

REQUEST FOR TECHNICAL PROPOSALS Central Alum Creek Facilities Plan

INTRODUCTION

Delaware County Regional Sewer District (DCRSD) seeks professional engineering firms to provide technical services for preparation of a Facilities Plan for the proposed Central Alum Creek Water Reclamation Facility (CACWRF). The Facilities Plan will be followed by Preliminary and Final Engineering Design Services and other professional engineering services as required.

The CACWRF Facilities Plan is intended to further evaluate and refine the recommendations provided for in the 2017 Master Plan. The 2017 Master Plan recommended construction of an 800,000 gallon per day (GPD) wastewater reclamation facility to alleviate future buildout concerns for the Alum Creek WRF and allow for additional development in the CACWRF tributary area. The Facilities Plan shall evaluate several key items and concerns including hydraulic expansion of the plant in the future, nutrient treatment strategy for short-term limits as well as long-term requirements, Army Corps and Ohio EPA permitting, flow routing of existing pump station and future pump stations and trunk sewers to provide influent flow to the new plant, and the potential use of collaborative construction methods.

Consultants must follow the procedures outlined in this request as well as the revised Qualifications-Based Selection Procedure for Professional Design Services updated on 12/13/2016. Refer to the "Consultant Prequalification Procedure" link located at <http://www.co.delaware.oh.us/sanitary>. Consultants need not be prequalified in order to respond to this RFP.

The Delaware County Regional Sewer District (DCRSD) office, 50 Channing Street, Delaware, Ohio 43015, will receive Technical Proposals until **1:00 pm (EST) on Thursday, December 21, 2017**. Proposals received after the date and time due will not be considered. All questions should be directed to Tiffany Maag by email at tmaag@co.delaware.oh.us.

In order to receive consideration, questions about the proposals or the project must be received no later than 4:00 p.m. (EST) on Monday, December 18, 2017. DCRSD will transmit written addenda in response to any questions that DCRSD considers necessary to be answered for clarification purposes. Oral statements may not be relied upon and will not be binding or legally effective.

Project Background

The Central Alum Creek Water Reclamation Facility (CACWRF) is a proposed new treatment plant to be constructed on the Alum Creek peninsula on the north side of Alum Creek Lake, south of 36/37 (See **Figure 1**). The purpose of this facility is to accommodate the increased growth which is anticipated to occur in the areas north, east, and west of Alum Creek Lake and along S.R. 36/37. These areas are projected to develop very rapidly in the near future due to their proximity to the outlet mall, I-71/36/37 interchange, and the siting of the new Olentangy Berlin High School on the northwest side of Alum Creek Lake. This development has increased interest in land development in the adjacent parcels of which nearly 2,250 acres have been identified as likely to see some type of improvement over time. An existing agreement with the Cities of Columbus and Westerville allows for the initial CACWRF discharge to be sized at approximately 800,000 GPD which should serve the near term needs of the DCRSD.

The proposed CACWRF was sited to be easily accessible to the areas in the northern parts of Berlin and Berkshire Townships which have already seen significant interest in near term development. The County has already obtained a Contract Option on the selected plant location with the property owner. The Contract Option is good for a period of 1 year with the property owner so that the Facilities Plan can be prepared to determine the conditions of the site prior to final purchase. The land included in the Contract Option is shown on **Figure 2** as well as a potential layout for the plant. This is not the final plant layout, rather a preliminary potential layout for property acquisition sizing purposes.

In order to convey flow from the east and west sides of the lake, considerations must be made for upgrading the existing East Alum Creek Pump Station and rerouting the forcemain on the east side of the lake, and rerouting the forcemain from the proposed West Alum Creek Pump Station on the west side of the lake. The West Alum Creek Pump Station is currently under design and will convey flow to the Alum Creek WRF in the interim so that the development can continue to proceed in this area. The proposed West Alum Creek Pump Station is initially sized for a peak flow of 3.9 MGD while the existing East Alum Creek Pump Station will be required to be rerouted and expanded to be capable of handling a peak flow of 5 MGD.

Additionally, a new gravity trunk sewer is required to be installed to accept flow from developments directly to the north along US36/SR37 and into southern Brown Township. All three proposed conveyance lines as well as the two pump stations will be sized to accept flow from the proposed development area utilizing a 25-year Level of Service. The pump station, forcemain, and trunk sewer portions of the project are shown in **Figure 3**.



Figure 1 – Overview of the CACWRF Location



Figure 2 – Contract Option CACWRF Site and Potential Layout

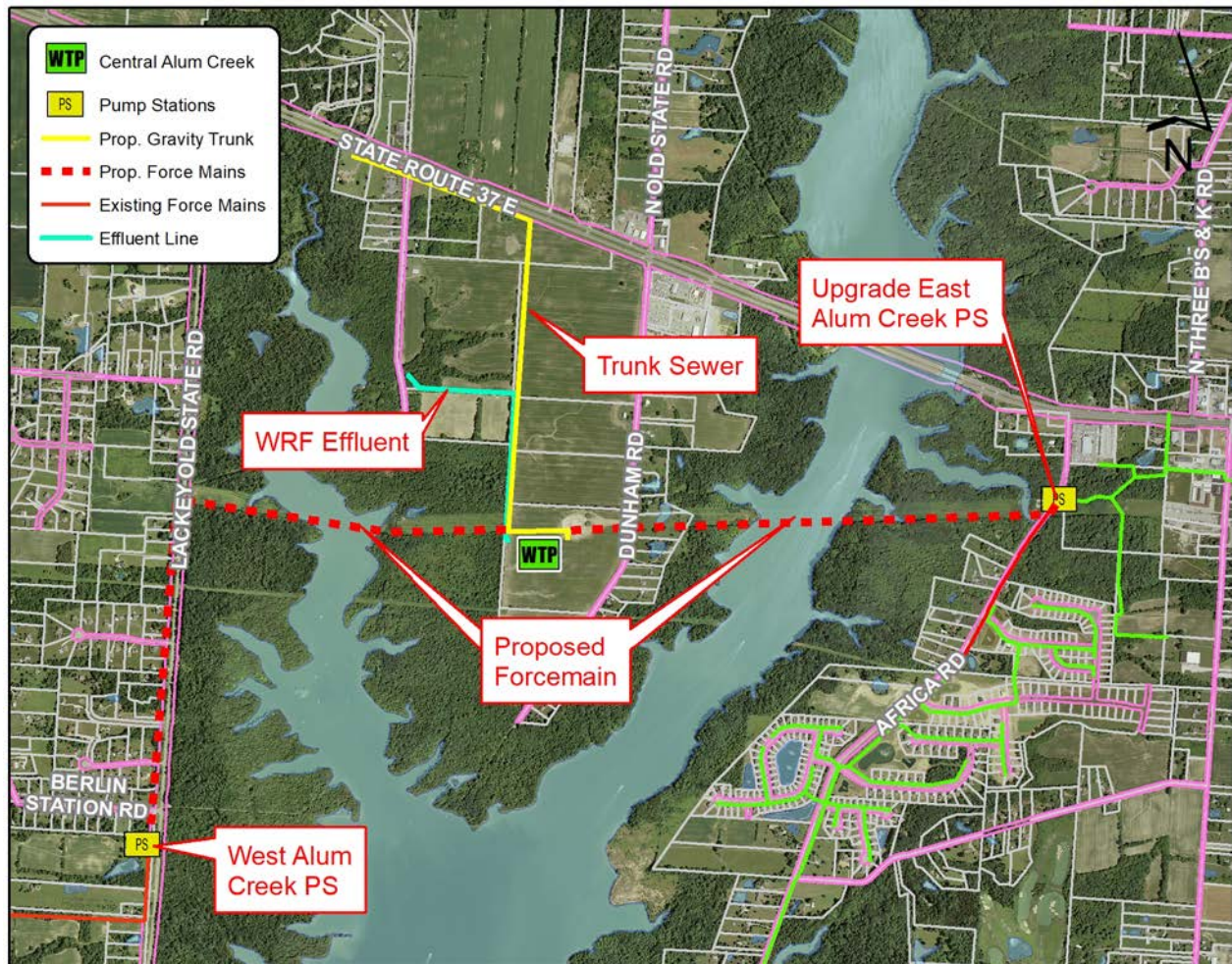


Figure 3 – Pump Station, Forcemain, and Trunk Sewer Layout

PROJECT DESCRIPTION

The submitting firm is welcome to review the recommendations of the 2017 Master Plan which provided the recommendation for constructing a new CACWRF. The improvements set forth in the 2017 Master Plan results in significant capital improvement investments by the DCRSD related to the CACWRF, totaling approximately \$34 million. This includes \$22 million for the CACWRF, \$5,000,000 for the influent trunk sewer, \$3,422,200 for the East Alum Creek Pump Station improvements and forcemain rerouting, and \$3,725,500 for the West Alum Creek Pump Station forcemain rerouting. It was determined that completion of a Facilities Plan prior to the preliminary/final engineering of the project would provide for a better plan for implementation of the project. This would in turn allow for preparation of a Facilities Plan that can address multiple key concerns for the DCRSD. At a minimum the Consultant's Facilities Plan approach should provide a plan to address the following:

1. Hydraulic expansion and nutrient limit strategy to address future regulations for an expandable treatment facility;

2. Detailed plan on Army Corps and Ohio EPA permitting; and
3. Collaborative construction method options discussion and past experience.

The items identified above are discussed in further detail in the following paragraphs. It is desired that the Consultant's proposal includes a plan to address each section (1-3) below.

1. Hydraulic Expansion and Nutrient Limit Strategy/Discharge Limits:

The CACWRF will ultimately discharge into Alum Creek Lake, which increases the sensitivity of the project and type of facility that is constructed. For this reason, DCRSD understands the social responsibility that comes with discharging into public drinking water sources. These responsibilities must be considered in the Facilities Plan and specifically a strategy must be identified that addresses nutrient limits and potentially more stringent future regulations. Consideration must also be given for providing a facility that is expandable as growth and development occur in a rapidly growing area like Delaware County. It is anticipated that the plant may be expanded from the initial 800,000 GPD capacity up to 3.2 million gallons per day (MGD) with future buildout projections. Provide discussion on your firm's proposed approach to these issues as well as proposed public outreach and stakeholder involvement regarding the future expandability and limits.

Additionally, preliminary discharge limits have been provided by the Ohio Environmental Protection Agency (EPA) for discharge into a tributary upstream of Alum Creek Lake. The limits have not yet been accepted by DCRSD, and the Facilities Plan shall address recommendations for either meeting or proposing to revise the limits. The preliminary Ohio EPA limits are attached to this RFP. A key component to this Facilities Plan is that the CACWRF must be expandable from a flow and limit standpoint without excessive cost when additional capacity is required. Provide a discussion on how this may be addressed as well as a **Conceptual Site Plan** of the facility that your firm envisions.

2. Detailed Plan on Environmental Permitting:

Focus shall also be given to permitting, specifically with the Army Corps of Engineers and the Ohio EPA. It is anticipated that Army Corps permitting will be a key aspect of the project with the influent forcemains from the West Alum Creek Pump Station and East Alum Creek Pump Station and also the CACWRF effluent discharge upstream of Alum Creek Lake. Provide a summary of your plan for the permit approval process and strategy to obtain permits in a timely manner for implementation of the project.

3. Collaborative Construction Method Options Discussion and Past Experience:

DCRSD has been evaluating the potential use of collaborative construction methods for installation of the CACWRF, influent trunks sewer, and pump station and forcemain upgrades. Provide discussion on the approach that your firm would take to evaluating collaborative construction methods (design-build, construction manager at-risk, progressive design build, etc.) without recommending a specific type of construction method to be used. Include information

on past project experience and the role of your firm throughout design and construction. Also explain whether collaborative construction methods would be a useful tool with the various types of work (treatment plant, pump station upgrades, forcemain rerouting, trunk sewer, etc.).

The submitting firm shall provide their approach to the review, analysis and planning of the facility installation. Project schedule including coordination of phases (pump station upgrade and forcemain rerouting), and anticipated deliverables to meet the County's needs should be included. The section titled "CONTENT OF CONSULTANT'S RESPONSE" in this RFP provides the requirements for the response.

EXISTING DOCUMENTS

DCRSD will provide existing record documents such as as-builts of the East Alum Creek Pump Station and other documentation, the 2017 Master Plan and Technical Memorandums associated with the Master Plan, on the District's website at the following link: <http://www.co.delaware.oh.us/sanitary/newweb/rfp.asp>

OVERVIEW OF PROCESS

DCRSD uses a Qualifications Based Selection Process conforming to the requirements of Ohio Revised Code Sections 153.65 to 153.71. The process is as follows:

CONTENT OF CONSULTANT'S RESPONSE

A firm's proposal response shall include, but is not limited to, the following:

1. Company Name and background on company.
2. Names and experience of key personnel that will be assigned to perform the services. Provide organizational chart for the proposed project team for each contract to be considered for. Provide resumes for the key project staff members (3 page maximum per resume).
3. List of completed projects for DCRSD and/or similar to the proposed project in which the team is wishing to be considered for and has previously participated in; include detailed information on project description and key personnel.
4. A description of the firm's project strategy. The description shall include:
 - a. Hydraulic expansion and nutrient limit strategy;
 - b. Detailed plan on environmental permitting; and
 - c. Collaborative construction method options.
5. Project Schedule indicating the time frame for work tasks, review time, milestones, etc. This should include schedule considerations for the various phases of the work (CACWRF, pump station upgrades, forcemain rerouting, and trunk sewers).

6. Three (3) public or private agency references to contact regarding the firm's past performance, preferably on similar projects.

One (1) original and four (4) copies of the proposal are to be submitted for evaluation, along with a digital copy of the proposal on CD/DVD. There is a thirty (30) page total limit (one sided) on the proposal (15 pages double sided). A total of three (3) 11"x17" pages will be allowed as part of the 30 page limit. The cover letter will not be included in the 30 page limit.

EVALUATION

The Proposal Evaluation Committee shall be determined by the Executive Director or his/her designee. Each member of the Proposal Evaluation Committee shall evaluate all firms. Individual evaluations shall be combined into a consensus evaluation. The average score for each of the criteria shall be totaled for a composite score.

EVALUATIONS CRITERIA

The Proposal Evaluation Committee shall evaluate the proposals based on the following criteria:

Experience, technical training and education of the personnel assigned to perform the work	20 POINTS
Competence to perform the required services as indicated by past projects	20 POINTS
Project Approach and Strategy	50 POINTS
Project Schedule	10 POINTS
TOTAL POINTS	100 POINTS

Prior to completing evaluations, the Proposal Evaluation Committee may request revisions or clarification of the proposals, provided the same opportunity to revise or clarify is given to all proposing firms.

If the Proposal Evaluation Committee feels that the scoring process listed above is sufficient to determine the highest ranked firm, DCRSD may proceed to consultant recommendation.

If the Proposal Evaluation Committee feels that interviews are necessary to determine the highest ranked firm following the scoring evaluations, the Proposal Evaluation Committee may require them. DCRSD reserves the right to limit the number of firms to be interviewed. If required, the interview process will consist of a panel discussion between DCRSD and members of the Consultant project team identified by DCRSD. A formal interview presentation will not be performed.

Following the interviews (if required), the Proposal Evaluation Committee will evaluate the firms to determine a final ranking.

CONSULTANT RECOMMENDATION

Once the Proposal Evaluation Committee has conducted the short-listed firm interviews (if required) and ranked the firms, the committee shall prepare a letter notifying each firm of its findings. DCRSD may then enter into contract negotiations with the highest ranked firm.

FINAL CONTRACT NEGOTIATIONS AND AWARD

DCRSD shall establish the proposed terms and scope of services for the project's contract. Should the negotiations with the highest ranked firm be unsuccessful, then they shall be terminated and negotiations shall begin with the next highest ranked firm. This process shall continue until a contract is successfully negotiated. If all of the negotiations are unsuccessful, all of the firms that submitted proposals will be notified that the selection process has been terminated. DCRSD reserves the right to terminate the final negotiations at its discretion.



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

December 23, 2016

Mr. Bill Johngrass, P.E., Project Manager
ms consultants, Inc.
2221 Schrock Road
Columbus, OH 43229

Re: Proposed Delaware County – Central Alum Creek Water Reclamation Facility Preliminary Effluent Limitations

Dear Mr. Johngrass:

Ohio EPA Central District Office, Division of Surface Water (CDO/DSW) has reviewed your letter dated October 28, 2016 regarding the development of final effluent limitations for the proposed Delaware County Central Alum Creek water reclamation facility (WRF). Based upon the information presented in your October 28th letter, along with the information presented during the December 13th meeting and site visits between Mike Gallaway and John Owen of CDO/DSW and Delaware County staff, I offer the following response:

Delaware County is proposing to construct the proposed Alum Creek WRF with an average daily design flow of 0.800 MGD, a maximum daily flow of 1.6 MGD and a peak hourly flow of 4.0 MGD which will either discharge directly to Alum Creek Reservoir or to Alum Creek Reservoir via a small tributary. The plant site could be located either east of Big Run Road or west of Dunham Road, and south of State Route 37 East, within Berlin Township, Delaware County. Based upon current water quality information and those requirements contained in the Ohio Antidegradation rule found in Ohio Administrative Code (OAC) Section 3745-1-05, CDO/DSW has developed of preliminary effluent limitations for the proposed Central Alum Creek facility. These preliminary effluent limitations are consistent with the Ohio's Antidegradation requirements and are considered protective of Ohio's current aquatic life-based water quality standards (WQS), as well as the downstream uses of the Alum Creek Reservoir and Alum Creek itself. The table contained in Attachment 1 to this letter contains those preliminary effluent limitations.

Please be advised, the following considerations should be noted and considered during the planning and design of the Central Alum Creek facility.

1. The Ohio WQS standards for seasonal ammonia-nitrogen may become more restrictive in the future due to US EPA's development of new WQS criteria. CDO/DSW's development of the preliminary effluent limitations for seasonal ammonia was based on Best Available Demonstrated Control Technology (BADCT) limitations listed in Table 5-1 of Ohio's Antidegradation Rule or Ohio WQS. CDO/DSW is uncertain when the new standards will be promulgated, but it is expected within the next 5 years, and the new standards could be half of the current ones, possibly making the preliminary effluent limitations not protective.
2. Given the current, existing downstream uses of both Alum Creek Reservoir and Alum Creek itself, Delaware County may wish to consider treatment technologies, during the planning and design of the Central Alum Creek facility, that have inherently effective and reliable nutrient (phosphorus) removal abilities.
3. The planning and design of the Central Alum Creek facility should also consider the possible management/disposal of water treatment plant residuals.

Additionally, depending on which discharge location Delaware County chooses, an outfall sign will need to be installed at the outfall location.

Bill Johngrass
ms consultants, Inc.
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Please note the discharge from proposed treatment facility meets the applicability requirements of Ohio's Antidegradation Rule found in OAC 3745-1-05(B). While the rule does not require a public hearing in this situation, the Agency's receipt of a NPDES permit application, with or without a permit to install application, must be public noticed for 30 days, as well as requiring Ohio EPA to perform a full antidegradation review on the application(s).

Should you have any questions, please feel free to contact me at (614) 728-3849.

Sincerely,



John R. Owen, P.E., BCEE
Environmental Specialist II
Division of Surface Water
Central District Office

c: Mike Frommer, P.E., Director, Delaware County Sanitary Engineers Office
Tiffany Maag, P.E., Assist. Director, Delaware County Sanitary Engineers Office
Mike Gallaway, Manager, CDO/DSW
Ashley Ward, NPDES Supervisor, DSW-Central Office

ATTACHMENT 1

PRELIMINARY FINAL EFFLUENT LIMITATIONS FOR THE CENTRAL ALUM CREEK WATER RECLAMATION FACILITY				
Pollutant	Concentrations		Loadings (kg/day)*	
	30-Day Average	7-Day Average	30-Day Average	7-Day Average
Total Suspended Solids (mg/l)	12	18	36.3	54.5
Ammonia-Nitrogen (mg/l)				
Summer	1.0	1.5	3.03	4.54
Winter (Reservoir)	3.0	4.5	9.10	13.6
Winter (Small Tributary)	1.9	2.9	5.75	8.78
CBOD ₅ (mg/l)	3.0	5.0	9.10	15.1
Nitrogen, Total Inorganic (mg/l)	10	15	30.3	45.4
E. Coli (#/100 ml)	126	284	---	---
Oil & Grease, Total (mg/l)	---	10 (max)	---	---
pH (s.u.)	6.5 to 9.0		6.5 to 9.0	
Phosphorus, Total (mg/l)	1.0	1.5	3.03	4.54
Dissolved Oxygen (mg/l)	6.0 (min)	---	---	---

* Based on a ADDF of 0.800 MGD