

**REQUEST FOR PROPOSALS  
FOR  
PROFESSIONAL SERVICES  
FOR  
THE CITY OF CASPER  
CASPER, WYOMING 82601**

**SAM H. HOBBS WASTEWATER TREATMENT PLANT PRELIMINARY FACILITIES  
PLAN**

The City of Casper, Wyoming is seeking qualification statements and service proposals from qualified engineering consultants to furnish facilities planning services for the Sam H. Hobbs Regional Wastewater Treatment Plant (WWTP.) The specific nature of the scope of work for the study is outlined in this Request for Proposals (RFP). Consultants responding will be evaluated and a consultant chosen by City staff in conjunction with City Council/Public Utilities Advisory Board members. The schedule for Consultant selection and execution of a professional services contract is August-September 2015 for the Sam H. Hobbs Wastewater Treatment Plant Preliminary Facilities Plan. Completion of the plan is scheduled no later than August 31, 2016. Proposals shall be submitted to the City of Casper Public Utilities Division, 200 N. David St., Room 205, Casper, WY 82601 by 5:00 pm on August 14, 2015.

**I. Purpose**

The purpose of this preliminary facilities plan is to:

- Evaluate existing hydraulic and organic loadings and compare to current treatment plant design criteria
- Provide 20 year projected hydraulic, organic, nutrient, and selenium loading capacity requirements based on current growth of Natrona County
- Provide plausible future effluent permit requirements established from communication with the Wyoming Department of Environmental Quality (DEQ) and the US Environmental Protection Agency (EPA) – this will include nutrient, stricter ammonia, and possible selenium removal - these requirements are to be used when selecting various wastewater treatment process options or configurations
- Evaluate existing secondary treatment process equipment and piping for effectiveness, efficiency and remaining useful life – determine what, if any, existing secondary treatment equipment will be used in the proposed wastewater treatment options or configurations
- Identify, select, and recommend various WWTP modification alternatives taking into consideration probable future nutrient removal requirements, possible selenium removal requirements, and 20 year projected loading requirements
- Provide conceptual facilities modification design alternatives

- Provide budgetary cost figures and suggested time frames for the completion of recommended process upgrades and/or expansions to meet future regulatory requirements and/or treatment plant expansion needs

## **II. Background**

The Sam H. Hobbs Regional Wastewater Treatment Facility, located at 2400 Bryan Evansville Road in Casper, Wyoming, provides wastewater treatment services to approximately 69,000 people in the City of Casper, the Towns of Bar Nunn, Evansville and Mills, the Wardwell Water and Sewer District, Natrona County International Airport, and other smaller entities in the regional wastewater system.

- The last WWTP facility plan was completed in 1997
- The City desires to be proactive in planning for future nutrient and/or selenium removal requirements
- The City is reluctant to conduct capital improvements to the existing secondary treatment process structures and related equipment without knowledge of how future regulations will change the treatment process

The Sam H. Hobbs Wastewater Treatment Facility was built in 1958, expanded to include secondary treatment in 1975, and expanded again in early to mid-1980's to increase treatment capacity from six million gallons per day (MGD) to 12.8 MGD based on 1983 Wyoming Pollutant Discharge Elimination System (WYPDES) permit requirements. In 1988, with a renewed WYPDES permit, EPA and DEQ promulgated ammonia removal requirements which immediately derated the WWTP to 7.5 MGD capacity. More strict ammonia limits and receiving water mixing requirements necessitated the most recent expansion during the 2006 to 2008 timeframe. At that time, mechanical aeration equipment was upgraded to a fine bubble aeration system and aeration capacity was increased. Additionally, ultraviolet light replaced chlorine disinfection and sludge drying beds were replaced by centrifuge dewatering. This expansion increased the WWTP capacity to 10 MGD.

The current treatment train consists of preliminary treatment (perforated plate fine screening and grit removal), primary clarification, secondary treatment, ultraviolet (UV) disinfection, sludge thickening, anaerobic digestion and centrifuge dewatering. The secondary treatment system includes a biofilter tower (currently not used), aeration basins with single stage blowers and fine bubble air diffusion, secondary clarifiers, and necessary pumping systems to handle return and waste activated sludge flow. The total aeration capacity is 2.4 MG, is operated as a complete mix system which also achieves nitrification.

The existing treatment plant has a design Annual Average Flow rating of 10 MGD. The current permitted capacity, however, is based on a Maximum Month Average Daily Flow

of 9.0 MGD. During the 2008 permit renewal process, the City requested a reduction in permitted capacity on a MMADF flow basis to 8.6 MGD. The Wyoming Department of Environmental Quality (WDEQ) set the MMADF at 9.0 MGD during the most recent (2013) permit renewal process. Current effluent requirements are:

<b>Parameter</b>	<b>Monthly Average</b>	<b>Weekly Average</b>	<b>Daily Maximum</b>
Biochemical Oxygen Demand, mg/l	30	45	90
E. Coli, MPN/100ml, May -September	376	N/A	859
E. Coli, MPN/100ml, October-April	2572	N/A	2572
Total Flow, MGD	9.0	N/A	N/A
Total Suspended Solids, mg/l	30	45	90
Total Residual Chlorine, mg/l	N/A	N/A	0.05
Ammonia as N mg/l, May -September	3.74	N/A	13.20
Ammonia as N mg/l, October-April	7.28	N/A	16.15
pH, s.u	N/A	N/A	6.5-9.0
Biochemical Oxygen Demand, % Removal	85	N/A	N/A
Total Suspended Solids, % Removal	85	N/A	N/A
Oil and Grease, mg/l	N/A	N/A	10
Whole Effluent Toxicity Chronic	N/A	N/A	Pass

Future Nutrient Removal - Wyoming, as with many states, is being pressured to establish numeric criteria for nutrients (total phosphorous and total nitrogen) as these can be incorporated into discharge permits. The WDEQ has established a “nutrient stakeholder work group” and is currently in the early stages of updating its 2008 Nutrient Criteria Development Plan as well as working towards establishing numeric criteria for nutrient limits. Indications have been that some sort of numeric nutrient limits could be included in the WWTP’s 2018 permit but more likely in the 2023 permit.

Selenium - In addition to future nutrient removal, a thirty-eight mile stretch of the North Platte River, including the segment through the City of Casper, is listed on the US EPA 303(d) list as selenium impaired waters. If the river remains on the impaired waters list there is a possibility that the WWTP could be faced with a selenium removal requirement. Currently, the WWTP removes very little selenium and likely would not be able to meet a numeric selenium limit without additional treatment. Selenium is endemic in soils in the North Platte River watershed above and through the City of Casper.

The Natrona County Conservation District (NCCD), Casper Alcova Irrigation District (CAID), Bureau of Land Management (BLM), Natural Resource Conservation Service (NRCS), and others have been working towards mitigating selenium levels in the Kendrick Water Shed area in an effort to reduce selenium levels and ultimately petition to have the North Platte River segment removed from the impaired waters list. The majority

of their efforts have been placed on the implementation of best management practices for irrigation throughout the water shed.

Budget - The budget amount available for the Sam H. Hobbs Wastewater Treatment Plant Preliminary Facilities Plan is \$300,000. It is recognized that more in-depth studies may be needed following the completion of this preliminary facilities plan.

The professional services contract will be with the City of Casper.

## **II. Preliminary Scope of Services**

Periodic updates regarding the progress of the plan shall be given to the City management staff assigned to oversee the project. The Consultant may be asked to participate in meetings with representatives of interest groups or businesses in order to secure comments regarding the recommendations prior to presentation to the Public Utilities Advisory Board, the 201 Management Oversight Committee, and the City Council.

### **A. General**

The Scope of Services shall, as a minimum, include the following:

#### **1. Work Sequence**

- Preliminary Data Collection
- Evaluate Existing Hydraulic, Organic, Ammonia, and Nutrient Loadings and Compare to Current Treatment Plant Design Criteria
- Determine Effectiveness, Efficiency and Remaining Useful Life of Existing Secondary Treatment Process Structures, Equipment and Piping and determine which, if any, would be used to meet future treatment requirements
- Determine Future Flow, Loadings and WYPDES Permit Requirements
- Identify, Select and Recommend Various Wastewater Treatment Plant Unit Process Modification Alternatives
- Provide Conceptual Facilities Modifications Design
- Plan Preparation and Presentation
- Meeting With City Staff
- Professional Certification

#### **2. Preliminary Data Collection**

- Existing WYPDES permit requirements and compliance data, plant operations data, existing facility design criteria, flow and loadings projections and all other pertinent information including selenium control data shall be gathered, reviewed and evaluated.

- Casper and Natrona County Growth Plans
  - Potable water selenium data
3. **Evaluate Existing Hydraulic, Organic, Ammonia, and Nutrient Loadings and Compare to Current Treatment Plant Design Criteria**
- Using available information, compare existing secondary treatment plant design criteria to actual flows, loadings and treatment efficiencies, determine and document remaining capacities.
4. **Determine Effectiveness, Efficiency and Remaining Useful Life of Existing Secondary Treatment Process Structures, Equipment and Piping**
- Evaluate the aeration basin, secondary clarifiers, aeration equipment, return activated sludge equipment, waste activated sludge equipment and all associated appurtenances for remaining useful life.
  - Evaluate and rate the current use of the equipment for effectiveness and efficiency.
  - Determine which existing secondary treatment process structures and appurtenances, if any, could continue to be used to meet new nutrient and selenium treatment requirements.
5. **Determine Future Flow, Loadings, and WYPDES Permit Requirements**
- The consultant shall estimate future plant flows and loads, based upon existing growth of Natrona County, to serve as a basis for determining future secondary treatment process needs. The growth estimates over the next twenty years shall include population, hydraulic, organic, ammonia, nutrient, and selenium loadings (may be others).
  - Consultant shall communicate with the regulatory agencies in an effort to ascertain future WYPDES permit requirements. These findings coupled with flow and loading projections, should be used as a basis for determining future secondary treatment process needs.
  - Determine to the best of consultant's ability the timing of future required nutrient and selenium removal requirements by regulatory agencies.
6. **Identify, Select and Recommend Various Wastewater Treatment Plant Modification Alternatives**
- The consultant shall research, select and recommend various treatment option alternatives for meeting future flows, future loadings and future WYPDES permit requirements including nutrients and selenium.

- The consultant shall research and recommend if a receiving stream diffuser system would alleviate any treatment requirements in the future.
- The consultant shall recommend which existing secondary treatment process structures and appurtenances could continue to be used in the future to meet new nutrient and selenium treatment requirements.
- The consultant shall research and recommend a continuing or modified strategy for basin wide efforts for selenium control in conjunction with other agencies; This will include discussions with regulatory agencies and other agencies involved in basin wide selenium control.
- The consultant shall indicate time frames for WWTP modification alternatives.
- The consultant shall utilize both economic and non-economic factors for evaluating alternatives.

**7. Provide Conceptual Facilities Modifications Design**

- The consultant shall define sizing, configuration, cost estimates, conceptual drawings, etc. for the recommended facility modifications. The cost estimate shall utilize a budget level design and construction cost estimate for the facility modifications.
- The consultant shall recommend and define a strategy for basin wide efforts to control selenium in the watershed.

**8. Plan Preparation and Presentation**

- Consultant shall prepare six (6) copies of the draft “Sam H. Hobbs Wastewater Treatment Plant Preliminary Facilities Plan”. All applicable tables, graphs, maps, etc. shall be included. An executive summary shall also be prepared as the first chapter of the study. Following staff review and comments, the consultant shall prepare the final “Sam H. Hobbs Wastewater Treatment Plant Preliminary Facilities Plan” and provide fifteen (15) copies.
- The Consultant will present the completed study at a meeting of the City of Casper Public Utilities Advisory Board and the 201 Management Oversight Committee at a regular meeting and at a City Council Work Session meeting if warranted.
- Owner shall provide a timely review of all documents submitted by the Consultant.

**9. Meeting with City Staff**

- The Consultant shall meet with City representatives from the City Public Services Department at least monthly during the course of the Sam H. Hobbs Wastewater Treatment Plant Preliminary Facilities Plan

development to discuss the status of the project. The majority of the meetings will be phone meetings. Consultant shall prepare and distribute minutes of all progress meetings.

**10. Professional Certification**

- The Consultant shall affix his professional engineer's stamp, date, and signature to the front cover of the “Sam H. Hobbs Wastewater Treatment Plant Preliminary Facilities Plan” in accordance with Wyoming State Registration Statutes.

**B. Sub-consultants**

1. The Consultant shall be responsible to procure any necessary Sub-consultant to complete the work.
2. The Owner and Consultant shall mutually approve, in writing, the use of any Sub-consultants that the Consultant desires to use.
3. The Consultant shall be responsible for the administration, management, procurement, and payment of services provided by Sub-consultant(s).

**C. Engineer’s Warranty.**

1. Engineer agrees that Engineer’s work shall be performed with that degree of skill and judgment which is normally exercised by professional engineering firms performing services of a similar nature, and that the work shall be performed and shall conform to generally accepted engineering standards and practices. Engineer will re-perform any services not meeting this standard without additional compensation.

**III. General Criteria for Evaluating Qualification Statements.**

**Experience:** The experience of the proposed Consultant should be documented, including experience in wastewater treatment plant facilities plan development similar to the plan proposed by the City of Casper. This experience will be examined on the basis of comprehensive wastewater facilities expansion planning including biological nutrient removal and/or selenium removal and computer modeling work by the Consultant and/or their Sub-consultant(s).

**Expertise:** Specific expertise is desirable in a variety of areas including the following: Wastewater treatment facilities planning, biological nutrient removal, selenium removal, loading projection, computer modeling work, knowledge of anticipated future regulatory WYPDES regulations, and previous successful negotiated resolutions with regulatory

agencies on future WYPDES requirements by the Consultant and/or their Sub-consultants. Professional references shall be provided wherever practicable.

**Workability:** The qualification statement should provide assurance of the demonstrated ability of the consultant to work with a diverse group of individuals and agencies including citizens, businesses, and governmental organizations.

**Conflicts of Interest:** The qualification statement shall specifically address any possible conflicts of interest and the proposer's position or response as to whether or not such other work or relationship may be deemed a conflict of interest with this planning study.

**Special Qualifications:** The qualification statement shall identify any specific qualifications which might make the proposer uniquely qualified to provide the requested services. These may include similar work experience related to another community of similar size or a study of similar nature.

**Professional Staff:** The experience of the proposed Consultant's or Sub-consultant's personnel assigned to this project shall be noted. Individual biographical resumes with specific wastewater treatment facilities planning experience related to facilities planning, biological nutrient/selenium removal and computer modeling work shall be important.

**Timeliness:** Time is of the essence. The qualification statement shall specify the time availability of the Consultant's or Sub-consultant's personnel available for this project.

#### **IV. Sub-consultants**

The Consultant shall be responsible to retain, and pay for the services of, any Sub-consultant necessary to complete the work. The City and the Consultant shall mutually agree to the use of any Sub-consultants which the Consultant desires to retain.

#### **V. Contract**

The Consultant will be required to sign a contract with the City relating to the work to be performed. Such contract shall include, but not necessarily be limited to, the following articles: method of compensation, time of performance, subcontracts, duties of the Consultant, termination of the contract, ownership of material, changes, EEO, submission of material, and obligations to the City.

#### **VI. Recommendations**

To be considered, the proposal must respond to all requirements in the RFP. Any other information believed to be relevant, but not applicable to the enumerated categories, should be provided as an appendix to the proposal. If publications are provided, the document and page number shall be referenced. The proposal shall be divided into

sections as indicated below:

**Statement of Project Requirements:** Each Proposer shall state in sufficient terms its understanding of the study requirements presented in this RFP.

**Scope of Work:** Each Proposer shall describe in narrative form the proposer's technical plan for accomplishing the work. Please use the Preliminary Scope of Work tasks provided in this RFP as the point of departure. Additions to, or modifications to the Scope of Work and Task descriptions are permissible, but reasons for changes shall be fully allocated to each Scope or Task. Include a program evaluation and review technique diagram, time related, showing each task and event.

**Personnel and Prior Experience:** Each proposal should identify specific executive, professional and technical personnel who will be assigned to the study. The proposal shall indicate the responsibilities each person will have in the study and indicate the previous related work experience of each individual. Personnel indicated having appropriate expertise for this study be assigned to the study and actively engaged in completion of the tasks. Any changes in assignment of personnel shall be reviewed with the City of Casper to assure consistent technical expertise throughout the term of the study.

**Sealed Proposals:** Each proposal must be submitted to the City of Casper Public Utilities Division, 200 N. David St., Room 205, Casper, WY 82601 by 5:00 pm on August 14, 2015. No additional proposals will be received thereafter. Five copies of the proposal must be submitted. The proposal will remain valid for at least thirty (30) days.

## **VII. Criteria for Selection**

All proposals received shall be subject to evaluation by a Selection Committee comprised of City staff, City Council, and/or Public Utilities Advisory Board members. The evaluation shall be for the express purpose of selecting the proposals which most clearly meets the RFP requirements. The following areas will be considered in the selection:

1. **Understanding the Problem:** This refers to the Consultant's understanding of the City of Casper's needs, objectives of the RFP, and the nature and scope of work involved.
2. **Consultant Qualifications:** This includes the ability of the Consultant to meet the needs of the RFP. Particularly, time constraints, cooperation and participation by City staff, elected officials, and special interest groups, and the quality and relevancy of recent studies and projects of similar nature completed by the consultant.
3. **Professional Personnel:** This refers to the competence of professional personnel

assigned to the project by the Consultant. Qualifications of all professional personnel will be measured by education and experience, with particular emphasis on experience and analysis of innovative practices. Individual biographical resumes with specific project experience related to a study or project similar to the Casper project will be given strong consideration.

4. **Soundness of Approach:** Emphasis shall be placed on stated techniques for collecting and analyzing data, sequence and relationship of major program steps, methods for managing the plan, rationale for stated methodology assessing economic incentives, and the practicality of implementing the recommendations.
5. **Cooperative Process:** This refers to the Consultant's understanding, expression, and historical experience involving projects which demonstrate sensitivity to the need for developing a spirit of cooperation with the City Staff, and other interested parties.
6. **Time Availability:** Time is of essence on this study.

#### **VIII. Interviews**

City staff will review all proposals and select a maximum of three to five Consultants for interviews by the selection committee. Upon completion of the interviews one firm will be selected on the basis of compliance with criteria. In the event that a satisfactory fee cannot be negotiated with the selected firm, subsequent attempts will be made to negotiate with the other qualified firms in the order of their ratings. Final selection will be made by the City Council.

#### **IX. Fees**

The negotiated fee shall be based on estimated plan development costs, time, and materials, including hourly rate for technical personnel, and reimbursables, with an upset amount. By submission of proposal, the Consultant warrants that he/she is aware of the budget for the study and is confident that he/she will be able to complete the study within budget. A Fee Schedule will be required during negotiations to be included in the professional services agreement. The City reserves the right to contract for all or a portion of the facilities plan depending on budget constraints.

#### **X. Contract Award**

The City of Casper reserves the right to accept, reject, or request changes in proposals. The City will work closely with the selected Consultant to develop or refine a detailed scope of work, schedule for completion of tasks and costs associated with completed work included in the contract documents. The City is not liable for any costs incurred by the Consultant prior to contract issuance.

**XI. Addenda to the Request for Proposals**

In the event that it becomes necessary to revise any part of this RFP, addenda will be provided to all Consultants invited to respond.

**XII. Late Proposals**

Late proposals will not be accepted. It is the responsibility of the Consultant to ensure that the proposal arrives prior to 5:00 pm, August 14, 2015.

**XIII. Response Material Ownership**

The material submitted in response to the RFP becomes the property of the City of Casper and will only be returned to the consultant at the City's option. Responses may be reviewed by any person after the final selection has been made. The City of Casper has the right to use any or all ideas presented in reply to this request. Disqualification of a consultant does not eliminate this right.

**XIV. Acceptance of Proposal Content**

The contents of the proposal of the successful Consultant may become contractual obligations if the City of Casper wishes to execute a contract based on the submitted proposal. Failure of the successful Consultant to accept these obligations in a contract may result in cancellation of the award and such Consultant may be removed from future solicitations.

**XV. Reference Checks**

The City of Casper reserves the right to contact any reference or any client listed in the documents for information which may be helpful to the City in evaluating the Consultant's performance on previous assignments.