 - Nibley Blacksmith Fork Irrigation Company
 - Clear Creek Irrigation Company
 - College Irrigation Company
 - 2.6. Map existing land drains throughout the City
 - Research available records and map land drains
 - Additional land drain information will be obtained through interviews with canal company representatives, random landowners, and others having local knowledge of land drain systems as needed
 - 2.7. Additional mapping required to determine information of canals, rivers, and other inflows entering the City
 - 2.8. Additional mapping required to determine information of stormwater system discharge points from the City and the adequacy of system capacity "downstream" of Nibley City
 - 2.9. Review available plat information to augment field collected data.
 - Review plats for irrigation and stormwater easement to help identify buried systems that are not noticeable from surface investigation
 - 2.10. Inspect and evaluate capacity, function, and overall conditions of the existing major stormwater conveyance and storage facilities. Specific attention will be given to:
 - Interactions with irrigation systems and land drains
 - Regional ponds
 - 2.11. Determine canal capacity/flows and determine stormwater contribution into canals (determine a percentage or ratio of stormwater contribution). This task should also be included in Section 3 of the Scope of Work below
3. Develop and update existing stormwater model
 - 3.1. Perform hydrologic analysis to obtain regulated and City required design hydrographs and peak discharges
 - 3.2. Include canals and relevant canal elements
 - 3.3. Evaluate existing capacity of stormwater system, canals, and local and regional ponds
 - 3.4. Calibrate model using historic records



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- 3.5. Identify problem areas and potential flooding and water quality deficiencies
- 3.6. Summarize and map the watershed and results of hydrologic study
4. Review City Stormwater Design Requirements and Standards
5. Operations and Maintenance
 - 5.1. Review and update existing operations and maintenance procedures
 - 5.2. Determine required Storm Drain Annual Maintenance budget needed for
 - Catch basin cleaning
 - Pipe cleaning
 - Detention basin inspections, cleaning, and other maintenance
 - CCTV inspection of pipes, culverts, etc.
 - Ditch cleaning & Maintenance
 - Completing all other annual storm system maintenance as per street department's existing obligations and needs
6. Rate Study
 - 6.1. Evaluate system operations, maintenance, Impact Fee Facilities Plan (IFFP), and capital needs to determine appropriate user fee
 - Recommend user fee now and suggested appropriate adjustments through the next 15 years
7. Project Coordination and Public Involvement
 - 7.1. Coordination, interviews, and presentations with the following
 - Irrigation and canal companies
 - City staff
 - City Council presenting the final report
8. Stormwater Master Plan Report
 - 8.1. Prepare a map of the existing storm drain system
 - 8.2. Prepare a map of canal systems
 - 8.3. Evaluate land use and zoning areas using current and future land use maps
 - 8.4. Forecast future stormwater capacity needs
 - 8.5. Provide an overall list of conclusions and recommendations drawn from the Master Plan Study
 - 8.6. Prepare a conceptual drainage system design Master Plan
 - 8.7. Determine, analyze, prioritize, and recommend major stormwater control facilities
 - 8.8. Identify and create a list of projects needed to address current deficiencies in the stormwater system and projects needed to serve the City at build-out
 - 8.9. Update Capital Improvement Plan and provide cost estimates for budgeting purposes
 - 5, 10- and 20-year, and build-out improvement project recommendations

SCHEDULE



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The City desires that the final Master Plan be completed and presented to City staff by **June 15, 2024**. Adoption by the City Council will be at a future scheduled council meeting.

PROJECT DELIVERABLES

1. Three (3) Copies of the final Stormwater Master Plan update shall be provided to the City.
2. An electronic interactive web-friendly format of the Stormwater Master Plan for the City's website.
3. Electronic copy of the final reports in .pdf and original document formats.
4. Electronic copies of the updated stormwater model, including all electronic data used to edit the model.
5. City Staff Training on the updated stormwater model.

PROPOSAL REQUIREMENTS

Each proposal must include the following in order:

- Cover page (Not included in the page count) with title of project, date submitted, submitting firm name, key contact, address, phone number, and email address.
- Table of contents (Not in page count, only TOC information will be allowed on this page).
- Qualifications of firm(s) proposing on the project including specific similar sample projects. Each project listed must include the following information:
 - Staff proposed for this project who worked on the similar project;
 - Scope of the project;
 - Description of the project emphasizing elements related to this project;
 - Project client reference who was involved with the project.
- Qualifications of each individual proposed for this project. Each individual listed must include the following information:
 - Name, education, and years of experience;
 - Experience on projects of this type doing the proposed duties assigned with this project;
 - List of projects this staff member completed similar to this project;
- Detailed approach and methodology for completion of the project. The tasks must clearly define goals and objectives expected. It is the engineering firm's responsibility in the process to provide a detailed approach and methodology that demonstrates their experience and knowledge of the project.
- Detailed Scope of Work proposed to complete Tasks.
 - Identified steps in the Scope of Work in this RFP may be expanded as the proposing firm deems necessary for completion of a successful project.
- Detailed Schedule (Detailed Schedule may be submitted on size 11 x 17). The Detailed Schedule shall highlight key objectives, milestones, interaction between tasks with the appropriate lead and lag times, and areas requiring input from the city, state, and private, Public and federal agencies. This must tie back to the Detailed Scope of Work proposed by the Firm. Proposed schedule shall start with Firm selection with detail through plan completion.



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- Fee Proposal. The proposal must be correlated with specific items outlined in the Detailed Scope of Work proposed by the Firm and must include the expected costs and estimated hours by task and must include sufficient detail that allows reviewing staff adequate information to compare key individual item costs. This proposal should also identify any special services to be provided by resources outside of your Firm and the cost of such services.

PROPOSAL FORMAT

Proposals shall contain the required information discussed above, in the general order listed, not exceeding eight (7) pages in length (not including the Appendices or fee proposal). With no more than one (1) tabloid page (11 x 17 inches) with a “Z” fold.

SUBMITTAL REQUIREMENTS

The City reserves the right to reject any or all proposals and to waive any informality or technicality in any proposal.

The City reserves the right to delay or deny approval of the work if it is determined in the City’s best interest to do so.

Four (4) hard copies and one (1) PDF version of the technical proposal shall be submitted by **2:00 p.m. on Tuesday, August 29, 2023** to Nibley City, 455 West 3200 South, Nibley, UT 84321

Questions pertaining to this Request For Proposal shall be directed in writing submitted via email to the City Engineer, Tom Dickinson td@nibleycity.com . All questions shall be delivered in written form via email and shall be submitted before **1:00 pm on August 24, 2023**. A list of questions and answers will be kept on the City website at <https://nibleycity.com/index.php/departments/public-works>

SELECTION OF CONSULTANT

The successful consultant will be selected in accordance with the City procurement policy based on Evaluations below. Final costs may be negotiated upon notice of selection.

The City reserves the right to request an oral interview.

EVALUATION

The written proposals will be evaluated based on the following criteria.

Approach/Methodology: Demonstration of knowledge regarding the details of successful project completion based on the scope and tasks provided.

Project Team: Specific similar experience, depth of staff support, sub-consultants, and their experience.

Project Experience: Firms will be evaluated based on past projects successfully completed of similar scope and magnitude.

Fee: Cost will be evaluated to provide the best value to the City.