

**REQUEST FOR PROPOSALS
FOR
PROFESSIONAL SERVICES
FOR
THE CENTRAL WYOMING REGIONAL WATER
SYSTEM JOINT POWERS BOARD
CASPER, WYOMING 82604**

WATER TREATMENT – PRELIMINARY FACILITIES PLAN

The Central Wyoming Regional Water System Joint Powers Board (RWSJPB) is seeking qualification statements and service proposals from consulting groups specializing in surface water treatment, wellfield design, and use of riverbank filtration for wellfields. 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 RWSJPB staff in conjunction with RWSJPB Board Members. The schedule for Consultant selection and execution of a professional services contract is September – October 2015 for the Water Treatment – Preliminary Facilities Plan. Completion of the study is scheduled no later than September 30, 2016. Proposals shall be submitted to the City of Casper Public Utilities, 200 N. David St., Room 205, Casper, WY 82601 as agent for the Regional Water System. The proposals are due no later than 5:00 pm on August 14, 2015.

I. Introduction, Background, and Basic Objectives

The purpose of this preliminary facilities plan is to analyze and determine needed expansion and upgrade alternatives to the water treatment plant/water production facilities. The recommendations will include budgetary cost figures and suggested time frames for the recommended expansion/upgrades required.

The Regional Water System (RWS), located at 1500 Southwest Wyoming Blvd. in Casper, Wyoming provides wholesale water service to approximately 65,000 people to nine wholesale customers within Natrona County. The City of Casper, the Towns of Bar Nunn, Edgerton, and Midwest, the Wardwell and Pioneer Water and Sewer Districts; and several smaller improvement and service districts are provided wholesale water by the Regional Water System. The RWSJPB wholesale customers provide retail water service to their customers.

The Regional Water System uses both surface water treatment and alluvial groundwater wells for supplying water to RWS wholesale customers. The source is the North Platte River. The surface water and groundwater receive different treatment using unit processes located at the water treatment plant. The water treatment plant is currently only operated during the months of May through early October during high water demand periods. The wellfields are the only source of water used during the winter months. The water treatment plant has a

“design” capacity of 27 Million Gallons per Day (MGD) while the groundwater originally had a “design” capacity of 25 MGD. The current actual capacity of the water production facilities (surface water and groundwater) is approximately 39 MGD. In addition to the water production facilities, the Regional Water System owns approximately 63 miles of 8-inch through 42-inch transmission line, six booster stations, and six active water storage tanks. The geographic area serviced is about 48 miles north to south and about 20 miles east to west.

The City of Casper Public Utilities Division is under contract with the RWSJPB to provide all management, operation, and maintenance of the Regional Water System.

The surface water treatment plant (WTP) was expanded in 1999 to 27 MGD. Experience has indicated that the maximum capacity is actually about 22-25 MGD without causing serious operational problems. The current treatment scheme for the water treatment plant includes the use of ferric chloride and polymer for coagulation/flocculation/sedimentation (two parallel Actiflo trains), six rapid sand filters, ozonation for intermediate disinfection and Actiflo polymer destruction, corrosion control chemical (Sea Quest poly-blend), and the use of chloramines (sodium hypochlorite and aqueous ammonia) for transmission system disinfectant residual. Sulfuric acid (coagulation/flocculation optimization) and hydrogen peroxide (ozone destruction) are also available. These last two chemicals have rarely been utilized at the water treatment plant. Polymer feed is also available for filter feed and backwash water but has not been used extensively to date as it has proved unnecessary. Following filtration and chloramination, the surface water is pumped from three clearwells into the RWS transmission system. Round 1 of the LT2 Enhanced Surface Water Treatment Rule Microscopic Particulate Analysis (MPA) sampling resulted in a Bin 1 classification for cryptosporidium for the North Platte River. The WTP will start MPA sampling of the source water for round 2 of the LT2 Enhanced surface Water Treatment Rule this fall.

An emergency power project is currently underway at the water treatment plant which will be able to supply enough power to handle 14 MGD of water. The wellfields are not included as emergency power to the groundwater supply was cost prohibitive. In addition, a project to construct a parallel 0.92 Million Gallon (MG) finished water storage tank project is also underway. This parallel tank will provide additional flexibility as the existing 2.6 MG finished water storage tank is used for groundwater storage as well as a backwash water supply for the surface water filters. Currently, the existing 2.6 MG tank can never be taken out of service for maintenance.

The groundwater supply consists of approximately 30 wells on both sides of the river near the water treatment plant (Ft. Caspar Wellfield and Dempsey Acres Wellfield.) Three of the wells in the Dempsey Acres Wellfield are Ranney Collectors. All of the wells are approximately 35 feet deep. The “design” capacity of the wellfield in 1999 was 25 MGD. In 2005, EPA mandated that the large infiltration gallery be removed from service (5 MGD capacity.) In addition, actual wellfield experience has indicated the original “design”

capacity of the wellfields was overly optimistic. The current firm capacity of the wellfields is 14-15 MGD during high river flows (with recharge) and approximately 10-12 MGD during the winter months. Both wellfields use artificial recharge where water is pumped from the river to recharge channels located throughout the wellfields. The RWS groundwater supply is considered to be “Groundwater Under the Direct Influence of Surface Water” (GWUDI) by EPA. The groundwater is ozonated, furnished with corrosion control chemicals, and disinfected with chloramines for transmission system disinfectant residual. Hydrogen peroxide addition is also available for ozone destruction but to date has not been used. Water is pumped from the wells through the treatment processes to the 2.6 MG finished water storage tank. High service pumps then pump water to the RWS transmission system from the finished water storage tank.

The surface water and groundwater are not commingled until the common WTP discharge header leading to the RWS transmission system. The surface water system and the groundwater system have separate master metering facilities.

In 2005, EPA granted approval for the RWS GWUDI groundwater system to be an alternative filtration technology using riverbank filtration. This approval was contingent upon the RWS complying with several operational and performance requirements to improve pathogen removal and ongoing monitoring of water quality to meet all monitoring and treatment techniques required under the SDWA surface water treatment rules. EPA has required weekly aerobic spore sampling (surrogate for cryptosporidium) of two wells and periodic MPA analysis of typical wells especially when the recharge channels are rehabilitated. In addition 2 times 4-log pathogen removal is required for the groundwater supply through the use of ozone disinfection. EPA continues to express concerns about the RWS GWUDI groundwater system.

The RWS transmission system and wholesale customer distribution systems suffer from nitrification events in late summer and fall because of the use of chloramination. There is no supplemental chlorination/chloramination disinfection by any of the wholesale customers at the present time.

The maximum daily production capabilities of the RWS water production facilities are approximately 39 MGD with use of both the WTP and the groundwater supply. The highest maximum day demand in the RWS system has been 29.5 MGD experienced in 2012.

The budget amount available for the Water Treatment – Preliminary Facilities Plan Update is \$400,000. It is recognized that more in-depth studies may be needed following the completion of this study.

The professional services contract will be with the Central Wyoming Regional Water System Joint Powers Board.

II. Preliminary Scope of Services

Periodic updates regarding the progress of the study shall be given to the RWS management staff assigned to oversee the study. 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 RWS Joint Powers Board.

A. General

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

1. Work Sequence

- Preliminary Data Collection
- WTP/Wellfield Assessment and Analysis
- Recommend Expansion/Upgrades/Unit Process Replacements
- Recommend Updated Operations of Water Production Facilities to optimize performance
- Study Preparation and Presentation
- Meetings With Staff
- Professional Certification
- Presentation of study to RWSJPB
- Water Supply/Water Rights Studies are not part of this project

2. Preliminary Data Collection

- Collect and review previous design studies for the water treatment plant and wellfields
- Collect and review “As Built” plans, specifications, shop drawings, etc. for the water treatment plant and wellfields
- The 2009 Nitrification study for the transmission system will be available as will the 2014 Water Treatment Plant Condition Assessment Study (not yet finished.)
- All applicable EPA and DEQ compliance records and WTP process control records will be made available; State Engineer records will also be available
- Anticipated future EPA rules and regulations which could affect upgrades
- Casper and Natrona County Growth Plans

3. WTP/Wellfield Assessment and Analysis

- Detailed tour, assessment, and analysis of unit processes and equipment at the water treatment plant and groundwater wells

- Additional sampling at the water treatment plant and wellfields may be needed to gather additional information (MPA, aerobic spores, etc.)
- Video records and photographs of all inspections

4. Recommend Expansion/Upgrades/Unit Process Replacements

- Growth estimates and water treatment production requirements for five, ten, and twenty years in the future for the Regional Water System
- Alternatives for expansion/upgrades of both the water treatment plant and wellfield with cost estimates and estimated timing of the proposed expansion/upgrades
- Specific upgrades/unit process replacement analysis requested by the RWSJPB include but are not limited to the following:
 - Additional Actiflo unit and rapid sand filters for WTP expansion
 - WTP Piping and pump modifications for expansion
 - Wellfield expansion (if possible)
 - On-site generation of sodium hypochlorite
 - Use of chlorine dioxide instead of chloramination for transmission system residual
 - Use of ultraviolet disinfection either as a supplement or replacement for ozone
 - Investigate the sizing and operation of the backwash water and sludge holding lagoons; Investigate different dewatering processes
 - In-depth investigation and updated study of RWS GWUDI groundwater system
 - Is the current groundwater system suitable for a reliable long-term supply with or without additional treatment?
 - Can the infiltration gallery (5 MGD) be placed back into service with or without additional treatment?
 - Is there a better surrogate than the use of aerobic spore testing?
- All analytical testing performed by the Consultant must meet EPA accepted testing procedures
- The consultant shall provide cost estimates, conceptual drawings, etc. for the recommended facility modifications. The cost estimates shall utilize a budget level design and construction cost estimate for the facility modifications.
- The consultant shall utilize both economic and non-economic factors for evaluating alternatives.

5. Recommend Updated Operations of Water Production Facilities to optimize performance

- Use of sulfuric acid and/or hydrogen peroxide to optimize WTP performance
- Wellfield Management Plan update to maximize groundwater production

while minimizing contaminant potential to the wellfields; Update and revise as necessary the recharge channel rehabilitation procedures

- Other operation optimization as determined

6. Study Preparation and Presentation

- Consultant shall prepare six (6) copies of the draft “Water Treatment – 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 “Water Treatment – Preliminary Facilities Plan” and provide twenty (20) copies.
- The Consultant will present the completed study to the Central Wyoming Regional Water System Joint Powers Board at a regular or special meeting.
- Owner shall provide a timely review of all documents submitted by the Consultant.

7. Meetings with Staff

- The Consultant shall meet with City representatives representing the Regional Water System at least monthly during the course of the preliminary facilities plan study 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.

8. Professional Certification

- The Consultant shall affix his professional engineer's stamp, date, and signature to the front cover of the “Water Treatment –Preliminary Facilities Plan Update” 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).
4. Project Coordination. Consultant shall be responsible for coordination with

the outside agencies and other entities as required to prepare the Water Treatment - Preliminary Facilities Plan.

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 facilities planning studies similar to the study proposed by the Central Wyoming Regional Water System Joint Powers Board. This experience will be examined on the basis of comprehensive water treatment plant/wellfield (especially GWUDI) studies and computer modeling work by the consultant or his Sub-consultants.

Expertise: Specific expertise is desirable in a variety of areas including the following: Water treatment plant expansion and groundwater wellfield studies; GWUDI studies, detailed design and construction of water treatment plants and wellfields including innovative treatment; thorough knowledge of existing and future EPA Safe Drinking Water Act Regulations by the Consultant or his Sub-consultants; and previous demonstrated negotiated resolutions with regulatory agencies on water treatment techniques. 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 study experience related to water treatment plant/wellfield (especially GWUDI) expansion studies and associated 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 RWSJPB 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 RWSJPB 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 RWSJPB.

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 City Staff as agent for the RWSJPB 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 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 and RWSJPB 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 the RWSJPB'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, RWSJPB members, 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 RWSJPB 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 study, 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 City Staff, the RWSJPB and other interested parties.
6. **Time Availability:** Time is of the essence on this study.

VIII. Interviews

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 Central Wyoming Regional Water System Joint Powers Board.

IX. Fees

The negotiated fee shall be based on estimated study 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 RWSJPB reserves the right to contract for all or a portion of the study depending on budget constraints.

X. Contract Award

The RWSJPB reserves the right to accept, reject, or request changes in proposals. The RWSJPB and City Staff 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 RWSJPB 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 on August 14, 2015.

XIII. Response Material Ownership

The material submitted in response to the RFP becomes the property of the Central Wyoming Regional Water System Joint Powers Board and will only be returned to the consultant at the RWSJPB's option. Responses may be reviewed by any person after the final selection has been made. The RWSJPB 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 Central Wyoming Regional Water System Joint Powers Board 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 Central Wyoming Regional Water System Joint Powers Board reserves the right to contact any reference or any client listed in the documents for information which may be helpful to the RWSJPB in evaluating the Consultant's performance on previous assignments.