



**Request for Proposals**  
**Design and Services of a Granulated Activated Carbon**  
**PFAS Treatment System for Wells J-1, J-2, and J-3 at 88<sup>th</sup> and Pine St.**  
**2700 88<sup>th</sup> St SW Lakewood, WA 98498**

**Proposals are Due on Wednesday, August 2, 2023**

The Lakewood Water District (District) is seeking proposals from consultants to provide design and permitting assistance services for the addition of a granulated activated carbon (GAC) filtration system for the removal of PFAS at the District's existing Wells J-1, J-2, and J-3 at the District's 88th St and Pine well site. The new PFAS treatment system will be designed to filter approximately 2,000 gpm of water produced from the District's three wells at the site. The existing wells draw from two different aquifers. J-1 and J-3 draw from aquifer A, and J-2 draws from aquifer E. The treatment system for the three wells (Wells J-1, J-2, and J-3) should be designed with the possibility of increasing the flow rate in the future. Wells J-1 and J-3, in shallow aquifer A, have low levels of PFAS, and J-2 in aquifer E has elevated hydrogen sulfide, which will be removed through the GAC treatment process.

**Project Background**

In June of 2022, the United States Environmental Protection Agency (EPA) published a proposed Maximum Contaminant Level (MCL) levels for six PFAS compounds, perfluorooctane sulfonate (PFOS) - 4 ppt and perfluorooctanoic acid (PFOA) - 4 ppt. EPA's proposed rule includes the use of a hazard index to consider the combination of four contaminants: Perfluorononanoic acid (PFNA), Perfluorohexanesulfonic acid (PFHxS), Perfluorobutanesulfonic acid (PFBS) and GenX. This project will treat the wells to filter PFAS from the drinking water to levels that meet the proposed EPA MCLs.

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made toxic chemicals that include PFOA, PFOS, PFNA, PFHxS, PFBS, GenX, and many other chemicals. These chemicals are not found naturally in the environment. PFOA and PFOS have been the most extensively produced and studied of these chemicals. There is evidence that exposure to PFAS over time may lead to adverse human health effects.

In 2016, Joint Base Lewis McChord (JBLM) sent out a press release notifying the District that high levels of PFAS were found in 5 of the military base's wells as concentration levels were in excess of the EPA's health advisory level of 70 ppt during the UCMR3 monitoring. After sampling of water produced from District wells close to JBLM, it was found that PFAS was detected well below the EPA health advisory level of 70 ppt. As a result, the District implemented ongoing monitoring of its shallow aquifers – the A-level and C-level aquifers. PFAS levels detected at the 88th and Pine site have remained below both the EPA health advisory level and the State Dept. of Health State Action Level (SAL). However, in anticipation of the EPA's proposed MCL levels, the wells would be above the proposed MCL.

The latest sample results for the wells are as follows.

J1 - March 2023	ppt		J3 - March 2023	ppt
PFOS	14		PFOS	14
PFHxS	10		PFHxS	11
PFBS	9.8		PFBS	8.3
PFOA	8.6		PFOA	7.3
PFNA	ND		PFNA	ND
GenX	ND		GenX	ND

**Site Information**

At the 88th and Pine well site, there are also one underground booster stations with one pump each and a 0.44 MG Standpipe Tank. In addition to the design for the GAC system for the three wells, part of the scope of work will be relocating one station from the below-ground booster station to an above-ground booster station. In 2027 the District has planned to replace the existing 0.44 MG tank with a 2.0 MG tank. In the design of the GAC

system and booster station, the selected consultant will want to locate the GAC system and booster station out of conflict with the future tank. A conceptual site drawing is attached to be used in guiding the consultant.

The 88th and Pine wellfield was initiated in 1952 with the drilling of well J-1. Well J-2 was added in 1961, and Well J-3 in 2007. The wellfield is important given its location in the northwestern corner of the service area, serving the 455-pressure zone and having an on-site storage tank.

### **Well J-1**

Constructed: 1952  
Aquifer: Aquifer A  
Size: 24-inch casing; 16-inch, 100-slot screen  
Screened zone: 135 to 156 feet bgs  
Pump: Line Shaft with VFD  
5-year average SWL 78 feet bgs  
5-year average PWL 111 feet bgs

### **Well J-2**

Constructed: 1961  
Aquifer: Aquifer E  
Size: 16-inch casing; 12-inch perforated casing; 8-inch, 30-slot screen  
Screened zone: 498 to 605 feet bgs  
Pump: Submersible with Soft Start  
5-year average SWL 143 feet bgs (2014 to 2017)  
5-year average PWL 180 feet bgs (2014 to 2017)

### **Well J-3**

Constructed: 2007  
Aquifer: Aquifer A  
Size: 20-inch casing; 16-inch, 100-slot screen  
Screened zone: 140 to 160 feet bgs  
Pump: Submersible with VFD  
5-year average SWL 64 feet bgs  
5-year average PWL 95 feet bgs

### **Project Schedule**

The District is looking to expedite the design schedule because of the possible effect of the proposed rule on PFAS levels from the EPA. Depending on need and availability, the District may use the selected consultant for construction management services in conjunction with District staff.

The District desires to have the improvements completed and in service by June 2025.

### **Scope of Services**

The Consultant shall:

- Attend a pre-design meeting to confirm the design scope.
- Perform site assessment to determine the location of the treatment system and booster station within the chosen property boundaries.
- Prepare site surveys as needed for the proposed design, permitting, and construction.
- Perform soil investigations.
- Prepare SEPA documents for the proposed project.
- Prepare the complete plans, specifications, and contract documents (using the District's standard contract documents) for the construction of a new 88th and Pine GAC filtration system, including new piping and electrical controls as necessary, all necessary stormwater facilities, and landscaping as required by the permitting authority.
- Evaluate the water quality of all three wells and determine appropriate treatment techniques to address aesthetic water quality concerns for J-2 Well.
- Size and design abandonment of the existing pump station and a new above-ground replacement pump station.

- If necessary, prepare separate specifications and bid documents for any equipment needing pre-purchased.
- Attend monthly status meetings with the District during the design to seek input from the District.
- Submit 30, 60, and 90 percent design drafts as well as a final draft for District approval.
- Prepare a Design Report for submittal and approval from the Department of Health.
- Obtain permits through the City of Lakewood.
- Obtain construction document approval from the State Department of Health.
- As part of the overall project GAC system and booster station relocation, evaluate and design, if necessary, site improvements for future tanks.
- Design any necessary modifications to the chlorination system to accommodate the new treatment system and booster station.
- Prepare estimates of construction costs as part of the 60%, 90%, and final design submittal.
- Include scope and costs for construction management services with staff interaction.

**Schedule**

The anticipated project milestones are:

Proposals for professional services due	August 2, 2023
Internal Review and Selection	August 11, 2023
Complete contract negotiations	August 18, 2023
Approve consultant's contract	August 22, 2023
Begin design	September 5, 2023

The District will expedite the internal review, contract negotiations, and contract approval at its discretion based upon staff capacity, the number of proposals received, and the efficiency of contract negotiations.

**Proposal Requirement**

Proposals shall include the following information:

Project approach	Describe the consultant’s proposed approach to the project and each task. Include the project team member(s) responsible for the task; identify issues to be resolved.
Project schedule	For the design phase and construction management. The District is hopeful of securing Public Works Board Loan for this project.
Project Team	Each team member's role and directly relevant experience, organization chart.
Relevant project experience and References	Similar projects completed within the last five years (including role of proposed team members, estimated and actual construction cost, amount of change orders, and client contact and phone number for each project).
Insurance	Statement that consultant and sub-consultants, if any, currently have the required levels of insurance (attached)

The proposals shall be limited to twelve 8-1/2 x 11 single-sided pages, including cover letter but excluding resumes, and a maximum of three 11 x 17 pages to show past design work.

For information or questions about the project, contact the Engineering Manager, who is listed below and is the Project Manager. Submit your proposal via email in electronic format before **4:30 p.m. on Wednesday, August 2, 2023**, to: Randall Black, General Manager: [rblack@lakewoodwater.org](mailto:rblack@lakewoodwater.org) Office Phone: (253) 588-4423

**Consultant Selection and Evaluation Process**

District staff will evaluate the consultants' proposals based on the following criteria:

1. Project approach and resolution of issues	30%
2. Project personnel's directly relevant experience on projects with similar issues (schedule, permits, noise, aesthetics, PFAS mitigation etc.)	30%
3. Available staff to meet an expedited design schedule.	20%
4. Record of performance (based on information from references regarding meeting budgets and schedules, completeness of design, documents, record of change orders, etc.)	20%

All firms submitting proposals will be notified in writing by August 11, 2023, as to their status in the selection process. District staff will work with the most qualified consultant to prepare an Agreement for Consulting Services, including a Scope of Work and an estimated budget for the Project. The recommended consultant and Agreement will be submitted to the District's Board of Commissioners. Approval of the selected consultant will be made by internal staff, General Manager, Engineering Manager, Pumping Water Treatment Dept. Head, and Pumping and Water Treatment Lead.

Attached is a copy of the District's standard Architecture and Engineering agreement, including the necessary insurance requirements, which will be used with the selected firm. If the District and the selected firm are unable to agree on the terms and conditions of the Agreement, the District will terminate negotiations and the next best qualified firm will be contacted for contract negotiation.

The District may waive any informalities or irregularities in the proposal and reserves the right to accept, reject, or negotiate any or all proposals, including the right to award the contract in whole or in part if it is deemed in the District's best interests. The District shall not be liable for any cost incurred by consultants in responding to this RFP.

**Attachments:**

- Proposed Conceptual Site Plan
- District's Standard Architecture and Engineering Agreement.