IT IS THE VENDOR'S RESPONSIBILITY TO CHECK FOR ADDENDUMS PRIOR TO SUBMITTING PROPOSALS

REQUEST FOR PROPOSALS
SPECIFICATION NO. 07-215

The City of Lincoln, Nebraska intends to enter into a contract and invites you to submit a sealed proposal for professional Engineering Services related to the projects listed and described below:

WATERSHED MASTER PLANNING
Little Salt Creek Basin

Sealed proposals will be received by the City of Lincoln, Nebraska on or before **12:00 noon, Wednesday, August 1, 2007** in the office of the Purchasing Agent, Suite 200, K Street Complex, Southwest Wing, 440 South 8th Street, Lincoln, Nebraska 68508. Proposals will be publicly opened, reading only the names of those submitting proposals.

A copy of the request for proposal may be obtained from the Purchasing Division web site at: www.lincoln.ne.gov Keyword search: Bid

Submitters should take caution if U.S. mail or mail delivery services are used for the submission of proposals. Mailing should be made in sufficient time for proposals to arrive in the Purchasing Division, prior to the time and date specified above. It is the responsibility of submitters to check for all addendums issued for this request for proposals prior to submission.

INSTRUCTIONS TO PROPOSERS
CITY OF LINCOLN, NEBRASKA
PURCHASING DIVISION

1. PROPOSAL PROCEDURE

1.1 Each RFP must be legibly printed in ink or typed, include full name, business address, telephone number, fax number and email address of the Proposer; and be signed in ink by the Proposer.

1.2 Response by a firm/organization other than a corporation must include the name and address of each member.

1.3 A response by a corporation must be signed in the name of such corporation by a duly authorized official thereof.

1.4 Any person signing a response for a firm, corporation, or other organization must show evidence of his authority so to bind such firm, corporation, or organization.

1.5 Proposals received after the time and date established for receiving offers will be rejected.

2. EQUAL OPPORTUNITY

2.1 Each proposer agrees that it shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, disability, national origin, age, or marital status. In the employment of persons, proposer shall take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to race, color, religion, sex, disability, national origin, age, or marital status.

3. DATA PRIVACY

3.1 Proposer agrees to abide by all applicable State and Federal laws and regulations concerning the handling and disclosure of private and confidential information concerning individuals and corporations as to inventions, copyrights, patents and patent rights.

3.2 The proposer agrees to hold the City harmless from any claims resulting from the proposer's unlawful disclosure or use of private or confidential information.

4. PROPOSER'S REPRESENTATION

4.1 Each proposer by signing and submitting an offer, represents that he/she has read and understands the specification documents, and the offer has been made in accordance therewith.

4.2 Each offer for services further represents that the proposer is familiar with the local conditions under which the work and has correlated the observations with the requirements of the RFP.

5. SPECIFICATION CLARIFICATION

5.1 Proposers shall promptly notify the Purchasing Agent of any ambiguity, inconsistency or error which they may discover upon examination of specification documents.

5.2 Proposers desiring clarification or interpretation of the specification documents shall make a written request which must reach the Purchasing Agent at least seven (7) calendar days prior to date and time for response receipt, unless otherwise noted in RFP.

5.3 Interpretations, corrections and changes made to the specification documents will be made by written addenda.

5.4 Oral interpretations/changes to Specification Documents made in any other manner, will not be binding on the City; proposers shall not rely upon oral interpretations.

6. ADDENDA

6.1 Addenda are written documents issued by the City prior to the date for receipt of offers which modify or interpret the specification document by addition, deletion, clarification or correction.

6.2 Changes made to the specification documents will be made by written addenda to all known prospective bidders and posted on the City-County website at lincoln.ne.gov Keyword - Bid.

6.3 Copies of addenda will be made available for inspection at the office of the Purchasing Agent and on the City's website.

6.4 No addendum will be issued later than forty-eight (48) hours prior to the date and time for receipt of offers, except an addendum withdrawing the RFP, or addendum including postponement.

6.5 Proposers shall ascertain prior to submitting their offer that they have received all addenda issued, and they shall acknowledge receipt of addenda in their proposal.

7. ANTI-LOBBYING PROVISION

7.1 During the period between the proposal advertisement date and the contract award, proposers, including their agents and representatives, shall not lobby or promote their proposal with any member of the City Council or City Staff.

8. EVALUATION AND AWARD

8.1 The signed proposal shall be considered an offer on the part of the proposer. Such offer shall be deemed accepted upon issuance by the City of purchase orders, contract award notifications, or other contract documents appropriate to the work.

8.2 No offer shall be withdrawn for a period of ninety (90) calendar days after the time and date established for receiving offers, and each proposer agrees in submitting an offer.

8.3 In case of a discrepancy between the unit prices and their extensions, the unit prices shall govern.

8.4 The RFP process is designed to be a competitive negotiation platform, where price is not required to be the sole determinative factor; also the City has the flexibility to negotiate with a select firm or selected firms to arrive at a mutually agreeable relationship.

8.5 A committee will be assigned the task of reviewing the proposals received.

8.5.1 The committee may request documentation from Proposer(s) of any information provided in their proposal response, or require the Proposer to clarify or expand qualification statements.

8.5.2 The committee may also require a site visit and/or verbal interview with a Proposer or select group of Proposers to clarify and expand upon the proposal response.

8.6 The offer will be awarded to the lowest responsive, responsible proposer whose proposal will be most advantageous to the City, and as the City deem will best serve their requirements.

8.7 The City reserves the right to accept or reject any or all offers, parts of offers; request new proposals, waive irregularities and technicalities in offers; or to award the RFP on a split-order basis, or lump-sum basis; such as shall best serve the requirements and interests of the City.

9. INDEMNIFICATION

9.1 The proposer shall indemnify and save harmless the City of Lincoln, Nebraska from and against all losses, claims, damages, and expenses, including, attorney's fees arising out of or resulting from the performance of the contract that results in bodily injury, sickness, disease, death, or to injury to or destruction of tangible property, including the loss of use resulting therefrom and is caused in whole or in part by the proposer, any subcontractor, any directly or indirectly employed by any of them or anyone for whose acts any of them may be liable. This section will not require the proposer to indemnify or hold harmless the City of Lincoln for any losses, claims damages, and expenses arising out of or resulting from the sole negligence of the City of Lincoln, Nebraska.

9.2 In any and all claims against the City or any of its members, officers or employees by an employee of the proposer, any subcontractor, anyone directly or indirectly employed by any of them or by anyone for whose acts made by any of them may be liable, the indemnification obligation under paragraph 9.1 shall not be limited in any way by any limitation of the amount or type of damages, compensation or benefits payable by or for the bidder or any subcontractor under worker's or workmen's compensation acts, disability benefit acts or other employee benefit acts.

10. LAWS

10.1 The Laws of the State of Nebraska shall govern the rights, obligations, and remedies of the Parties under this proposal and any agreement reached as a result of this process.

10.2 Proposer agrees to abide by all applicable State and Federal laws and regulations concerning the handling and disclosure of private and confidential information concerning individuals and corporations as to inventions, copyrights, patents and patent rights.

11. AWARD

11.1 The RFP process is designed to be a competitive negotiation platform, where price is not required to be the sole determinative factor; also the City has the flexibility to negotiate with a selected firm or firms to arrive at a mutually agreeable relationship.

11.2 The City shall be the sole judge as to merits of the proposal, and the City's decision will be final.

11.3 A committee will be assigned by the Mayor with the task of reviewing the proposals received.

11.3.1 The committee may request documentation from Proposer(s) of any information provided in their proposal response, or require the proposer to clarify or expand qualification statements.

11.3.2 A short list of firms from proposals submitted may be selected for a presentation to the committee and ranked by committee members.

11.4 Final approval to enter into contract negotiations with the top ranked firm will be by the Mayor of the City of Lincoln.

11.5 The City shall not be liable for any expense incurred in connection with preparation of a response to this RFP.

11.6 The contract document shall incorporate by reference all requirements, terms and conditions of the solicitation, proposal received and all negotiated details.

12. LIVING WAGE

12.1 The bidders agree to pay all employees employed in the performance of this contract, a base wage of not less than the City Living Wage per Section 2.81 of the Lincoln Municipal Code. This wage is subject to change every July.

REQUEST FOR PROPOSALS

Watershed Master Plan
Little Salt Creek Basin
Spec. 07-215

1. INTRODUCTION

1.1 The City of Lincoln, Nebraska is continuing to implement a program of **WATERSHED MASTER PLANNING** to identify and manage issues of stormwater quantity and quality and channel stability associated with existing and future development of the City.

1.2 Master plans are intended to be used as a guideline in the proper management of the urban stormwater system to minimize impacts from flooding, water quality deterioration, and channel de-stabilization within the City as a result of urbanization.

1.3 The City is requesting proposals from qualified engineering consultants to prepare a watershed master plan for the Little Salt Creek basin.

1.4 Consultants will work closely with City staff throughout the development of the plans, which include a significant public process element.

1.5 The Little Salt Creek Watershed Master Plan is expected to be adopted as an approved component of the City-County Comprehensive Plan, and ultimately will be integrated into a unified watershed management master plan for the City of Lincoln and projected growth areas.

1.6 The Little Salt Creek Watershed Master Plan will be created in two phases to provide the flexibility of planning for the watershed in Phase 1 while allowing for adaptation to research findings as they become available in Phase 2.

1.7 This project is funded jointly by the City of Lincoln and the Lower Platte South Natural Resources District (NRD).

2. OBJECTIVE

2.1 The objective of the study is to develop a watershed master plan which will allow the City and NRD staff, as well as other planning and design engineers, to proactively forecast, evaluate, and manage stormwater quantity and quality, channel stability, maintenance and operations, and financial impacts as well as environmental impacts which are occurring today or will result from future development or other changes in the basin.

2.2 The goal of the plan is to identify future capital improvement projects that will help to alleviate flood hazards, improve water quality, and in areas where natural streams exist, stabilize stream banks.

2.3 In addition this master plan will consider potential impacts to unique and sensitive environmental resources in the watershed, including rare saline wetlands, the state endangered saltwort plant (Salicornia rubra), and the Salt Creek Tiger Beetle (SCTB) which is a federally listed endangered species.

2.4 In general, the plan shall include a compilation of basin data for stormwater quality and quantity, drainage infrastructure, soils, channel stability, environmental assets including critical habitat and recovery units of the SCTB, high-risk facilities, best management practices, and capital improvement projects.

2.5 The plan should provide guidelines for future development from a watershed perspective and should include project components reflecting capital improvement projects, non-structural agricultural and urban BMPs, and conservation features.

2.6 The project will identify fragile habitats and unique environmental resources, including saline wetlands and native prairies, and make recommendations to protect and enhance them.

2.7 The project will include a Physical Map Revision to current FEMA FIRM for Little Salt Creek, based upon the master plan hydrology and hydraulics.

2.7.1 odeling should be completed in a format consistent with developing FEMA floodplain and floodway delineations for the mainstem and tributaries up to the uppermost 150-acre sub-basin.

2.8 The process should include a significant public involvement component that informs the public about the development of the master plan.

2.9 The Watershed Master Plan project components, computer models and model outputs will be utilized by the City, NRD, and local consultants in evaluating and guiding future changes proposed in the basin.

2.10 The Watershed Master Plan should take into consideration the 2030 City-County Comprehensive Plan, including floodplain and environmental components, the future land use plan, and future infrastructure if applicable.

2.11 The plan should be adaptable to other basins of the City so that this study and subsequent basin planning studies can ultimately be developed for incorporation into a consistent and comprehensive watershed master plan for the City of Lincoln.

2.12 Information gathered for this master plan will be stored in GIS format compatible with the City of Lincoln's GIS database.

3. BASIN DESCRIPTIONS

3.1 Little Salt Creek basin has been identified as one of the areas for the proposed master plans.

3.1.1 This basin is located generally north of the City Limits of Lincoln and is predominantly agricultural land.

3.1.1.1 The watershed is drained by the Little Salt Creek which is tributary to Salt Creek.

3.1.2 The watershed master planning for the Little Salt Creek Watershed was initiated in 2000.

3.1.2.1 However, the presence and federal listing of the Salt Creek Tiger Beetle as an endangered species required that more information regarding the SCTB be developed before completing a watershed master plan for the basin.

3.1.2.2 As a result, the master planning process for this basin was halted in 2002.

3.2 The Interim Stormwater Hydrology and Hydraulics Report - Lower Salt Creek Watershed was published in early 2004.

3.2.1 Additional previous studies and references for the basin are listed in the Section 7, Sources of Information.

4. PROJECT COORDINATION

4.1 This project will involve coordination with the City, Lower Platte South Natural Resources District, Lancaster County, the Natural Resource Conservation Service, the Nebraska Department of Natural Resources, the Nebraska Department of Roads, the Nebraska Department of Environmental Quality, Nebraska Game and Parks, the University of Nebraska, Lincoln, the U.S. Fish and Wildlife Services, the U.S. Department of Agriculture, the U.S. Army Corps of Engineers and other agencies as needed.

4.2 The Consultant will be required to coordinate the project with those agencies.

4.3 Ed Kouma, PE, will act as the City project manager for this project.

5. ANTICIPATED SCOPE OF WORK and DELIVERABLES

5.1 See attached Appendix A**.** Scope of work is for Phase 1.

5.2 It is intended, but not guarenteed, that the scope of the contract with the chosen consultant will be amended in the future for phase 2 efforts.

6. CITY'S RESPONSIBILITY

6.1 Provide available information as detailed in the Section on Sources of Information

6.2 Provide timely reviews of the drafts and deliverables.

7 SOURCES OF INFORMATION

7.1 Information to be provided digitally to Consultant by City

7.1.1 Existing and proposed land use

7.1.2 Stream reaches

7.1.3 Current aerials, streets, wetland cover, LIDAR data.

7.1.4 Existing floodway and flood fringe boundaries

7.1.5 Existing hydrologic and hydraulic models

7.1.6 Land ownership information

7.2 Information provided on hard copy as applicable by City
- 7.2.1 Plans for ponds and hydraulic structures
- 7.2.2 FEMA/FIS study
- 7.2.3 Interim Stormwater Hydrology and Hydraulics Report, Lower Little Salt Creek Watershed.
- 7.2.4 City of Lincoln Drainage Criteria Manual
- 7.2.5 Past Public Involvement Correspondence

7.3 Information on internet
- 7.3.1 2030 Comprehensive Plan -- www.lincoln.ne.gov/city/plan/complan/2030/index.htm
- 7.3.2 Floodplain Task Force information – www.lincoln.ne.gov/city/pworks/watrshed/mfptf/index.htm
- 7.3.3 Stevens Creek, Beal Slough, and SEUSC Watershed Master Plans www.lincoln.ne.gov/city/pworks/watrshed/mplan/index.htm
- 7.3.4 Mayor's Floodplain Task Force recommendations - www.lincoln.ne.gov/city/pworks/watrshed/mfptf/reports/final/index.htm
- 7.3.5 Flood Standards for the Existing Urban Area - www.lincoln.ne.gov/city/attorn/lmc/ti27/ch2752.pdf
- 7.3.6 Flood Standards for the New Growth Areas - www.lincoln.ne.gov/city/attorn/lmc/ti27/ch2753.pdf

7.4 Other information
- 7.4.1 Regulated NPDES industries and CAFOs within the watershed (obtain from NDEQ)

8. SELECTION PROCEDURE AND SCHEDULE

8.1 The City intends to proceed with this project as soon as possible.

8.2 The proposed schedule of activities is as follows:

8.2.1	Final requests for clarification	July 20, 2007
8.2.2	Proposal submittal 12:00 Noon	August 1, 2007
8.2.3	Short list and schedule interviews, week of	August 6, 2007
8.2.4	Interview short listed consultants, week of	August 13, 2007
8.2.5	Select consultant and negotiate, week of	August 20, 2007

8.3 Any request for clarification or additional information regarding this RFP shall be directed in writing to:

Vince M. Mejer Purchasing Agent
440 So. 8th St., Ste.200,Lincoln, NE 68508
fax: 402/441-6513 or email: vmejer@lincoln.ne.gov

9. PROPOSAL CONTENTS

9.1 Proposal contents shall include the following
- 9.1.1 Firm name, address and telephone number.
- 9.1.2 Years established and former names.
- 9.1.3 Type of services particularly qualified to perform.
- 9.1.4 Names of principles and states in which they are registered
- 9.1.5 Names of key personnel to be used for the proposed work, experience of each and length of service with the firm.
- 9.1.6 Number of staff usually and currently employed.
- 9.1.7 Outside consultants and associates usually and currently employed.
- 9.1.8 List of completed projects of similar nature for which the firm was the principal professional.
- 9.1.9 Current projects of the firm and estimated construction costs of each.
- 9.1.10 Willingness and capability to meet the time requirements expressed in the Scope of Services.
- 9.1.11 The length of the proposal shall not exceed 15 pages.(The resume of personnel are not included in this page count.)

9.2 Project Personnel and Experience
- 9.2.1 Provide an organizational chart of key personnel for the proposed project showing responsibility and lines of authority.
- 9.2.2 Provide brief resumes of key project personnel, including: Name and anticipated role in proposed project, and experience/education related to this type of project
- 9.2.3 Demonstrate the experience of the firm and project team with watershed basin planning, endangered species critical habitat, water quality modeling, FEMA floodplain modeling, basin characterization, runoff modeling and analysis.

9.3 Performance and reference:
- 9.3.1 Demonstrate the technical ability of the firm and the responsible personnel to perform similar kinds of projects in timely and cost effective manner.
- 9.3.2 Provide an example of watershed management plan projects within past five years.
  - 9.3.2.1 For each project, list project name and location, contact person and telephone number, cost of work (actual cost vs. initial estimated cost), time to complete the projects and which key personnel worked on the project.

9.4 Approach to proposed project:
- 9.4.1 Describe general approach to the proposed project. Include description of each key step, milestones, deliverables, and meetings with the city.
  - 9.4.1.1 Provide flow chart showing tasks and deliverables.
- 9.4.2 Describe any ideas to improve the development of the plan and recommend any scope of work not identified in this RFP considered essential by the consultant.

9.5 Schedule
- 9.5.1 Consultant shall indicate their proposed schedule by indicating the elapsed calendar days between important milestones and show the ability to meet schedule.

9.6 Other Items
- 9.6.1 Availability of key personnel.

10. EVALUATION CRITERIA

10.1 All proposals will be evaluated on the following criteria:
- 10.1.1 Team's experience and key personnel.
- 10.1.2 Demonstrated past performance on similar projects.
- 10.1.3 Clarity, conciseness, and organization of the proposal
- 10.1.4 Demonstrated understanding of the project and City processes.
- 10.1.5 Proposed approach of analysis
- 10.1.6 Demonstrated knowledge of threatened and endangered species critical habitat, recovery, and water quality issues as noted in the anticipated scope of work.
- 10.1.7 Consultant's schedule.
- 10.1.8 Comments and opinions provided by references.

11. SUBMITTAL PROCEDURE

11.1 Please submit **six** copies of your proposal at following address, no later than 12:00, Noon, Wednesday, August 1, 2007 to:

Vince M. Mejer
Purchasing Agent
440 South 8th Street, Suite 200
Lincoln, Nebraska 68508

11.2 If the proposal is sent by mail, the respondent shall be responsible for actual delivery of the proposal prior to the submittal deadline.
- 11.2.1 Any response received after the submittal deadline will not be considered.

11.3 The City may waive any informalities or irregularities in the proposal and reserves the right to accept, reject, or negotiate any or all proposals, including the right to award the contract in whole or in part if deemed to be in the City's best interest.

11.4 Request for clarification or additional information must be received in written format by July 20, 2007

11.5 Any additional information regarding this RFP will be issued as written addenda and sent to all RFP recipients, at least five working days before the submittal deadline.

12. ESTIMATED FEES

12.1 The City will rank the proposals based on the criteria outlined in the RFP and determine a short list.

12.2 The firms selected for oral presentations will be notified and will be asked to prepare a fee schedule and submit in a sealed envelope at the time of interview.

12.3 The fee schedule may be used in case of a tie in the ranking of the top firm after the oral presentations.

12.4 If the City is unable to arrive at a mutual agreement with the top ranked firm the City retains the sole right to move on to negotiations with the second (then third, etc.) ranked firm.

ANTICIPATED SCOPE OF WORK
LITTLE SALT CREEK WATERSHED MASTER PLAN

BACKGROUND/HISTORY

The City of Lincoln (City) and the Lower Platte South Natural Resources District (NRD) are in the process of developing a Comprehensive Watershed Management Plan for the City of Lincoln and its future growth areas. This comprehensive watershed plan is being developed basin by basin, through the completion of watershed master plans for individual basins. Watershed master plans are used as planning tools to be referenced in conjunction with proposed development and as a guide in the preparation of future capital improvement projects. The next watershed scheduled for master plan development is the Little Salt Creek Watershed, a tributary to Salt Creek on the north edge of the city.

The watershed master planning for the Little Salt Creek Watershed was initiated in 2000. However, the presence and federal listing of the Salt Creek Tiger Beetle (SCTB) as an endangered species required that more information regarding the SCTB be developed before completing a watershed master plan for the basin. As a result, the master planning process for this basin was halted in 2002, and the Interim Stormwater Hydrology and Hydraulics Report - Lower Salt Creek Watershed was published in early 2004.

The Salt Creek Tiger Beetle (Cicindela nevadica lincolniana) is an active, ground-dwelling, predatory insect that captures smaller arthropods in a ‘‘tiger-like’’ manner by grasping prey with its mouth. The SCTB is confined to eastern Nebraska saline wetlands and stream banks of Little Salt Creek and Salt Creek in the northern third of Lancaster County. It is found along mud banks of streams and seeps, and in association with saline wetlands and exposed mud flats of saline wetlands. The SCTB was added to the Nebraska endangered species lists in 2000. On October 6, 2005, the U.S. Fish and Wildlife Service listed the beetle as an endangered species under the federal Endangered Species Act.

The Little Salt Creek Watershed Master Plan will build on the Interim Report, and will include components typical of master plans previously developed by the City and NRD. In addition, this master plan will consider potential impacts to unique and sensitive environmental resources in the watershed, including rare saline wetlands, the state endangered saltwort (Salicornia rubra), and the SCTB. Key components of the master plan will be the identification of areas and habitats that require protection from degradation, and development of potential improvement projects in situations where sufficient supporting data is available. Because there is ongoing research related to saline wetlands and the SCTB, the master plan recommendations must be flexible to allow for adaptation to research findings as they become available.

PHASE I COMPONENTS

1. **WATERSHED INVENTORY**
   - 1.1. Collect, compile, and evaluate the data listed below for the basin.
     - 1.1.1. Provide the data in a format that is fully compatible with the City's (i.e. Public Works and Utilities Department's) GIS Database.
     - 1.1.2. Provide 'metadata' for all Consultant created files and databases, generally including source/origination, quality, qualifications, attribute coding, and other relevant information mutually agreed to by the City and Consultant.
   - 1.2. Data sets will include but not be limited to:
     - 1.2.1. New data that updates information for any data category compiled as part of the Lower Little Salt Creek Watershed Interim Report (See Table A).
     - 1.2.2. Existing minimum flood corridor based upon City stormwater ordinances including both locations carrying greater than 150 acres of drainage and channels with a defined bed and bank.
       - 1.2.2.1 Minimum flood corridors will be developed only for reaches within the City's zoning jurisdiction.
     - 1.2.3. Known on-going or proposed developments.
     - 1.2.4. Unique environmental resources, including saline wetlands and/or Salt Creek Tiger Beetle (SCTB) habitat.
       - 1.2.4.1 Depending on availability of Critical Habitat and Recovery Plan information, this task may be performed under a subsequent phase of work.
     - 1.2.5. Table A indicates some of the detail needed for each of the above data sets.

2. **GOALS AND CRITERIA**
   - 2.1. Update floodplain and floodway maps for the entire Little Salt Creek Watershed using best available data.
     - 2.1.1 Mapping will be completed for all stream reaches that have a drainage area of 150 acres or greater.
   - 2.2. Identification of known problem areas and areas requiring protection.
     - 2.2.1. Identify areas with flooding, erosion, and/or water quality degradation
     - 2.2.2. Identify areas that require protection, such as Critical Habitat and Recovery Units for the SCTB, and other rare or sensitive environmental resources.
     - 2.2.3. Identify cases where problem areas and areas requiring protection overlap.
     - 2.2.4. Identify and develop Best Management Practices (BMPs) and/or capital improvement projects in cases where sufficient supporting data related to SCTB impacts is available.
   - 2.3. Prioritization of problem and/or protection areas based on degree of flooding, erosion, water quality degradation, potential impacts to environmental resources, importance of habitat/resource protection, and location relative to growth tier.
   - 2.4. Develop guidelines and recommendations for future development of the watershed based on master plan findings and best available information regarding environmental resources, including saline wetlands and the SCTB.
     - 2.4.1. Include activities that may constitute a "take" according to the Endangered Species Act (ESA).
     - 2.4.2. Include list or general description of possible mitigation measures.
   - 2.5. Identify potential funding sources for future studies and/or implementation of potential BMPs and future capital improvement projects.
   - 2.6. Maintain a proactive stakeholder and public involvement process.
   - 2.7. Foster resource agency coordination.
   - 2.8. Incorporate flexibility into the plan to allow potential BMPs and capital improvements to be modified as more information related to the SCTB is made available.

3. **HYDROLOGY AND HYDRAULICS**

3.1. Hydrology will be run on HEC-HMS public domain model.

3.1.1 The HEC-1 model used in the Interim Report will be imported to HEC-HMS and updated to reflect best available data.

3.2. Hydrologic parameters will be updated to reflect existing conditions.

3.2.1 The upper half of the watershed (north of City extra-territorial jurisdiction limits) will be evaluated to the same level of detail as the lower half studied in the Interim Report.

3.3. Sub basin delineations will be approximately 150 acres on average, with a typical range of 100 to 200 acres.

3.4. Hydrologic data will be provided in a format that is fully compatible with the City's (i.e., Public Works and Utilities Department's) GIS database.

3.5. The following scenarios will be evaluated:

3.5.1. Existing conditions to evaluate stormwater runoff and stream flows throughout the watershed for the 2- 10-, 50-, 100-, and 500-year storm events.

3.5.2. Existing and future conditions for the water quality event to determine potential impacts from development and assist in the formulation of potential water quality BMPs.

3.6. Hydraulics will be run on the HEC-RAS public domain model.

3.6.1 The 10-, 50-, 100-, and 500-year occurrence intervals will be run to develop flood profiles consistent with FEMA standards.

3.6.2. Stream cross-sections will be developed at regular intervals from the confluence of Little Salt Creek with Salt Creek to the upstream limits located below basins draining 150 acres.

3.6.2.1 Cross-sections developed and used in the Interim Report will be used for the lower half of the basin.

3.6.2.2 Additional cross-sections will be developed for the upper half of the basin outside of the City's current zoning jurisdiction.

3.7. Delineations for the 100- and 500-year floodplains and the floodway will be prepared for a Physical Map Revision to current FEMA FIRM for Little Salt Creek.

3.8. Hydraulic data will be provided in a format that is fully compatible with the City's (i.e. Public Works and Utilities Department's) GIS database.

4. WATER QUALITY

4.1. Stream bioassessments will be conducted at approximately a half-dozen locations on Little Salt Creek and its tributaries.

4.1.1 Bioassessment procedures will be based on EPA guidance as published in Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish (1999).

4.2. Consultant shall perform a limited water quality assessment for the watershed.

4.2.1 The assessment will include collecting water quality samples at up to a ten locations.

4.2.2 Because the dominant land use is agricultural, sampling sites will be selected in order to obtain data below various types of farming practices, livestock operations, and urban development where applicable.

4.2.3 Dry weather grab samples will be collected in the late spring or early summer, and again in the later summer/early fall to provide baseline information.

4.2.4 At up to five of the ten sites, grab samples will be collected during wet weather in order to estimate runoff pollutant concentrations.

4.2.5 Each grab sample will be analyzed for the following constituents:

4.2.5.1 Day 5 Biological Oxygen Demand (BOD5)

4.2.5.2. Total Suspended Solids (TSS)

4.2.5.3. Total Dissolved Solids (TDS) or Electrical Conductivity (EC)

4.2.6 If funding allows, sample for sodium and chloride ions
4.2.6.1 Total Nitrogen (TN)
4.2.6.2 Total Phosphorus (TP)
4.2.6.3 Dissolved Phosphorus
4.2.6.4 Copper
4.2.6.5 Lead
4.2.6.7 Zinc
4.2.6.8 E. coli

4.3. Qualitative evaluation of typical water quality pollutant issues anticipated to arise with future urban development.

5. GEOMORPHIC

5.1. Conduct geomorphic inventory of the main stem and significant tributaries to Little Salt Creek using background and field analysis
5.1.1. Obtain thalweg profile survey to identify reaches of channel degradation (knick points, head cuts, etc.) within the City's current zoning limits.
5.1.2. Information will be incorporated into a GIS coverage indicating location of stream centerline and incised or unstable channel banks, nicks, head-cuts, etc.
5.1.3. Obtain digital photographs of each geomorphic assessment location and/or stream instability.
5.1.4. Provide narrative description of each unstable stream site above.
5.1.5. Complete analysis of the impact of future development on stream stability as it relates to the water quality storm.

6. SOILS ASSESSMENT

6.1. Identification of dispersive soils
6.2. Location of saline seeps in stream banks
6.3. Elevation of saline seeps

7. STRUCTURES

7.1. Identify any existing structures (i.e., buildings) located within the 100-year floodplain delineated as part of the master plan.
7.1.1. Collect sufficient survey information needed to complete an elevation certificate for each property to verify whether it is above or below the proposed 100-year flood elevation that is developed.

7.2. Collect basic hydraulic information on existing hydraulic structures (i.e., culverts, and bridges) that drain at least 150 acres.
7.2.1. Information to be collected includes: county ID, city/state ID, type, size, length, pier width, top of roadway profile, invert/flow line elevations, physical condition, and low steel elevation where applicable.
7.2.2. Collect photos of the structures that include cross-section of channel facing upstream from structure, upstream face of structure, downstream face of structure, and cross-section of channel facing downstream from structure.

7.3. Provide the bridge data in a format that is fully compatible with the City's (i.e. Public Works and Utilities Department's) GIS database.

8. PUBLIC INVOLVEMENT & FACILITATION

8.1. Public involvement will include mailing an initial questionnaire and multiple information mailings throughout the length Phase I of the master plan.
8.1.1. The mailing formats will be developed in conjunction with City and NRD staff.

8.2. Three open house meetings will be led and coordinated (including mailings and meeting setup) by the consultant throughout the length of Phase I of the master planning process.
8.2.1. Brochures for each open house will be developed by the consultant and completed by the City's Citizen Information Center (CIC) Department and will be mailed by the consultant to each property owner in Little Salt Creek and to approximately 200 other individuals (government entities, engineers, developers, attorneys).

8.3. The consultant will assist in the formation of a Citizen's Advisory Group (CAG) to provide ample opportunities for public education and input to the master planning process.
- 8.3.1 Up to three CAG meetings will be facilitated by the consultant as part of Phase I.
- 8.3.2 Future phases of work may necessitate additional CAG meetings.

8.4. The consultant will facilitate up to four meetings of the Technical Advisory Group (TAG) throughout Phase I of the master plan.
- 8.4.1 The TAG shall include various resource and regulatory agencies.
- 8.4.2 Several TAG participants will also serve on the CAG described in 7.3 above.
- 8.4.3 TAG participants will include, at a minimum, the following agencies:
  - 8.4.3.1 City of Lincoln – Public Works & Utilities (Watershed Management Division)
  - 8.4.3.2. City of Lincoln – Planning Department
  - 8.4.3.3. City of Lincoln – Parks & Recreation Department
  - 8.4.3.4. Saline Wetlands Partnership
  - 8.4.3.5. Lower Platte South Natural Resources District
  - 8.4.3.6. Lancaster County Engineer
  - 8.4.3.7. Nebraska Game & Parks Commission
  - 8.4.3.8. US Fish & Wildlife Service.
  - 8.4.3.9 University of Nebraska (School of Natural Resources and Dept. of Entomology)

8.5. Two potential meetings each with City Mayor's office, Planning Commission, City Council, County Commissioners, and NRD board.

8.6. Up to three potential meetings with affected City/County Departments and any other public agencies.

8.7. The property ownership list will be provided to the Consultant by the City.

8.8. Creation and distribution of a bi-monthly newsletter.

8.9. Website hosted by consultant to include pertinent information

8.10. The property ownership list and other entities list will be provided to the consultant by the City.

9. CAPITAL IMPROVEMENT PROJECTS

9.1. Primary and secondary problem areas will be identified.

9.2. A general outline of capital improvement projects (CIP) to improve water quality, address stream stability, and reduce flooding will be developed if adequate supporting data is available regarding possible impacts to saline wetlands, SCTB, and Critical Habitat, and Recovery Areas for the SCTB.

9.3. Examples of possible CIPs proposed in Phase I include enhancement of existing restoration and rehabilitation projects, stream stability projects in areas not located near SCTB populations, and wetland restorations.
- 9.3.1 All proposed CIPs will include a summary of potential impacts to SCTB habitat.
- 9.3.2 Recommended improvements will be reviewed by the TAG before final adoption into the LSCWMP.
- 9.3.3 If adequate supporting data regarding possible SCTB impacts is not available during the time frame established for Phase I, the development of a CIP program will be conducted in subsequent phases as information becomes available.

10. POTENTIAL GUIDELINES/ORDINANCES

10.1. Recommendations and guidelines for future development will be proposed based on master plan hydrologic, hydraulic, water quality, and geomorphic analyses.
- 10.1.1. Recommendations will be proposed based on best available data regarding potential impacts to saline wetlands and SCTB habitat where sufficient supporting data exists.
- 10.1.2. Recommendations will be reviewed by the TAG before final adoption into the LSCWMP.
- 10.1.3. If adequate data regarding SCTB habitat is not available during completion of Phase I services, more detailed guidelines will be developed in subsequent phases of work.

11. POTENTIAL FUNDING SOURCES

11.1. Phase I of the master plan will include an evaluation and listing of potential funding sources for future studies and proposed BMPs and capital improvements.

12. DELIVERABLES

12.1. As outlined in the scope of services above, provide a final watershed master plan for Phase I services for the Little Salt Creek Watershed, supported by technical memos, draft and final reports describing the work completed, conclusions, and recommendations.

- 12.1.1. The written material is to be in an 8 ½" by 11" format, supplemented and supported by maps, figures, photographs, and tables.
- 12.1.2. Fact sheets, PowerPoint presentations, presentation boards and other materials to be prepared for public involvement purposes.
- 12.1.3. Digital copies of maps, figures, photographs, and other key information shall be provided at interim intervals for updating the City's Website.
  - 12.1.3.1 Website hosted by consultant to include pertinent information.
- 12.1.4. The models used in the stormwater basin planning must be in standard form (i.e., HEC-HMS and HEC-RAS to allow for easy updates and changes by the City, NRD, County, and Consultants.
- 12.1.5. All project deliverables (except the draft report) will be required to be in a digital format and compatible with the City's computer systems.
- 12.1.6. Completed and approved Letter of Map Change for the watershed.

12.2. The submitted draft and final report will be accompanied by a cover letter signed by the senior QA/QC personal for this project certifying that they have reviewed the submitted report.

12.3. The final report format will be consistent with the Stevens Creek Watershed Master Plan.

- 12.3.1. The draft and final Phase 1 report will include the following sections.
  - 12.3.1.1. Executive Summary
  - 12.3.1.2. Introduction and Purpose
  - 12.3.1.3. Data Collection and Development
  - 12.3.1.4. Hydrologic Model Development
  - 12.3.1.5. Hydraulic Model Development
  - 12.3.1.6. Floodplain Management Tools
  - 12.3.1.7. Water Quality
  - 12.3.1.8. Geomorphology
  - 12.3.1.9. Unique/Sensitive Environmental Resources
  - 12.3.1.10. Capital Improvement Projects
  - 12.3.1.11. Phase I Master Plan Implementation
  - 12.3.1.12. Digital Deliverables
  - 12.3.1.13. Glossary of Terms
  - 12.3.1.14. Appropriate Appendices

12.4. The Phase 1 final report will also be in a digital format for the City's use and for inclusion on the City's Website.

12.5. All model inputs and outputs will be supplied to the City in a digital and hard copy format.

- 12.5.1. All hydrology and hydraulics will be in a public domain model.

12.6. GIS watershed information and any other information must be compatible with the City's GIS database.

TABLE A
DETAILED DATA SET INFORMATION AS APPLICABLE
(TO BE COMPILED DURING WATERSHED INVENTORY)

1. Existing land use data (land uses provided by City)
   - 1.1 land uses

2. Soil data
   - 2.1 soil types
   - 2.2 hydrologic soil groups

3. Sub-basins
   - 3.1 identification (to be coordinated with City)
   - 3.2 size
   - 3.3 existing and proposed curve numbers
   - 3.4 existing and proposed time of concentrations

4. Stream reaches (locations provided by City)
   - 4.1 identification (to be coordinated with City)
   - 4.2 upstream and downstream flow line elevation
   - 4.3 reach length
   - 4.4 grade
   - 4.5 Mannings for channel and overbank
   - 4.6 bank full flow and velocity
   - 4.7 channel type and typical geometry
   - 4.8 channel condition

5. Existing and future trails, parks and open space, public owned lands, wetlands, riparian areas, historical and cultural assets, land conservation elements, and other pertinent natural and cultural resource components.
   - 5.1 type
   - 5.2 size

6. Existing and proposed bridges/culverts (from aerials, City, County, NRD, and potential survey by consultant)
   - 6.1 Survey may be needed on existing bridges
   - 6.2 See Section on Structures in Anticipated Scope of Work

7. Detention/retention ponds (information form aerials, City, and NRD)
   - 7.1 identification (to be coordinated with City)
   - 7.2 size
   - 7.3 type
   - 7.4 condition
   - 7.5 hydrologic information including stage-storage-discharge tables
   - 7.6 plans
   - 7.7 pertinent elevations

8. Structures in the floodplain (from aerials and watershed survey)
   - 8.1 type
   - 8.2 address

9. Commercial and industrial facilities, and golf courses (from aerials, watershed survey, NDEQ, other information) and any other land uses having implications for water quality or quantity.
   - 9.1 type
   - 9.2 name
   - 9.3 size

10. Existing and updated floodplain and floodway delineations.

11. Existing minimum flood corridor for open channels without a mapped floodplain.

    11.1 Minimum flood corridor shall mean the existing channel bottom width plus 60 feet plus six times the channel depth. This stream buffer area shall be centered on the channel and is required in along channels draining greater than 150 acres, and along channels with less than 150 acres of drainage area that exhibit a defined bed and bank.

12. Known problem areas (due to existing and proposed potential flooding, bank erosion, inadequate drainage structures, or structures in need of repair based on information form City/NRD/County, public involvement, field observations, and technical study data).

13. Known restoration project areas related to saline wetlands, SCTB, or other environmental resources.

14. Inventory of public/private lands.

15. A listing of research or protection projects that includes timelines, contacts, descriptions, and objectives.

16. Develop a list of sources of information that will be used in the watershed master plan study including previous studies completed in the Little Salt Creek basin.

PHASE II

Phase II of the Little Salt Creek Master Plan will address items that could not be fully evaluated in Phase I due to missing or incomplete data related to the protection of saline wetlands and SCTB habitat. Information required to develop a more comprehensive list of capital improvement projects, BMPs, and development guidelines may include, but is not limited to, the following:

1. **ADDITIONAL DATA REQUIRED**

   1.1. Official publication of Critical Habitat and the Recovery Plan, and Recovery Areas by FWS, if not completed during Phase I.
   1.2. More detailed information regarding surface and groundwater interaction in the watershed
   1.3. Better understanding of the broader ecosystem function of the saline wetlands to benefit the saline dependent organisms.
   1.4. Potential impacts and effects of stormwater detention on soil and groundwater salinity
   1.5. Better understanding of the dependence of the SCTB on a properly functioning saline wetland ecosystem for survival.

2. **DEVELOP CAPITAL IMPROVEMENT PROJECTS**

   2.1. As more information becomes available, the areas identified as needing capital improvements in Phase I will be slated for capital improvement projects.

   2.2. CIP design will be based on hydrologic, hydraulic, water quality, and geomorphic analysis of Phase I, in addition to new data related to the protection and enhancement of unique environmental resources such as saline wetlands and the SCTB (see Items 1.1 through 1.4).

3. **PROPOSED BMPS**

   3.1. As more information becomes available, appropriate BMPs will be proposed for both agricultural practices and urban development. Emphasis will be placed on protecting unique natural resources, such as saline wetlands and the SCTB.

4. **POTENTIAL GUIDELINES/ORDINANCES**

   4.1. As more information becomes available, general recommendations for future development in Phase I will be refined as necessary to be consistent with updated research findings.