



Request For Qualifications
North of River Sanitary District No. 1
Wastewater Treatment Plant Expansion Project
Engineering Design Services

Issued:

Tuesday - February 22nd, 2022

Qualifications Due:

Friday – April 1st, 2022

5:00PM

Hard Copies – Deliver to:

MKN & Associates, Inc.

Attn: Josh Nord, PE

1800 21st Street, Suite C

Bakersfield, CA 93301

Electronic Copy – Deliver to:

jnord@mknassociates.us (via email) or

<https://mknassociates.wetransfer.com/> (via file transfer site)

Approved:

Patrick Ostly, PE

General Manager

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1.0 NOTICE

Request for Qualifications North of River Sanitary District No. 1 Wastewater Treatment Plant Expansion Project

North of River Sanitary District No. 1 (NORSRD or District) is soliciting Statements of Qualifications (SOQs) from consultants to provide professional design engineering services related to the North of River Sanitary District No. 1 (NORSRD or District) Wastewater Treatment Plant (WWTP) Expansion Project (Project). The Project is anticipated to include pre-design studies and design of an expansion to take the WWTP from the current 7.5 MGD capacity to 12 MGD and potentially studies and design related to advanced treatment that may be required for expanded recycled water operations. MKN & Associates, Inc. (MKN) will be acting in the role of Program Manager and will be handling the collection of all SOQs.

The deadline for MKN to receive all Statements of Qualifications is **5:00 p.m. on Friday, April 1st, 2022**. SOQs submitted after said time will not be considered.

Submit five (5) hard copies of the SOQ in a sealed envelope plainly marked with the project title, consultant name and address, and time and date of the qualifications submittal deadline. Additionally, submit the qualifications electronically (via email or file transfer site) as a single Adobe PDF document. Both hard and electronic copies are to be delivered to the District's Program Manager.

Based on the qualifications and project approach presented in the SOQ, and potentially interviews with the top candidate firms, the District plans to enter into a professional services agreement for the Project. It should be noted that the specific scope and fee for the Project will be negotiated with the top-ranked consultant. If negotiations with the top-ranked consultant are not successful, the District may pursue contract negotiations with the next ranked consultant.

SOQ hard copies to be mailed or delivered to:

MKN & Associates, Inc.
Attn: Josh Nord, PE
1800 21st Street, Suite C
Bakersfield, CA 93301

SOQ electronic copy to be delivered to:

Josh Nord, PE
jnord@mknassociates.us
<https://mknassociates.wetransfer.com/>

Reference documents will be made available for consultants to review via a file sharing platform. A limited number of site visits to the WWTP will also be provided for each consultant team. All questions shall be addressed in writing to Josh Nord at the email address listed above. All questions concerning this RFQ must be submitted in writing no later than 5:00 PM on March 18, 2022.

2.0 DESCRIPTION OF WORK

2.1 District Background and Related Studies

NORSRD was formed in 1940 as a California Special District for the purposes of collecting, conveying, treating, and recycling wastewater flows generated by residential, commercial, and industrial customers in Oildale California. Over time, the District's service area has expanded and NORSRD currently provides services to residents in the unincorporated community of Oildale, northwest portions of metropolitan Bakersfield, and the City of Shafter within Kern County, California. The District serves a population of more than 55,000 people through around 23,400 active sewer connections within a service area covering approximately 54 square miles.

The District has completed multiple studies over the years to forecast needs related to growth, evaluate hydraulic capacity, assess expanded recycled water opportunities, etc. These reports, which are available for review in the Appendices (see Section 6), are the following:

- Master Sewer Plan Update dated March 2018 and prepared by AECOM
- Recycled Water Study dated December 2019 and prepared by Provost & Pritchard Consulting Group
- NORSRD WWTP Capacity Review dated February 2021 and prepared by AECOM
- Recycled Water Opportunities Study dated January 2022 and prepared by Woodard & Curran

As these reports are available in their entirety, it is not the intent of this RFQ to restate all the detail that is available therein but rather to summarize and point to these documents in the body of the RFQ as needed.

2.1.1. Existing Facilities

NORSRD operates and maintains both the collection system and treatment plant for the benefit of the public. The collection system consists of five lift stations and approximately 174-miles of sewer main ranging from 6-inch to 54-inches in diameter. All system collector and interceptor sewers, as well as the City of Shafter trunk sewer, drain to the District's Outfall Sewer which discharges at the WWTP. The District's WWTP is located on 7th Standard Road, approximately 15 miles west of Highway 99. The WWTP has a capacity of 7.5 million gallons per day (MGD). Wastewater is treated to an undisinfected secondary standards, and the effluent is beneficially reused by irrigation of feed and fodder crops on designated reclamation land.

Current WWTP "unit process" include the following elements:

- Headworks with two mechanical bar screens and an influent lift station,
- One primary clarifier,
- One plastic media trickling filter,
- One secondary clarifier,
- Two anaerobic digesters operating in series,
- Grit removal facilities,
- Cogeneration plant using digester gas (Not presently in operation),
- Ferric chloride (FeCl₃) and polymer feed systems (CEPT) upstream of the primary clarifier,
- Screw press for dewatering, and
- 3 lined and 11 unlined (decommissioned) sludge drying beds.

Additional detail regarding both the collection system and the WWTP is included in the 2018 Master Plan.

2.1.2. Historical Flows and Loading

Incoming Average Annual Daily Flow (AADF) from 2012 to 2020 has grown from 5.63 MGD to 5.77 MGD with 1.35 MGD being contributed by the City of Shafter and 4.42 MGD coming from NORSD's service area. As noted in the 2021 Design Capacity Review, flows are increasing by approximately 2% annually and 80% of the WWTP hydraulic capacity is projected to be reached in 2022, which triggers initiation of plant hydraulic improvements.

With continued population growth and increasing water conservation in the service areas, the concentration of organics at the plant has increased. The WWTP was originally designed to treat 5.88 MGD and expanded to treat 7.5 MGD in December 2008 with an influent BOD₅ of 260 mg/L and an effluent BOD₅ of 40 mg/L. During a study period from January 2018 through February 2019, influent BOD₅ fluctuated between 209 and 280 mg/L and it has been projected that the WWTP's design BOD₅ mass loading will be exceeded by 2026. During the 2018-2019 study period referenced earlier, Total Suspended Solids (TSS) varied between 218 and 349 mg/L.

The current Waste Discharge Requirement (WDR), adopted in February 2011, applicable to plant operation is WDR R5-2009-0088.

2.2 Project Description

In light of the WWTP approaching its hydraulic capacity, BOD₅ effluent exceeding WDR limits, and nitrogen removal being an anticipated regulatory requirement; the District initiated the pre-design efforts required to define the appropriate planning horizon as well as the elements to be included in the WWTP expansion would. The 2018 Master Plan contains analysis of growth scenarios within the service areas as well as definition of the WWTP component changes, additions, and upgrades triggered by the projected growth. After the Master Plan, the District completed the 2019 Recycled Water Study, which evaluates the potential for more beneficial and economically favorable disposal of effluent and identifies the potential advanced treatment that may be required for expanded effluent use. While significant work has been performed and previous studies will be provided, it is expected that the Engineering Design Consultant will verify or update key assumptions from the master plan related to flows, loadings, and design criteria.

The 2018 Master Plan discusses a phased expansion of the WWTP capacity from 7.5 MGD to a buildout capacity of 30 MGD. Phase 1 of the WWTP expansion would increase the WWTP's capacity from 7.5 MGD to 12 MGD and is preliminarily assumed to include:

- Expanded grit removal
- One (1) primary clarifier
- Three (3) aeration (with nitrification/denitrification) basins
- Three (3) secondary clarifiers
- Conversion of existing secondary clarifier to primary clarifier
- Sludge thickening facilities (including digester covers, heat exchange, biogas conditioning, internal combustion engine)
- Two (2) digesters
- Two (2) sludge holding tanks
- One (1) screw press

The Engineering Design Consultant may elect to select different processes to meet anticipated end uses or updated design criteria. The 2018 Master Plan did not contemplate some of the recycled water opportunities currently under consideration by the District.

Although the evaluation of expanded recycled uses of the plant effluent and negotiations with potential users are ongoing, the 2019 Recycled Water Study identified advanced treatment methods (beyond secondary treatment with nitrogen removal as anticipated in future WDR Orders) to provide recycled water for uses such as groundwater recharge or advanced reclamation (i.e., golf courses, food crops, etc.). Identified improvements to treatment resulting from expanded recycled water use may include the following:

- Tertiary Filtration (cloth disk, sand, shaped cloth, etc.)
- Disinfection (UV, chlorine contact, etc.)

NORS D Management and Operations staff have also identified peripheral improvements that may be incorporated into the WWTP expansion. These types of improvements could include:

- SCADA, instrumentation and controls for the District's five lift stations and WWTP¹
- Fully integrated security, fire detection/alert system, and security camera monitoring
- Pond lining
- Site fencing upgrades with automatic actuated front gate
- 3D modeling of existing and new WWTP facilities
- Facilities to offset WWTP energy requirements (or achieve net energy production) via processes such as cogeneration, solar power and battery storage
- Development of a computerized maintenance and management system (CMMS)
- Production of high quality biosolids for expanded use
- Septage receiving facilities with possible addition of food waste handling
- New operations office and laboratory facilities
- Maintenance shop with a bridge crane and enclosed parking

The Engineering Design Services scope may also include the following work efforts:

- RWQCB permitting negotiation and coordination
- Environmental work CEQA / NEPA (currently anticipated to be executed under separate agreement)
- Energy master plan for WWTP
- SCADA Master Plan (currently anticipated to be executed under separate agreement)

The project will be completed within the existing plant site on property that has been previously disturbed. No additional property or offsite work is anticipated for this Design element. Appendix C contains a site plan showing the WWTP and preliminary proposed locations of the new process units.

2.3 Scope of Work

The minimum scope of work for the Project is described below. Proposers are encouraged to review the requirements of the RFQ, examine reference documents, and develop an approach and scope of services suited to the Project. For the purposes of the RFQ, the Project is considered to be the plant expansion to 12 MGD

¹ District is currently preparing a Request for Qualifications for a SCADA Master Plan and ongoing instrumentation/control engineering support. Selected Engineering Design Consultant for WWTP Improvements would not be conflicted out of pursuing this pending RFQ and will be responsible for designing facilities consistent with the recommendations from the SCADA Master Plan.

(previously described) with potentially advanced treatment as outlined in the 2019 Recycled Water Study (Section 7 Alternative No. 3).

The Design Consultant will provide survey, geotechnical, and engineering design services including instrumentation/controls, electrical, mechanical, structural, process, architectural, and civil disciplines. Additional services may be considered, but should be presented separately as optional tasks.

1. **Preliminary Design Services** – Preliminary Design Services should include investigations, predesign studies, analysis, and preliminary design development. Permitting, agency negotiation, and CEQA/NEPA-related work will be handled separately by the District. Required tasks associated with preliminary design services include:
 - a. Topographic, Boundary, and Structure Survey
 - b. Geotechnical Investigation
 - c. Design Criteria – Design Consultant will review available plant data, record drawings, prior reports/studies, and identify any additional data requirements for design of the project.
 - d. Concept Design Report – At a minimum, the Concept Design Report should summarize the results of the investigations; describe the proposed design for the WWTP Expansion Project, and provide the basis for design of new facilities, 30% design plans, anticipated list of construction sheets, list of specifications, recommendations, proposed project schedule, and an opinion of cost. The District and Engineering Design Consultant may elect to develop a Facilities Plan to meet State Revolving Fund requirements in place of the Concept Design Report.
2. **Design Support for CEQA/NEPA Compliance** – The permitting and CEQA investigation will be handled separately by a consultant engaged by the District for that purpose. However, support services from the design consultant (e.g., project description, exhibits, and consultation on potential construction impacts) will be required. An “as-needed” task will be established in the contract for engineering support of CEQA/NEPA activities.
3. **Construction Documents** – Develop 60%, 90%, and Final design plans and specifications required for competitive public bidding of the Project. The District will prepare and provide upfront documents (incorporating standard documents from the Engineers Joint Contract Documents Committee) for review by the Design Consultant. All technical specifications shall follow the Construction Specifications Institute (CSI) Masterspec™ format. It is assumed that the Design Consultant will revise the District’s supplementary conditions and/or provisions to suit the project and will identify any discrepancies between District standard upfronts and the Consultant’s technical specifications for resolution. Drawings shall be developed in a 3D “smart” format such that they can be easily converted into electronic as-built drawings and incorporated into the CMMS and asset management systems. Plans must include the existing, salvaged, and reused infrastructure.
4. **Meetings** – Include a Kickoff Meeting and a sufficient number of progress meetings required for completion of required services. The District anticipates a minimum of one progress meeting associated with each Project deliverable and a formal update for staff (and/or the Board of Directors) once per quarter.
5. **Engineering Cost Opinion** – Develop 60%, 90% and Final engineering opinion of cost.
6. **Bid Phase Services** – At a minimum, Bid Phase Services should include attending the pre-bid construction meeting, responding to requests for information (RFIs), and providing letters of clarification and bid addenda as required.
7. **Office Engineering During Construction** – The Design Consultant will not provide construction management but will perform typical engineering services during construction (ESDC) in support of the District’s Construction Manager (to be selected separately). Services should include developing a conforming set of construction documents, performing submittal review, providing responses to RFIs, reviewing and providing comments on Requests for Change, performing field visits, and development of construction as-built plans (including a 3D electronic model).

Project management and quality assurance related tasks should be identified along with the appropriate deliverables identified above. The Design Consultant will be required to prepare a schedule and keep the schedule updated throughout the pre-design, design, and bidding phases.

2.4 Schedule of Work

The anticipated project schedule is summarized below. The dates are tentative and subject to change, based on permitting conditions, consultation with agencies, and other potential impacts that cannot be assessed at this time.

Table 2-1: Anticipated Project Schedule	
Issue RFQ	February 22 nd , 2022
Mandatory Pre-SOQ Meeting	March 17 th , 2022
Written Questions Due	March 18 th , 2022
SOQs Due	April 1 st , 2022
Notification of Consultant Shortlist/ Request for Proposal (at District's Option)	April 6 th – 8 th , 2022
Proposal Submittal and/or Consultant Interviews (at the District's Option)	April 11 th – 15 th , 2022
Contract Negotiation with Top-Ranked Consultant	April 15 th - 29 th , 2022
Consultant Selection / Board Approval	May 2022
Notice to Proceed	May 2022
Design Deliverable Dates after NTP to be Developed in Project Approach (by the Consultant)	

3.0 GENERAL TERMS AND CONDITIONS

3.1 Statement of Qualifications Requirements

1. Content: The SOQ shall be concise, well organized and demonstrate the proposer's understanding of the Project and their applicable qualifications and experience. The SOQ shall be limited to forty (40) pages, exclusive of resumes, cover letter (2 pages), divider pages, and covers. SOQs should include the minimum SOQ Content as described in Section 4.0. Any additional materials that will support your SOQ may be included. However, if they do not directly address the stated requirements, please include them in a separate appendix.
2. Consultant: The Consultant in the SOQ shall be responsible for a minimum of 60% of the Project work on a manhour basis. The Consultant will provide a Project Manager and/or Project Engineer who will serve as the Engineer of Record for the construction documents.
3. Subconsultants: Identify all subconsultants to be used during the term of the project and provide a list of responsible staff for each subconsultant along with their qualifications.
4. Insurance: The consultant will be required to obtain at their own cost an insurance policy meeting the District's requirements as described in the District's Standard Agreement (Appendix A). Said policy will be required to be maintained throughout the period of services. See Section 3.2 for additional details regarding proof of insurance.
5. Consultant's compensation: The Consultant shall include a fee schedule that presents hourly rates for the various categories of personnel that the Consultant would provide as well as the basis for charging other direct costs (including materials, travel, and subconsultants). A fee proposal will be requested from the top-ranked proposer(s) but is not required and will not be accepted as part of the SOQ.
6. Commitment: The SOQ shall be signed by the individual with power to bind the Consultant to the scope of work and approach identified in the document. Execution of a professional services agreement will take place after negotiation of the final work scope.
7. Statement of Contract Disqualifications: Consultant shall include a signed statement of whether it or any of the proposed team members have ever been disqualified, removed, or otherwise prevented from proposing on or completing a municipal government project for any reason. If so, provide a description and explanation of the circumstances.
8. Exceptions: Consultant shall initial the District's Standard Agreement (Appendix A) to indicate general agreement with the content therein. If the Consultant takes any exceptions to the Standard Agreement, identify the specific portion and provide a full explanation including suggested changes (if any). Changes to the District's Standard Agreement will not be considered during the RFQ process but may be considered during scope negotiation prior to execution of the final agreement for professional services.

3.2 Contract Award and Execution

1. The District reserves the right to reject any or all responses to this RFQ, waive any insubstantial irregularities in this RFQ or any submitted SOQ, to negotiate with all qualified Consultants, or to cancel in part or in its entirety this RFQ process.
2. If a contract cannot be negotiated with the highest-ranked consultant for any reason, the District reserves the right to select the next most qualified consultant.
3. The District reserves the discretion to determine the ability, competency and responsibility of the Consultants. Before award, Consultants may be required to furnish evidence of capability to adequately perform the work in a timely manner as deemed necessary by the District.
4. The Consultant shall provide proof of insurance in the coverages and amounts specified in Appendix A within 15 calendar days after notice of selection as a precondition to contract execution.

5. Even if selected, the District reserves the right to terminate any agreement reached with the selected firm at any time and in an appropriate manner.

4.0 SOQ CONTENT AND SELECTION PROCESS

4.1 Statement of Qualifications Content

1. Cover letter/Executive Summary
2. Project Organization and Key Personnel – Provide a project organization chart showing the names of all key personnel assigned to the Project and their primary responsibility. Subconsultants should also be identified in the organization chart with responsibilities identified. Any changes in key personnel and subconsultants after the award of contract must be proposed in writing and approved by the District before any change is made.
3. Experience and References - Include professional references for five (5) similar projects performed with the proposed project team members. Provide project descriptions demonstrating abilities of the team to provide the types of services identified in the Project Description (Section 2.2). Provide current contact information (i.e., name, telephone number, and email address) for references that illustrate the quality of past performance of the project team.
4. Project Understanding – Describe the consultant’s understanding of the project. Identify the potential challenges and critical tasks, the recommended project approach, and describe how the consultant’s team is best suited to address the key issues and execute the proposed approach.
5. Proposed Scope of Work – Address and detail all the tasks identified in this RFQ. Additional tasks identified during development of the SOQ that may be applicable may be included as optional. Include a project schedule showing anticipated completion time for each task, assuming that the Project Management team can provide anticipated permit conditions from Kern County.
6. Design Fee – The NORSD Master Sewer Plan Update (2018, AECOM) provided a planning level cost opinion. The total project cost to expand the WWTP from 7.5 MGD to 12 MGD is estimated at \$85.1M and the budget for design fee is \$8.5M. Provide comments on whether the estimated design fee is adequate or not. After development of a short list and interviews, a fee proposal will be requested from the top-ranked firm(s). It is understood that the planning level cost presented in the master plan does not reflect possible cost associated with treatment beyond the secondary level with denitrification.
7. Exceptions, statement of past disqualifications, statement of insurance coverage, and other items identified in Section 3 and throughout the remainder of this RFQ.
8. Resumes – Include resumes of all key personnel and subconsultants.

4.2 Method and Criteria for Selection

Upon evaluation of the SOQs, the District will identify the Consultant(s) it feels are most qualified for this Project based on criteria such as:

- Quality and clarity of the SOQ as well as demonstrated understanding of the work
- Experience of the proposed Project Manager and key team members working together on similar projects
- Firm’s history of design projects proceeding through construction with minimal change orders
- Experience designing WWTP improvements of similar size

After developing a short list based on the SOQs, the District may choose to conduct interviews of the top ranked Consultant(s). However, the District reserves the right to make a selection based solely on the written SOQs. If interviews are conducted, the interviewed Consultants will be evaluated and re-ranked and the District will negotiate a final scope of work, fee, schedule and contract terms with the top ranked firm.

5.0 DEADLINE AND INQUIRIES

5.1 Deadline

Five (5) hard copies and one electronic (Adobe PDF format) copy of the SOQ must be submitted to MKN by **5:00 pm on Friday, April 1st, 2022**. Late submissions will not be accepted. Clearly mark all hard copy submittals with the name of the RFP, the firm name, and the RFQ deadline.

SOQ hard copies to be mailed or delivered to:

MKN & Associates, Inc.
Attn: Josh Nord, PE
1800 21st Street, Suite C
Bakersfield, CA 93301

SOQ electronic copies to be delivered to:

Josh Nord, PE
jnord@mknassociates.us via email or
file transfer via <https://mknassociates.wetransfer.com/>

5.2 Inquiries

All questions concerning this RFQ must be submitted in writing no later than 5:00 PM on March 18, 2022. Phone calls are allowed but must be documented afterward in writing for formal response. Any clarifications deemed to be necessary, as a result of a question/RFI, will be issued in writing and delivered electronically (in Adobe PDF format) to all consultants who received the RFQ package.

Direct questions or information requests concerning this project to Josh Nord at:

Josh Nord, PE
MKN & Associates, Inc.
1800 21st Street, Suite C
Bakersfield, CA 93301
jnord@mknassociates.us
(661) 873-4262 ext 1001

Each potential proposing team is allowed to schedule two (2) two-hour visits to the existing WWTP with a minimum of 1 week notice. Schedule visits by contacting Josh Nord via email.

Reference documents including previous studies, record drawings, and plant monitoring data are available via an electronic file sharing platform. Access to the file sharing platform will be provided to consultants upon request (contact the Program Manager).

6.0 APPENDICES

A. District Standard Agreement