

Proposal Deadline: 2:00 p.m., October 12, 2017
~~Proposal Deadline: 2:00 p.m., September 14, 2017~~
Gross Reservoir Expansion
Request for Letter of Interest and Statement of Qualifications
Board of Consultants

Requests for Proposals

Denver Water, owner of Gross Dam and Reservoir in Boulder County, Colorado, is soliciting information from independent consultants regarding their capabilities to evaluate the design and construction of the Gross Reservoir Expansion (GRE) Project. This is an invitation for qualified candidates to provide a Letter of Interest and Statement of Qualifications for consideration by Denver Water as a Board of Consultants (BOC) candidate.

The selected consultant must be qualified for this work and possess specific expertise in dam design and construction including: hydraulic design; geologic and geotechnical engineering; structural analysis of concrete dams; roller compacted concrete; and general heavy civil construction.

The BOC will be assembled by Denver Water and be a member of the Project Review Board (PRB) which will be composed of representatives from the Colorado State Engineer's Office (SEO), the Federal Energy Regulatory Commission (FERC) and Denver Water's Dam Safety Department. The BOC will be an independent body responsible for providing technical quality control and opinion on technical and construction related project elements. The BOC will support the PRB members and serve each entity as their experts in evaluation of the design and construction of the project. Multiple BOCs are not anticipated; however it is expected that the design engineer will have specific QA/QC reviewers with similar expertise. The BOC will work through Denver Water, but may occasionally be asked to respond directly to the FERC or SEO.

Denver Water intends to solicit for the individual BOC members concurrently with the Design Engineer solicitation. Award of both contracts will be synchronized to avoid potential conflict of interested parties. Denver Water encourages perspective BOC members who may be part of a Design Engineer team to submit on both advertisements. Denver Water also requests that each submission be specific to the individual BOC candidate and to not include multiple submissions for a single organization.

Project Background

The existing Gross Dam is an on-stream facility located on South Boulder Creek in Boulder County, Colorado, and in the Arapahoe-Roosevelt National Forest. The dam is owned and operated by Denver Water and provides raw water storage from both west slope transcontinental diversions and from the South Boulder Creek watershed upstream of Gross Dam. The dam structure is a curved concrete gravity dam formed with a maximum structural height of 345 feet. The dam has a crest length of 1,050 feet (including the spillway section) and formed to a radius of 1,740 feet.

The dam impounds Gross Reservoir which extends into the Roosevelt National Forest and inundates areas reserved by the Federal Government for power development. The facility is under the jurisdictions of the FERC and the SEO.

The dam was constructed by Denver Water to provide municipal water storage for the City and County of Denver and surrounding communities. Construction of the dam began in 1951 and was completed with initial reservoir filling in 1955. The dam is capable of storing 40,990 acre-feet of water with the reservoir at the spillway crest,

elevation 7,280. The dam is currently operated with 2 feet of flashboards along the entire spillway length, enabling an additional 821 acre feet of storage at elevation 7,282, for a total storage volume of 41,811 acre-feet. While the original facility was constructed without power generation capabilities, a power house and turbine were later added to the facility in 2007.

Denver Water will raise Gross Dam by 131 feet to a final height of 471 feet, increasing storage volume from 41,811 acre feet to about 119,000 acre-feet. A downstream roller compacted concrete (RCC) buttress raise matching the existing curvature of the dam is planned and will require over 900,000 cubic yards of RCC. The raise will involve: buttress foundation preparation, buttress construction, outlet works modification, spillway construction, and mechanical/electrical/operations enhancements. The canyon walls and bottom are comprised of South Boulder Creek Granite. The steep and rugged site topography and the planned use of the reservoir during construction make cost effective construction planning a challenge.

Project Schedule

The Moffat Project began in 2003 when Denver Water submitted a Notice of Intent (NOI) with the Corps of Engineers (Corps). The Final EIS was released on April 25, 2014, and the Record of Decision (ROD) and 404 Permit were released on July 7, 2017. In addition to the Corps 404 Permit, Denver Water is pursuing a FERC License Amendment which is expected in 2018.

Denver Water now intends to start final design (to include 30, 60, 90, and 100 percent design documents) of the dam enlargement and appurtenances concurrent with the ongoing FERC License Amendment process. The design (including FERC and SEO approval) work will last through 2020, with first site improvement construction contracts estimated to be let in 2019 and dam construction contracts let as early as 2020. Construction of the Project is estimated to be completed in 2025. Denver Water anticipates constructing the project through phased construction packages using an Early Contractor Involvement model.

It is anticipated that the members of the BOC will be involved and meet on a regular schedule through the entire project to enable continuity and consistency. The schedule through design will be established in coordination with Denver Water, the FERC, the SEO, and the Design Engineer. The schedule through construction will be based on the planned construction schedule. Meetings are envisioned to occur about twice per year; however, additional meetings will likely be scheduled for specific technical issues. The meetings will occur in Denver and will involve multi-day sessions for presentation of information, deliberation amongst BOC members, and presentation of BOC responses. Each BOC meeting will have one or more specific topics and Denver Water will provide questions for the BOC to deliberate and answer. A designated facilitator will coordinate and facilitate the BOC meetings.

Qualification

1.1 Requests for Information

Considering the various components of the dam raise, there are many areas of expertise that are required to complete a successful project. BOC candidates must demonstrate expert level knowledge and experience in one or more of these technical areas:

- Roller compacted concrete;
- Structural analysis of concrete dams;
- Hydraulic structures;
- Rock foundations/geology;
- Hydraulic analysis.

Experience with risk informed decision making is an additional positive factor, but not required.

1.2 Proposal Submission

If you are interested in being considered as BOC member, please submit a Statement of Qualifications (SOQ) by October 12, 2017 to include the following information:

1. Letter of interest and availability over the period of performance;
2. Brief description of your technical expertise and experience relative to the areas listed above;
3. Brief discussion of your experience/qualifications for participating on a BOC (include: 1) any relevant experience on FERC BOC's and 2) serving as a lead BOC member responsible for gathering and distributing comments);
4. Brief discussion of your experience with Risk Informed Decision Making including role (facilitator, technical expert, and participant) and type of work performed.
5. Curriculum vitae or professional resume;
6. 2018 Labor Rate Sheet with five year escalation rates;
7. Estimated travel expenses for a single workshop assuming a 2 1/2 day workshop (3 nights) in Denver (we understand these will vary, Denver Water will reimburse for actual expenses with no markup);
8. Three references with current contact information (prefer at least one contact has knowledge of previous experience as a BOC member).

Please limit the SOQ to less than 5 pages (not including resumes) and include a 2018 rate sheet.

Denver Water will select the BOC members based on the SOQs, telephone interviews, and input from the FERC and SEO. The following criteria will be the basis for evaluating the written proposals.

- Technical training
- Project relevant experience
- Ability to participate in each BOC meeting throughout the life of the project
- Reasonableness of billing rate, escalation rates, and expenses

Responses shall be addressed as follows:

Project Title: Gross Reservoir Expansion Project
SOQ for Board of Consultants
Attention: Mr. Jeff Martin, Program Manager
Denver Water Engineering Division, Administration Building
1600 West 12th Avenue
Denver, Colorado 80204-3412

Selection Schedule

Letters of Interest and SOQs will be received by email or at Denver Water's office until 2:00 PM Thursday, October 12, 2017. Submittals can be delivered by mail or email. Denver Water may contact potential BOC members with questions or to obtain additional information after review of the SOQ. ~~Final selection and notification of candidates will be Thursday, November 9, 2017.~~ It is anticipated the first BOC meeting will be held in early 2018.

If you have any questions regarding this request, please feel free to contact Jeff Martin at 303.628.6508 or at jeff.martin@denverwater.org.