



United States Department of the Interior
NATIONAL PARK SERVICE
DENVER SERVICE CENTER
CONTRACTING SERVICES
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File Code: A16
Sole Source Justification
Park/PMIS NAMA 291052
PR Number TBD

Date: March 31, 2026

Reference: Construction Services, NAMA 291052 Nano Bubble

Subject: Sole Source Justification Other than Full and Open Competition

In accordance with FAR 6.103-2, the following information is provided:

1. Identification of the Agency and the Contracting Activity:

Department of the Interior (DOI), National Park Service (NPS), Denver Service Center (DSC), Contracting Services (CS) Division on behalf of DOI NPS DSC, Design and Construction (D&C) Division.

2. Nature and/or Description of the Action Being Approved:

This action covers the procurement and installation of a fully integrated Nano Bubble Filtration System designed to replace the existing, failing filtration infrastructure at the Lincoln Memorial Reflecting Pool. The system uses nanobubble ozone infusion technology to improve water quality by reducing bacteria, pathogens, algae, and organic contaminants.

The acquisition is required on an urgent basis because the existing system is no longer meeting operational requirements and the Reflecting Pool must be treated and operational prior to major scheduled public events.

3. A Description of the Supplies or Services Required to Meet the Agency's Needs, Including the Estimated Value:

The required system consists of:

- Onsite generation of oxygen and ozone
- Patented nanobubble infusion technology
- Pumps, valves, piping, fittings, controls, safety sensors
- Electrical components (transformers, panels, cabling, conduit)
- HVAC units for system housing
- Structural frames and insulated connections
- Installation, testing, startup, and commissioning

The system is engineered to distribute ozone-filled nanobubbles throughout the entire water column with long residence time and high oxidative efficiency, validated by NOAA, Ohio State University, and the University of Florida.

The Independent Government Estimate (IGE) for the Nano Bubble portion is \$1,808,352.

4. Identification of the Statutory Authority Permitting Other Than Full and Open Competition:

FAR 6.103-2, Unusual and Compelling Urgency. This authority applies when the Government's need is of such an unusual and compelling nature that delays in award would seriously injure the Government.

FAR 6.103-2, Unusual and Compelling Urgency, applies because delaying the award long enough to conduct a

competitive procurement would prevent the National Park Service from completing the work in time to reopen the Lincoln Memorial Reflecting Pool for the Nation's 250th anniversary event series. This delay would result in serious injury to the Government, including failure to meet statutory visitor-safety responsibilities and operational commitments for the 250th.

A competitive acquisition would introduce an unavoidable 10–15-week delay for solicitation, proposal development, evaluation, and award. Missing this window would mean the Reflecting Pool could not be refilled and made operational for the 250th anniversary, which constitutes mission failure and exposes the Government to public-safety, resource-protection, and event-support risks.

This acquisition fulfills the immediate need to restore water-quality performance and the extended fabrication and delivery lead times associated with the Nano Bubble Filtration System.

The Reflecting Pool is a central feature of the National Mall's visitor experience and is an essential component in NPS's planned programming and crowd-management posture for the 250th. Failure to complete the concrete repairs and coating installation before the required curing window closes would result in the Pool remaining drained or partially inoperable during the event period. This outcome constitutes mission failure, as the NPS has explicit responsibilities for public safety, resource protection, and visitor services tied to the 250th.

5. Minimum Quantity and Why the full scope is Urgent.

The agency evaluated whether the requirement for the Nano Bubble Filtration System could be divided into urgent and non-urgent components or procured in partial phases. This analysis concluded that the entire system constitutes the minimum quantity necessary to meet the urgent water-quality and operational needs of the Reflecting Pool.

The Nano Bubble Ozone Technology (NBOT) relies on a fully integrated, interdependent system that includes oxygen generation, ozone generation, nanobubble infusion equipment, pumps, controls, electrical distribution components, structural mounting, HVAC units, heat tracing, piping, valves, and safety sensors. These elements must operate together as a complete assembly to achieve the required treatment performance. Partial procurement or staged installation would not allow the system to function or produce the expected reductions in bacteria, algae, pathogens, and organic contaminants.

Additionally, the existing filtration system is no longer capable of meeting operational or water-quality performance standards, and the Reflecting Pool requires immediate treatment to ensure acceptable conditions and support upcoming public events. The Nano Bubble Filtration System has significant fabrication and delivery lead times, and any delay in obtaining the full system would jeopardize operational readiness.

Because the system cannot be divided into functional subcomponents, and because full installation is required to restore water-quality performance, the complete Nano Bubble system represents the minimum quantity necessary to meet the agency's urgent mission requirements.

Based on this evaluation, limiting the award to a minimum subset of work would fail to achieve the Government's urgent need and would still result in operational failure during the 250th anniversary. Therefore, the full scope constitutes the minimum quantity necessary to meet the urgent mission requirement.

6. A Demonstration that the Proposed Contractor's Unique Qualifications or the Nature of the Acquisition Requires Use of the Authority Cited.

The NPS intends to award this contract to Greenwater Services.

The Nano Bubble system is a highly specialized and niche technology with limited domestic suppliers. The required configuration involves proprietary manufacturing methods and system-integration expertise unique to this technology. Procuring directly from the system manufacturer reduces lead times, mitigates delays related to subcontractor involvement, and minimizes cost escalation risks.

The Government determined these qualifications are essential, not merely beneficial, because improper installation of any single material system results in delamination, blistering, discoloration, microbial growth, or

premature failure — all of which compromise public safety and the operational readiness of the Lincoln Memorial Reflecting Pool.

The requirement meets the standard for “unusual and compelling urgency” for the following reasons:

The existing filtration system is failing and cannot maintain water quality, resulting in elevated levels of bacteria and algae.

The Reflecting Pool is a core operational, visitor-service, and ceremonial feature of the National Mall and must be operational for the Nation’s 250th anniversary events.

Delaying award to conduct a competitive procurement would introduce unavoidable 10–15 week delays for solicitation development, proposal preparation, evaluation, and award.

Such delays would push installation beyond the permissible environmental window and prevent the Pool from being refilled in time, resulting in mission failure.

The Nano Bubble system has long fabrication and delivery lead times, requiring immediate authorization to proceed.

7. A Description of Efforts Made to Ensure that Offers are Solicited from as Many Potential Sources as is Practicable, Including Whether a Notice Was or Will be Publicized as Required by FAR 5.2 and, if Not, Which Exception Under FAR 5.202 Applies:

The required system relies on specialized nanobubble ozone generation technology that is not commercially available from general water-treatment suppliers. Only systems using this specific technology can achieve the identified performance outcomes, including deep-column oxidant penetration, long ozone residency, and the ability to reduce bacteria, algae, and organic contaminants without chemicals. The unique engineering requirements and proprietary design restrict available sources.

Why a Competitive Cycle Cannot Meet the Timeline:

4–6 weeks for solicitation preparation and posting

3–4 weeks for proposal development

2–3 weeks for evaluation and award

1–2 weeks for GC subcontract solicitation, evaluation, and award to the system manufacturer

Thus, a competitive procurement is incompatible with the critical path dictated by long-lead system fabrication.

8. A Determination by the Contracting Officer that the Anticipated Cost to the Government Will be Fair and Reasonable:

The Contracting Officer has determined pricing to be fair and reasonable based on historical pricing for comparable systems, proprietary manufacturer pricing, and market research in accordance with FAR 15.401.

Pricing will be evaluated by the Contracting Officer using:

- Comparison with prior NPS and DOI awards of similar complexity
- Market research of proprietary manufacturer pricing
- Comparable water treatment systems
- Ozone and oxygen generation technology

9. A Description of the Market Research Conducted and the Results or a Statement of the Reason Market Research Was Not Conducted:

Market research determined that while various water-quality mitigation methods exist—including chemical treatment, aeration, and standard ozone systems—none provide the extended ozone half-life, full-column distribution, or oxidant persistence achieved through nanobubble infusion. Third-party validation by NOAA, The Ohio State University, and the University of Florida confirms the system’s ability to significantly reduce algae, bacteria, pathogens, and organic contaminants without residue or ecological risk.

10. Any Other Facts Supporting the Use of Other than Full and Open Competition:

Future acquisitions will benefit from early planning to allow time for complete competition cycles and expanded market engagement ahead of fixed public-event deadlines.

While multiple firms expressed interest during market research, the NPS determined that pursuing competition under the available timeline would itself prevent the NPS from meeting its mission obligations during the 250th anniversary. GAO case law requires agencies to demonstrate how delay not priority status causes injury. Here, the consequences of delay are concrete, time-bound, and unavoidable.

The Reflecting Pool has persistent water-quality challenges driven by environmental exposure, wildlife activity, and organic loading. The nanobubble system improves clarity, odor, water quality, and dissolved oxygen while reducing ecological impacts. It also supports the operational need for reliable conditions before significant upcoming public events. Long fabrication lead times require procurement ahead of other activities to ensure availability.

Competing the requirement introduces a minimum 10–15 week delay, which would:

- delay the cleaning and replacement of the pool due to the failure of the old system
- prevent the NPS from restoring the Pool to operational status before the 250th activities commence; and
- create public-safety and resource-protection risks associated with an empty or partially repaired Pool during a major national event.

11. A Listing of the Sources, if any, that Expressed in Writing, an Interest in the Acquisition:

Multiple contractors expressed interest in the project, however due to the time constraints listed in above a competitive acquisition is not the best route for the Government.

12. A Statement of the Actions, if any, the Agency May Take to Remove or Overcome any Barriers to Competition Before any Subsequent Acquisition for the Supplies or Services Required:

Earlier project planning will ensure future procurements allow adequate time for full GC competition and subcontractor system sourcing.

CERTIFICATIONS AND APPROVALS

Technical Certification:

I certify that any supporting data that is the responsibility of technical or requirements personnel which form a basis for the justification has been certified as complete and accurate:

Signature: PAULA ALDRICH Digitally signed by PAULA ALDRICH
Date: 2026.03.31 08:28:44 -06'00'

I certify that the justification is accurate and complete to the best of my knowledge and belief:

Signature: KYLE GONYNOR Digitally signed by KYLE GONYNOR
Date: 2026.03.31 08:03:32 -04'00'

Branch Chief:

50K - SAT:

Signature: JEFFREY MARTIN Digitally signed by JEFFREY MARTIN
Date: 2026.03.31 08:38:20 -04'00'

Legal Review:

>\$500K or as requested:

Signature: _____

Approvals:

>\$250,000 and <\$900,000 – Chief of Contracting Office (CCO):

Signature: **SHANNON
BLACKBURN**  Digitally signed by SHANNON
BLACKBURN
Date: 2026.04.01 10:56:02 -04'00'

>\$900,000 – Bureau Competition Advocate

Signature: _____