



**REQUEST FOR PROPOSAL  
TOWN OF BERTHOUD  
WATER, WASTEWATER, AND DRAINAGE SYSTEMS STUDIES**

SEALED PROPOSALS, INCLUDING PRICE, WILL CONSIST OF 4 PAPER COPIES WILL BE RECEIVED by the Town of Berthoud, 328 Massachusetts Avenue, Berthoud, CO 80513 until 1:00 p.m., Thursday, June 3, 2010 at which time they will be publicly opened for PROFESSIONAL SERVICES required to conduct the Town of Berthoud Water, Wastewater, and Drainage System Master Plan studies.

Price of the proposals shall contain itemized prices in accordance with the proposals. Neither proposal contents nor price will be released at proposal opening.

Any inquiries regarding this request for proposal should be directed to Stephanie D. Brothers, Public Works Director, Town of Berthoud, 328 Massachusetts Avenue, Berthoud, CO 80513, Telephone (970) 532-2634.

Proposals shall be based on the following attachments "A", "B", and "C".

## ATTACHMENT "A"

### A. INFORMATION FOR CONSULTANTS:

1. In order to be considered for an award, each proposal must bear the signature of the consultant or his authorized representative, the work must be supervised by a Colorado licensed engineer, and the firm must be registered with the State of Colorado.
2. Proposals received after the time and date specified will not be accepted or considered. ***This requirement is strictly enforced.***
3. The successful consultant shall furnish all materials, equipment and labor necessary to complete the study.
4. The Town reserves the right to reject any or all proposals submitted.
5. The successful consultant shall be fully insured as to hold the Town harmless from any claims involving the employees or equipment used by the successful consultant and subconsultants while executing this service.
6. The successful consultant shall be familiar with all applicable state laws.
7. No prospective consultant shall withdraw their proposal for a period of thirty (30) days after the actual date of proposal opening.
8. The Town shall provide all possible assistance and cooperation to firms preparing proposals for this project. The consultant should understand that verbal comments may be subject to misinterpretation and are in no way binding on the individual, or the Town. If questions arise concerning any aspect of this proposal the consultant should request clarification in writing. A copy of this request, as well as the written response, shall be provided to all firms receiving requests for proposals on the project.
9. The Town hereby notifies all prospective consultants that it will affirmatively insure that in any contract entered into pursuant to the advertisement, small or minority business enterprises will be afforded full opportunity to submit proposals in response to this invitation and will not be discriminated against on the grounds of age, race, religion, color, sex, national origin, or ancestry in consideration for an award.
10. The consultant hereby agrees that should they be awarded this contract, consultant shall not discriminate against any person who performs work thereunder because of age, race, religion, color, sex, national origin or ancestry.

**B. PROPOSAL FORMAT:**

The proposal shall be prepared and contain the following information:

1. Cover letter submitted with proposal.
2. Title page.
3. Table of Contents.
4. Introduction.
5. Scope of Services:

A detailed Preliminary Scope of Services is included in Attachment "B" Sections D, E, and F. State how you intend to conduct the activities presented in the Preliminary Scope of Services, and list all assumptions made in preparing the proposal. The proposed work/approach should be presented in the same format as in Attachment "B" and should address all the requirements contained therein.

6. Proposed Scope Alterations:

If you feel that any of the Scope of Services (in Attachment "B") may be improved by additions, deletions, or changes, please elaborate in this section. State your alterations as specific task changes for the activities presented in the Scope.

7. Qualifications:

- a. Briefly show your firm's capability for performing this project.
- b. List project team members and identify the project manager. Include a certification that the work conducted will be supervised by a professional engineer licensed in Colorado.
- c. State which of your offices will perform the project work.
- d. Provide a resume for each key project member.
- e. Identify all proposed subconsultants, list the work to be performed by the proposed subconsultants, and provide statements of project specific qualifications for each subconsultant.

8. Provide a bar graph schedule depicting the duration on each work item and the proposed phasing of the work.

9. List possible funding sources (grants, stimulus, etc.) the Town can obtain to help fund each of the three master plans (water, wastewater, and drainage) and any known deadlines for obtaining these additional sources.

**C. PRICE PROPOSAL:**

Submitted with the proposal shall be a copy of the price proposal(s). Individual price proposals may be submitted, one for each utility master plan. Also allowed is if the

consultant chooses to propose a price for all three, one total price can be submitted but include a cost for each master plan to show the total cost submitted. The proposals, prepared in the format of Attachment "C-1, C-2, and C-3."

**D. CONTRACTOR SELECTION PROCEDURES:**

The Town will conduct selection procedures based on the review of the proposals and possible interview. Consideration in the selection process by the Town will be based upon the ability of professional personnel, past performance, willingness to meet, time requirements, location, and current and projected work-loads.

The Town will evaluate proposals submitted and, based upon these proposals, select those firms to be interviewed, if so desired by the Town. The qualifications, experience and expertise of the project team, contents of the work proposal, and price will be considered in selecting firms to be interviewed.

The Town may interview some of the submitting firms, if possible, selected from those that have submitted proposals to do the work. The interview shall be recorded and include discussion of each firm's projections of project costs, qualifications, approaches to the project, ability to furnish required professional services, use of alternative methods for furnishing required professional services and fee based on the Town's description of the work. The fee may be used as a basis, along with the qualifications listed in the paragraph above this section, for selection by the Town of the most qualified firm for contract.

## ATTACHMENT "B"

### A. AUTHORIZATION

The Town of Berthoud's Board of Trustees has authorized the Town Staff to conduct the study described herein. The Consultant will complete the tasks and requirements outlined in sections **D, E, and F Scope of Services** of this Attachment B, or the Consultant may also chose to separate tasks if not electing to take on all three.

### B. PROJECT REQUIREMENTS

#### 1. Monthly Progress Reports and Billing Statements

The Consultant shall submit a brief monthly progress report outlining the study status, progress, and results to date, regardless of whether or not a billing statement is submitted, on or before the last working day of the month. Each billing statement must include a task-by-task report justifying the cost items contained in the billing statement. The monthly progress report may be used as the justification for the billing statement as long as all cost items covered in the billing statement are addressed in the progress report.

#### 2. Computer Models, Statement of Assumptions, Project Work File

a. The Consultant shall develop a computer model and/or spreadsheets capable of being utilized by the Town as a part of this project. The Consultant shall submit to the Town for approval all proposed model names and data formats prior to beginning work on that task. All data shall be submitted to the Town in written and digital formats with the final report. Digital media shall be labeled by the Consultant to provide sufficient detail to access the information on that media.

User manuals shall be submitted by the Consultant to the Town providing complete documentation of computer models developed under this project. The user manuals shall also contain the source code language and the type of computer equipment necessary to operate the model(s). All computer models, databases, and spreadsheets developed herein (written and digital formats) are due on the same date as the final report.

b. To facilitate the Town's accurate evaluation of the Consultant's work product, computations, conclusions and recommendations, the Consultant shall:

\* Include in the final report a section describing the assumptions and methodology used by the Consultant in generating the data and conclusions contained in that report.

\* Maintain a project work file containing the materials used in project analysis. This file will be available for review by the Town and should be organized in such a way as to allow replication of the steps and procedures used by the Consultant to reach the conclusions described in the study.

\* Prepare a project notebook containing a description of the assumptions and methodologies used in the project analysis. The notebook shall be organized in such a way as to allow replication of the steps, calculations, and procedures used by the Consultant to reach the conclusions described in the draft final report. The project notebook shall be submitted with the draft final report.

3. Cost Estimates

The Consultant shall provide, as a part of project cost estimates, an estimate of:

- a. The cost to prepare final plans and specifications.
- b. The cost to acquire permits and to mitigate project impacts.
- c. The cost of project legal expenses.
- d. The cost of acquiring access and rights-of-way.

4. Calculation of Engineering Costs and Contingencies

The Consultant shall use the following guidelines in calculating cost estimates.

Preparation of Final Designs and Specifications	\$ _____
Permitting and Mitigation	\$ _____
Legal Fees	\$ _____
Acquisition of Access and Rights of Way	\$ _____
Cost of Project Components	\$ _____
	\$ _____
	\$ _____
Construction Cost Subtotal #1	\$ _____
Engineering Costs = CCS#1 x 10%	\$ _____
Subtotal #2	\$ _____
Contingency = Subtotal #2 x 15%	\$ _____
Construction Cost Total	\$ _____
Project Cost Total	\$ _____

5. Final Report

The Consultant shall use the Contract Scope of Services as the outline for the draft and final reports so that Consultant compliance with Contract provisions can be verified. If the final report contains information of an engineering nature, the cover of the final report, all plates, and the executive summary must be stamped and signed by a professional engineer licensed in the State of Colorado. If the final report contains information of a geologic nature, the cover of the final report, all plates, and the executive summary must be stamped and signed by a professional geologist licensed in the State of Colorado. If the final report contains information of both an engineering and geologic nature, the cover of the final report, all plates, and the executive summary must be stamped and

signed by both a professional engineer and a professional geologist licensed in the State of Colorado.

#### 6. Final Report - Digital Format

In addition to the paper submittal described in Section C.5 above, the Consultant shall also provide the final documents and related materials in a digital format. This digital report shall, to the extent feasible, be assembled into one file rather than separate files for text, tables, graphics, etc. This digital report shall be contained on a CD(s), and shall be in both Word and Searchable Image Acrobat (pdf) format. Any plates, figures, and other data not suitable for Word shall be in AutoCAD, ArcGIS (if applicable), Adobe Acrobat, or compatible format.

#### 7. Anticipated Project Funding Assistance

The Consultant shall identify potential grant and/or low-interest loan opportunities the Town should consider to assist in funding the capital improvements recommended, and clearly identify project components eligible for such funding, both in cost estimates and in project mapping. The Consultant shall verify project component funding eligibility prior to commencing any economic analysis.

The Consultant shall provide the information necessary to complete applications to any identified funding sources.

#### 8. Stand-By Time

The Town will not reimburse the Consultant for stand-by time charges for the Consultant's supervisory personnel.

**D. WATER MASTER PLAN- SCOPE OF SERVICES**

**History.** The Town of Berthoud obtains its water from Carter Lake through a turn-off from the Southern Water Supply Project Pipeline and through the Handy Ditch system. A Water Treatment Plant Siting Study was conducted by Meurer & Associates in 1997. This study was conducted to make an expansion from a 2MGD plant to a 4 MGD plant, and where the probable location for this expansion would best meet the Town’s needs. The Town of Berthoud wishes to have a Comprehensive Master Plan wherein the future growth, existing facilities, future facilities, and water rights are all reviewed to establish future water supplies and facilities needed to meet projected growth.

The Town can provide the following information to the selected consultant: CAD file with map of known infrastructure (water, sewer, storm, etc.); GIS file with known infrastructure, records of existing water use, Town Water Plant pump information, a base EPA flownet file of the Town’s water system.

The Consultant shall complete the following set of tasks for the Town of Berthoud Water Master Plan Study.

**Task 1. Scoping and Project Meetings**

A scoping meeting shall be held at the beginning of the project schedule to become familiarized with the scope of the project, and to obtain input from Town staff. The Consultant shall budget for a minimum of two additional meetings to be held. One of these meetings will be scheduled at the discretion of the Town depending on developments during the study. One meeting will be held at the conclusion of the study to present the results to the Town. The Consultant shall budget for project coordination meetings at the project site as necessary. In the interest of economy, meetings shall be scheduled to coincide with fieldwork if possible.

**Task 2. Review and Summarization of Previous Data/Studies**

The Consultant shall collect and review all available background information regarding the Town’s water system, to include existing reports, planning documents, surveys, plans/engineering drawings, and other sources of data relating to the Town’s water system that would be pertinent to the scope of the study. Information obtained through this task shall be summarized and used to help direct project work.

**Task 3. Water Use/Demand Projections**

The Consultant shall prepare population/demand projections for the service area. The projections shall be based on industrial/commercial demand projections, and town/county planning office records and projections. The Consultant shall use this information to project future average day, monthly average, maximum day, maximum hour, fire-flow, and storage needs for the years 2010, 2015, 2020, and 2030. A five-year average of water demand shall be considered as the existing, or baseline condition. The projected demands shall be used to evaluate long term system expansion and water supply needs.

A comparison shall be made of projected water demand compared to supply including treatment capacity. Areas of potential future growth will also be designated. Issues regarding growth that will or may be affected by the choices made in building new water supply capacity will be highlighted, and resources cited.

**Task 4. Evaluation of Water Supply Sources**

The Consultant shall evaluate the existing source of supply in an effort to assess the ability to meet current and projected demands as determined in Task 3. The Consultant shall compile and summarize information regarding the current source of supply to include economic and technical considerations, water quality issues, system maintenance, production capacity, etc. The Consultant shall research and analyze other potential source supplies with a potential to provide an adequate supply to the service area.

**Task 5. Inventory of Existing Facilities**

The Consultant shall assess the functionality of the water distribution system and evaluate the need for isolated transmission lines, additional storage, and a second wet well and other needed improvements to the Town's water system. The Consultant shall also evaluate pump station modifications and upgrades necessary for maintaining and improving the system. An evaluation of storage facilities shall be made and capacities defined. The condition of the various storage facilities shall also be documented. The Consultant shall review existing reports, plans, data, and interview key staff members in the completion of this task. In addition, a visual inspection of major facilities shall be made. The Consultant shall then produce a summary of existing water works facilities.

**Task 6. Hydraulic Modeling**

The Consultant shall construct a hydraulic model of the Town's Water Supply System. The Consultant shall coordinate with the Town in the completion of this task and shall only use software agreed to by the Town (Haestad Methods WaterCad, EPANet, etc.). The Consultant shall evaluate the adequacy of the water transmission and distribution system to meet current and future demands, pressure and flow requirements. The Consultant shall consider municipal, industrial and fire flow needs in the evaluation. The model shall be detailed enough to satisfy the needs of the project in evaluating the adequacy of the existing system to meet current demands as well as in the evaluation of future growth scenarios, considering, but not limited to storage, transmission, water quality, pressures, transient analyses, etc. The model shall be constructed as a baseline, aid in the operations plan, and shall be able to be expanded upon as the system grows, and a working copy shall be provided to the Town.

**Task 7. Capital Improvement Plan (CIP)/Recommended Alternatives**

Based on the work completed in Tasks 1 through 6, the Consultant shall prepare a CIP plan which identifies the rehabilitation and expansion needs of the system. The Consultant shall determine the adequacy of the existing water treatment, storage, and pumping systems and recommend improvements to maintain and, where needed, improve current service levels. These needs should be prioritized by their immediacy, i.e. those requiring immediate attention and/or action. Needed improvements should be

prioritized for consideration by the Town. Proposed system improvements shall be summarized and provided in the draft and final reports.

**Task 8. Concept Level Designs and Cost Estimates**

The Consultant shall prepare conceptual level designs and cost estimates for the phased replacement costs of project alternatives. These cost estimates must include all permitting costs, easements, and clearances necessary for the recommended system improvements. Furthermore, these cost estimates shall be presented in 2010 dollars, must comply with Project Requirements C.3. and C.4. (including 10% for construction engineering and 15% for construction contingencies), and must be of sufficient accuracy to allow alternatives to be compared. Finally, these cost estimates shall also be of sufficient accuracy to support requests for funding.

**Task 9. Economic Analysis and Project Financing**

The Consultant shall provide information on potential funding sources for implementation of specific water supply improvement projects. The Consultant shall provide an ability to pay analysis which shall, based on a financial planning model, determine conditions and level of funding necessary for implementation. The Consultant shall generate recommendations based on annual financial commitments of the Town needed to cover construction costs and meet operation and maintenance obligations.

This analysis will provide information necessary to determine end costs of project implementation under funding scenarios involving local, state, and Federal assistance. The analysis shall also include all identified and recommended improvements and all eligible and non-eligible components and shall include maintenance and operation costs, administrative costs, and debt retirement. The Consultant shall also develop specific information needed to make application to local, state, and Federal agencies including timelines, trigger dates, agency criteria, conditions, and funding requirements.

**Task 10. Reports and Project Materials**

The Consultant shall submit to the Town: Five (5) copies of a draft report describing the results of all work completed in this study. After receipt and incorporation of comments from the Town, the Consultant shall submit all final documents and materials to the Town. These final documents and materials shall include:

A. Twenty (20) hard copies and one (1) unbound reproducible original of the final report including the environmental report (if applicable). Twenty (20) hard copies and one (1) unbound reproducible original of the executive summary. The unbound originals shall have original signatures. The summary shall outline the purpose, findings, recommendations and configuration of the project, and shall include detailed cost estimates. The summary should not exceed ten (10) pages. All reports shall be signed pursuant to Section C. above.

B. Eleven (11) CD copies containing the executive summary, the final report, and the

environmental report (if applicable) in a Searchable Image Acrobat (pdf) format. The digital reports shall be completely assembled into one standalone Acrobat file for each report.

C. Two (2) CD copies containing the executive summary, the final report, and the environmental report (if applicable) in both Microsoft Word and Searchable Image Adobe Acrobat formats. The digital reports shall be completely assembled, contained in one Word file and one Acrobat file, and will be the same version as the hard copies. Each CD shall have a hard copy table of contents attached.

D. Two (2) CD copies of all working files in their original format (Word, Cad, Excel). Each CD shall have a hard copy table of contents attached.

E. Two (2) CD copies of the Arcview GIS project file (if applicable) and all associated files shall be submitted. This GIS project should be done in a decimal degree ArcView GIS format.

F. One (1) project notebook containing the working files used in this project. The project notebook files shall include descriptions of the assumptions and methodologies used in the project analysis. The notebook shall be organized in such a way as to allow replication of the steps, calculations, and procedures used by the Consultant to reach the conclusions described in the final report. The project notebook shall have a CD section containing one each of the above disks (final report in both Word and Adobe format disk, working files disk and Arcview disks). This section shall contain a hard copy table of contents for each CD.

#### **Task 11. Project Presentation and Public Hearing**

Upon completion of the draft report, the Consultant shall present the findings at a public meeting. The Consultant shall be responsible for publishing notice of the meeting not less than once each week for two weeks prior to the meeting and should budget accordingly.

The consultant shall prepare a record of the project results presentation public meeting. The record shall include formal and informal notices; any written comments, statements or exhibits received; and other pertinent data. The record shall also include either recorded testimony, or a memorandum summarizing the views and comments presented at the meeting.

REQUEST FOR PROPOSAL (Cont'd.):

**ATTACHMENT "C-1"**  
**PRICE PROPOSAL SUMMARY**  
**BERTHOUD WATER MASTER PLAN STUDY**

<u>Task</u>	<u>Estimated Cost</u>
Task 1. Scoping and Project Meetings	_____
Task 2. Review and Summarization of Previous Data/Studies	_____
Task 3. Water Use/Demand Projections	_____
Task 4. Evaluation of Water Supply Sources	_____
Task 5. Inventory of Existing Facilities	_____
Task 6. Hydraulic Modeling	_____
Task 7. Rehabilitation Needs/Recommended Alternatives	_____
Task 8. Concept Level Designs and Cost Estimates	_____
Task 9. Economic Analysis and Project Financing	_____
Task 10. Reports and Project Materials	_____
Task 11. Project Presentation and Public Hearing	_____
<b>PROJECT TOTAL COST</b>	<b>\$ _____</b>

Firm Name and Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature of Firm President or Authorized Agent: \_\_\_\_\_

Employer Identification Number: \_\_\_\_\_

## **E. WASTEWATER MASTER PLAN- SCOPE OF SERVICES**

**History.** The Town's WasteWater Treatment Plant is located at the southeast end of Town and is designed to treat 2 MGD plant.

The Town of Berthoud wishes to have a Comprehensive Master Plan wherein the future growth, existing facilities, and future facilities.

The Town can provide the following information to the selected consultant: Wastewater Service Area Plan dated 1985, CAD file with map of known infrastructure (water, sewer, storm, etc.); GIS file with known infrastructure, records of existing loads at the Plant and on main line serving Campion Area, Town's wastewater lift stations information.

The Consultant shall complete the following set of tasks for the Town of Berthoud WasteWater Master Plan Study.

### **Task 1. Scoping and Project Meetings**

A scoping meeting shall be held at the beginning of the project schedule to become familiarized with the scope of the project, and to obtain input from Town staff. The Consultant shall budget for a minimum of two additional meetings to be held. One of these meetings will be scheduled at the discretion of the Town depending on developments during the study. One meeting will be held at the conclusion of the study to present the results to the Town. The Consultant shall budget for project coordination meetings at the project site as necessary. In the interest of economy, meetings shall be scheduled to coincide with fieldwork if possible.

### **Task 2. Review and Summarization of Previous Data/Studies**

The Consultant shall collect and review all available background information regarding the Town's wastewater system, to include existing reports, planning documents, surveys, plans/engineering drawings, and other sources of data relating to the Town's wastewater system which would be pertinent to the scope of the study. Information obtained through this task shall be summarized and used to help direct project work.

### **Task 3. WasteWater Use/Flow Projections**

The Consultant shall prepare population/demand projections for the service area. The projections shall be based on industrial/commercial demand projections, and town/county planning office records and projections. The Consultant shall use this information to project future average flows, peak flows, and capacity needs for the years 2010, 2015, 2020, and 2030. The 2008 wastewater flows shall be considered as the existing, or baseline condition. The projected demands shall be used to evaluate long-term system expansion and wastewater capacity needs. A comparison shall be made of projected wastewater demand compared to existing treatment capacity. Areas of potential future growth will also be designated. Issues regarding growth that will or may be affected by the choices made in building new wastewater capacity will be highlighted, and resources cited.

#### **Task 4. Inventory of Existing Facilities**

The Consultant shall assess the functionality of the wastewater system and evaluate the need for upsizing any existing main lines, additional need for any new main lines, and other needed improvements to the Town's wastewater system and Treatment plant. The Consultant shall also evaluate current lift station modifications and upgrades necessary for maintaining and improving the system. The Consultant shall review existing reports, plans, data and interview key staff members in the completion of this task. In addition, a visual inspection of major facilities shall be made. The Consultant shall then produce a summary of existing wastewater facilities.

#### **Task 5. Hydraulic Modeling**

The Consultant shall construct a hydraulic model of the Town's WasteWater System. The Consultant shall coordinate with the Town in the completion of this task and shall only use software agreed to by the Town (Haestad Methods, SWMM, etc.). The Consultant shall evaluate the adequacy of the existing main lines to meet current and future demands. The model shall be detailed enough to satisfy the needs of the project in evaluating the adequacy of the existing wastewater system to meet current demands as well as in the evaluation of future growth scenarios. The model shall be constructed as a baseline, aid in the operations plan, and shall be able to be expanded upon as the system grows, and a working copy shall be provided to the Town.

#### **Task 6. Capital Improvement Plan (CIP)/Recommended Alternatives**

Based on the work completed in Tasks 1 through 6, the Consultant shall prepare a CIP plan which identifies the rehabilitation and expansion needs of the system. The Consultant shall determine the adequacy of the existing wastewater system, the treatment facility, lift stations and recommend improvements to maintain and, where needed, improve current service levels. These needs should be prioritized by their immediacy, i.e. those requiring immediate attention and/or action. Needed improvements should be prioritized for consideration by the Town. Proposed system improvements shall be summarized and provided in the draft and final reports.

#### **Task 7. Concept Level Designs and Cost Estimates**

The Consultant shall prepare conceptual level designs and cost estimates for the phased replacement costs of project alternatives. These cost estimates must include all permitting costs, easements, and clearances necessary for the recommended system improvements. Furthermore, these cost estimates shall be presented in 2010 dollars, must comply with Project Requirements C.3. and C.4. (including 10% for construction engineering and 15% for construction contingencies), and must be of sufficient accuracy to allow alternatives to be compared. Finally, these cost estimates shall also be of sufficient accuracy to support requests for funding.

#### **Task 8. Economic Analysis and Project Financing**

The Consultant shall provide information on potential funding sources for implementation of the wastewater master plan or specific wastewater improvement projects. The

Consultant shall provide an ability to pay analysis which shall, based on a financial planning model, determine conditions and level of funding necessary for implementation.

The Consultant shall generate recommendations based on annual financial commitments of the Town needed to cover construction costs and meet operation and maintenance obligations.

This analysis will provide information necessary to determine end costs of project implementation under funding scenarios involving local, state, and Federal assistance. The analysis shall also include all identified and recommended improvements and all eligible and non-eligible components and shall include maintenance and operation costs, administrative costs, and debt retirement. The Consultant shall also develop specific information needed to make application to local, state, and Federal agencies including timelines, trigger dates, agency criteria, conditions, and funding requirements.

### **Task 9. Reports and Project Materials**

The Consultant shall submit to the Town: Five (5) copies of a draft report describing the results of all work completed in this study. After receipt and incorporation of comments from the Town, the Consultant shall submit all final documents and materials to the Town. These final documents and materials shall include:

A. Twenty (20) hard copies and one (1) unbound reproducible original of the final report including the environmental report (if applicable). Twenty (20) hard copies and one (1) unbound reproducible original of the executive summary. The unbound originals shall have original signatures. The summary shall outline the purpose, findings, recommendations and configuration of the project, and shall include detailed cost estimates. The summary should not exceed ten (10) pages. All reports shall be signed pursuant to Section C. above.

B. Eleven (11) CD copies containing the executive summary, the final report, and the environmental report (if applicable) in a Searchable Image Acrobat (pdf) format. The digital reports shall be completely assembled into one standalone Acrobat file for each report.

C. Two (2) CD copies containing the executive summary, the final report, and the environmental report (if applicable) in both Microsoft Word and Searchable Image Adobe Acrobat formats. The digital reports shall be completely assembled, contained in one Word file and one Acrobat file, and will be the same version as the hard copies. Each CD shall have a hard copy table of contents attached.

D. Two (2) CD copies of all working files in their original format (Word, Cad, Excel). Each CD shall have a hard copy table of contents attached.

E. Two (2) CD copies of the Arcview GIS project file (if applicable) and all associated files shall be submitted. This GIS project should be done in a decimal degree ArcView GIS format. The GIS product shall be a standalone program that can be run from the disk. Each CD shall have a hard copy table of contents attached.

F. One (1) project notebook containing the working files used in this project. The project notebook files shall include descriptions of the assumptions and methodologies used in the project analysis. The notebook shall be organized in such a way as to allow replication of the steps, calculations, and procedures used by the Consultant to reach the conclusions described in the final report. The project notebook shall have a CD section containing one each of the above disks (final report in both Word and Adobe format disk, working files disk and Arcview disks). This section shall contain a hard copy table of contents for each CD.

**Task 10. Project Presentation and Public Hearing**

Upon completion of the draft report, the Consultant shall present the findings at a public meeting. The Consultant shall be responsible for publishing notice of the meeting not less than once each week for two weeks prior to the meeting and should budget accordingly.

The consultant shall prepare a record of the project results presentation public meeting. The record shall include formal and informal notices; any written comments, statements or exhibits received; and other pertinent data. The record shall also include either recorded testimony, or a memorandum summarizing the views and comments presented at the meeting.

REQUEST FOR PROPOSAL (Cont'd.):

**ATTACHMENT "C-2"**  
**PRICE PROPOSAL SUMMARY**  
**BERTHOUD WASTEWATER MASTER PLAN STUDY**

<u>Task</u>		<u>Estimated Cost</u>
Task 1.	Scoping and Project Meetings	_____
Task 2.	Review and Summarization of Previous Data/Studies	_____
Task 3.	Wastewater Use/Flow Projections	_____
Task 4.	Inventory of Existing Facilities	_____
Task 5.	Hydraulic Modeling	_____
Task 6.	Capital Improvement Plan/Recommended Alternatives	_____
Task 7.	Concept Level Designs and Cost Estimates	_____
Task 8.	Economic Analysis and Project Financing	_____
Task 9.	Reports and Project Materials	_____
Task 10.	Project Presentation and Public Hearing	_____
<b>PROJECT TOTAL COST</b>		<b>\$_____</b>

Firm Name and Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature of Firm President or Authorized Agent: \_\_\_\_\_

Employer Identification Number: \_\_\_\_\_

F. **DRAINAGE MASTER PLAN- SCOPE OF SERVICES**

The Town of Berthoud wishes to have an updated Drainage Master Plan wherein the future growth, existing facilities, and future facilities.

The Town can provide the following information to the selected consultant: CAD file with map of known infrastructure (water, sewer, storm, etc.); GIS file with known infrastructure, the Town's Drainage Development Plan dated 1985.

The Consultant shall complete the following set of tasks for the Town of Berthoud Drainage Master Plan Study.

**Task 1. Scoping and Project Meetings**

A scoping meeting shall be held at the beginning of the project schedule to become familiarized with the scope of the project, and to obtain input from Town staff. The Consultant shall budget for a minimum of two additional meetings to be held. One of these meetings will be scheduled at the discretion of the Town depending on developments during the study. One meeting will be held at the conclusion of the study to present the results to the Town. The Consultant shall budget for project coordination meetings at the project site as necessary. In the interest of economy, meetings shall be scheduled to coincide with fieldwork if possible.

**Task 2. Review and Summarization of Previous Data/Studies**

The Consultant shall collect and review all available background information regarding the Town's drainage system, to include existing reports, planning documents, surveys, plans/engineering drawings, and other sources of data relating to the Town's drainage system that would be pertinent to the scope of the study. Information obtained through this task shall be summarized and used to help direct project work.

**Task 3. Inventory of Existing Facilities**

The Consultant shall assess the functionality of the drainage system and evaluate the need for upsizing any existing main lines, additional need for any new main lines, and other needed improvements to the Town's drainage system. The Consultant shall review existing reports, plans, data and interview key staff members in the completion of this task. In addition, a visual inspection of major facilities shall be made. The Consultant shall then produce a summary of existing drainage facilities.

**Task 4. Hydrologic and Hydraulic Modeling**

The Consultant shall acquire available rain gage station data in the vicinity of the Project Area. The drainage master plan should be based on the best information available at this time. Development of unit hydrographs for basins being studied shall be accomplished using the Colorado Urban Hydrograph Procedure (CUHP). Sub-basin size will be determined by the location of critical collection and conveyance facility components or the size can be used from the previous drainage master plan. The CUHP model will be used to obtain hydrographs for the 2, 10, and 100 year design storms.

Routing of sub-basin hydrographs throughout the primary basins to a point of outfall shall be accomplished using dynamic routing procedure contained in SWMM or equal

software. Runoff from the 2, 10, and 100-year storms shall be analyzed for the existing basin condition and any proposed basin condition for all stormwater improvement alternatives. When necessary, open channel water surface profile analysis based on the assumption of gradually varied flow shall be completed using HECRAS software.

The Consultant shall complete basin wide routing of sub-basin proposed runoff condition hydrographs to determine peak flows for the above stated return periods at key design points associated with critical condition and conveyance facility components. Proposed condition analysis shall include storage routing through existing and proposed detention ponds and other significant proposed storage elements.

#### **Task 5. Capital Improvement Plan (CIP)/Recommended Alternatives**

Based on the work completed in Tasks 1 through 4, the Consultant shall prepare a CIP plan that identifies the rehabilitation and expansion needs of the system. The Consultant shall determine the adequacy of the existing drainage system and recommend improvements to maintain and, where needed, improve current service levels. These needs should be prioritized by their immediacy, i.e. those requiring immediate attention and/or action. Needed improvements should be prioritized for consideration by the Town.

Proposed system improvements shall be summarized and provided in the draft and final reports.

#### **Task 6. Concept Level Designs and Cost Estimates**

The Consultant shall prepare conceptual level designs and cost estimates for the phased replacement costs of project alternatives. These cost estimates must include all permitting costs, easements, and clearances necessary for the recommended system improvements. Furthermore, these cost estimates shall be presented in 2011 dollars, must comply with Project Requirements C.3. and C.4. (including 10% for construction engineering and 15% for construction contingencies), and must be of sufficient accuracy to allow alternatives to be compared. Finally, these cost estimates shall also be of sufficient accuracy to support requests for funding.

#### **Task 7. Economic Analysis and Project Financing**

The Consultant shall provide information on potential funding sources for implementation of the wastewater master plan or specific wastewater improvement projects. The Consultant shall provide an ability to pay analysis which shall, based on a financial planning model, determine conditions and level of funding necessary for implementation.

The Consultant shall generate recommendations based on annual financial commitments of the Town needed to cover construction costs and meet operation and maintenance obligations.

This analysis will provide information necessary to determine end costs of project implementation under funding scenarios involving local, state, and Federal assistance. The analysis shall also include all identified and recommended improvements and all eligible and non-eligible components and shall include maintenance and operation costs, administrative costs, and debt retirement. The Consultant shall also develop specific information needed to make application to local, state, and Federal agencies including timelines, trigger dates, agency criteria, conditions, and funding requirements.

### **Task 8. Reports and Project Materials**

The Consultant shall submit to the Town: Five (5) copies of a draft report describing the results of all work completed in this study no later than October 30, 2009. After receipt and incorporation of comments from the Town, the Consultant shall submit all final documents and materials to the Town on or before December 1, 2009. These final documents and materials shall include:

A. Twenty (20) hard copies and one (1) unbound reproducible original of the final report including the environmental report (if applicable). Twenty (20) hard copies and one (1) unbound reproducible original of the executive summary. The unbound originals shall have original signatures. The summary shall outline the purpose, findings, recommendations and configuration of the project, and shall include detailed cost estimates. The summary should not exceed ten (10) pages. All reports shall be signed pursuant to Section C. above.

B. Eleven (11) CD copies containing the executive summary, the final report, and the environmental report (if applicable) in a Searchable Image Acrobat (pdf) format. The digital reports shall be completely assembled into one standalone Acrobat file for each report.

C. Two (2) CD copies containing the executive summary, the final report, and the environmental report (if applicable) in both Microsoft Word and Searchable Image Adobe Acrobat formats. The digital reports shall be completely assembled, contained in one Word file and one Acrobat file, and will be the same version as the hard copies. Each CD shall have a hard copy table of contents attached.

D. Two (2) CD copies of all working files in their original format (Word, Cad, Excel). Each CD shall have a hard copy table of contents attached.

E. Two (2) CD copies of the Arcview GIS project file (if applicable) and all associated files shall be submitted. This GIS project should be done in a decimal degree ArcView GIS format. The GIS product shall be a standalone program that can be run from the disk. Each CD shall have a hard copy table of contents attached.

F. One (1) project notebook containing the working files used in this project. The project notebook files shall include descriptions of the assumptions and methodologies used in the project analysis. The notebook shall be organized in such a way as to allow replication of the steps, calculations, and procedures used by the Consultant to reach the conclusions described in the final report. The project notebook shall have a CD section containing one each of the above disks (final report in both Word and Adobe format disk, working files disk and Arcview disks). This section shall contain a hard copy table of contents for each CD.

### **Task 9. Project Presentation and Public Hearing**

Upon completion of the draft report, the Consultant shall present the findings at a public meeting. The Consultant shall be responsible for publishing notice of the meeting not less than once each week for two weeks prior to the meeting and should budget accordingly.

The consultant shall prepare a record of the project results presentation public meeting. The record shall include formal and informal notices; any written comments, statements or exhibits received; and other pertinent data. The record shall also include either recorded testimony, or a memorandum summarizing the views and comments presented at the meeting.

REQUEST FOR PROPOSAL (Cont'd.):

**ATTACHMENT "C-3"**  
**PRICE PROPOSAL SUMMARY**  
**BERTHOUD DRAINAGE MASTER PLAN STUDY**

<u>Task</u>		<u>Estimated Cost</u>
Task 1.	Scoping and Project Meetings	_____
Task 2.	Review and Summarization of Previous Data/Studies	_____
Task 3.	Inventory of Existing Facilities	_____
Task 4.	Hydrologic and Hydraulic Modeling	_____
Task 5.	Capital Improvement Plans/Recommended Alternatives	_____
Task 6.	Concept Level Designs and Cost Estimates	_____
Task 7.	Economic Analysis and Project Financing	_____
Task 8.	Reports and Project Materials	_____
Task 9.	Project Presentation and Public Hearing	_____
<b>PROJECT TOTAL COST</b>		<b>\$ _____</b>

Firm Name and Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature of Firm President or Authorized Agent: \_\_\_\_\_

Employer Identification Number: \_\_\_\_\_