NEW JERSEY WATER SUPPLY AUTHORITY

P.O. BOX 5196 · CLINTON, N.J. 08809 · (908) 638-6121 · (908) 638-5241 (FAX)

SCOPE OF SERVICES

FOR

PROFESSIONAL SURVEYING & ENVIRONMENTAL CONSULTING SERVICES

Required for

Repairs to the Historic Ten-Mile Timber Waste Gate at Station 2599+47 of the Delaware & Raritan Canal

Franklin Township, Somerset County, New Jersey

October 2026

1.0 - PURPOSE & GENERAL INFORMATION:

1.1 - Intent of RFQ:

The New Jersey Water Supply Authority (Authority) is hereby seeking price quotes and statements of qualifications from prospective Consultants to complete the following project:

> Professional Surveying and Environmental Consulting Services required for Repairs to the Historic Ten-Mile Timber Waste Gate at Station 2599+47 of the Delaware & Raritan Canal, Franklin Township, Somerset County, NJ.

The Authority's intent is to award a contract to the firm submitting the lowest cost proposal in conformance with the requirements of this solicitation. Section 4.0 provides further guidance regarding the required contents of submissions in response to this RFQ.

The expected services are described in Section 3.0 (Scope of Services). In general, the scope includes professional surveying and environmental consulting services required to support the design and permitting of repairs to a historic waste gate structure on the Delaware & Raritan Canal. The Authority ultimately intends to complete the engineering design and construction permit applications for the project using in-house staff and resources. The successful Consultant's role will primarily be to develop an updated characterization of the site topography and to confirm the limits of regulated areas in support of this effort.

1.2 – Project Location and Site Visit Procedures:

The project site is located on Block 515, Lot 4, in Franklin Township, Somerset County, within the Delaware & Raritan Canal State Park. Prospective bidders may visit the site at their discretion, if deemed helpful or prudent in developing accurate quotes. The site is located along the State Park's multi-use trail, which is open to the public daily from sunrise to sunset at no charge. The Ten-Mile Timber Waste Gate structure is about a 0.16-mile walk down the trail from the parking area at Ten-Mile Lock. **Note that this is not a public parking area; if prospective Consultants intend to park here for purposes of a site visit, they must notify Tim Thiessen (tthiessen@njwsa.org) and Michael Seller (msellar@njwsa.org) via email, at least two (2) days in advance.**

1.3 – Working Hours/Access:

All site work under any contract resulting from this RFQ shall be conducted during the Authority's regular business hours (7:30AM – 4:30PM, Monday-Friday, with State Holidays off) unless otherwise approved. Vehicular access to the site is possible, subsequent to contract award, but must be coordinated with the Authority project manager on a daily basis during the project.

2.0 – BACKGROUND INFORMATION:

2.1 - History:

The Delaware & Raritan Canal (Canal) was built between 1830 and 1834 to serve as an artificial waterway connecting the Delaware River near Bulls Island to the Raritan River in the City of New

Brunswick. It was built via excavation and creation of an adjacent embankment or embankments, which retain and separate the Canal from the adjacent rivers (the Delaware, Millstone, & Raritan Rivers) that parallel nearly its entire 60-mile length. There are also numerous hydraulic and flood control structures along the Canal, such as locks, aqueducts, waste gates, spillways, and culverts.

The Canal was operated for commercial barge transportation until 1932. Subsequently, it was obtained by the State of New Jersey and retrofitted into a public water supply transmission system, which is the purpose it serves today. The Authority is responsible for operating and maintaining the Canal to reliably provide water purveyors and other customers in central New Jersey with up to 100 million gallons per day of raw water supply. The purveyors treat the raw Canal water, which in turn provides a vital source of potable water supply to residents of central New Jersey.

In addition to its water supply function, the Canal is listed on the National and State Registers of historic places, and it is also part of the Delaware & Raritan Canal State Park, which comprises one of New Jersey's most popular recreational corridors.

Projects that impact the Canal require authorization from various regulatory stakeholders, reflective of the diverse interests in this public resource. The Authority is responsible to preserve the functional integrity of the Canal and appurtenant structures as it relates to raw water delivery. At the same time, any rehabilitation or construction work must be planned and undertaken with adequate sensitivity to the environmental, recreational, and historic aspects of the Canal.

2.2 – Project Background:

The Ten-Mile Timber Waste Gate is a historic, decommissioned flood control structure located at Canal Station 2599+47 (with approximate GPS coordinates: 40°32'32"N, 74°33'59"W). It is located near the confluence of the Millstone and Raritan Rivers, on Block 515, Lot 4, in Franklin Township, Somerset County.

The structure is believed to have been built concurrent with the Canal itself, but it has undergone several modifications over its history. It would have served to safely divert excess stormwater flows from the Canal into the adjacent Raritan River, but it has not been used for that purpose since at least the 1950s. In its existing, inoperable state, it consists of a concrete inlet headwall in the Canal that houses the old wooden gate and its raising mechanism. Behind the gate is a 60-inch diameter concrete pipe that was plugged with concrete fill in 2014. The 60-inch pipe passes through the Canal embankment and daylights to the former outlet channel on the river side, where it is encompassed by an outlet structure consisting of a stone masonry headwall and wing walls.

The outlet structure is in poor condition overall. The right wingwall is mostly missing, with a pile of slumped embankment fill and rubble occupying its former footprint. Much of the left wingwall's lower portion is missing, leaving the upper portion partly cantilevered over a void that extends back into the embankment several feet. In the past, seepage and wetness have been

observed along the entire bottom portion of the headwall, as well as emanating from the cavity under the left wingwall.

Repairs to the Ten-Mile Timber Waste Gate are warranted to prevent further deterioration that could pose a risk to the integrity of the Canal. The Authority intends to pursue a rehabilitation project that will stabilize the outlet structure and eliminate seepage concerns. Preliminarily, this is anticipated to consist of dismantling and reconstructing both wingwalls on new concrete footings, installing proper drainage behind the wingwalls, repairing and repointing the headwall, and potentially installing a chemical grout cutoff wall within the Canal embankment.

Authority staff intends to develop engineering plans and obtain permits to complete this project. The selected Consultant will provide professional land surveying and environmental investigation services, as specified herein, in support of these efforts.

3.0 - SCOPE OF SERVICES:

Attachments A & B to this RFQ are included for informational purposes. They contain conceptual-level drawings depicting the existing conditions/potential site plan layout, and photographs of the waste gate and general surroundings, respectively.

The conceptual-level drawings were developed using old, outdated PDF base mapping from 1979. In addition, it is apparent, based on NJ-GeoWeb data and visual observation, that freshwater wetlands exist to some extent within the planned limits of disturbance. It is expected the project will also be subject to the flood hazard area and riparian zone associated with the adjacent Raritan River. The New Jersey Department of Environmental Protection (NJDEP) regulates activities impacting freshwater wetlands and riparian areas according to N.J.A.C. 7:7A and N.J.A.C. 7:13, respectively. To develop proper permitting and construction plans, the Authority requires updated base mapping that accurately depicts the present topography and the limits of regulated areas, such that any impacts thereto may be quantified.

To this end, the selected Consultant will be responsible for obtaining, on behalf of the Authority, a line verification Letter of Interpretation (LOI), as defined by N.J.A.C. 7:7A-4.5, including all efforts required to furnish this deliverable. Attachment C contains the NJDEP's LOI application checklist. Attachment D identifies the approximate portion of the site to be captured in the LOI (based on roughly 150' offset from the planned project limits). Note that the site (i.e. Block 515, Lot 4, Franklin Township) is a publicly owned parcel of roughly 75 acres. Thus, the Authority's understanding is that an LOI can be obtained for only the portion of the site that may be impacted based on the planned limits of disturbance.

It is expected the Consultant will identify and field-delineate the boundaries of all regulated freshwater wetland areas, then perform a topographic survey to capture these limits, along with all present site features and topography. The expectation is that in addition to the LOI, the Consultant will ultimately provide processed, digital drawing files (.dwg) of the survey, ready and authorized for the Authority to use as base mapping for project permitting/construction plans.

It should be noted that the land between the waste gate outlet headwall and the Raritan River is sometimes inundated during periods of higher river flow, which may preclude or hinder access during those periods. Under normal conditions, the area is relatively dry and accessible on foot (though highly vegetated during the growing season). It is the Authority's expectation that the Consultant will schedule and conduct the field work during a period with normal river conditions, such that the topography of the outlet area can be adequately characterized. In practice, this should be taken to mean that the work must be performed when the Raritan River at Manville gauge (USGS-01400500) indicates discharge at or near the "median day of year" value. This can be plotted versus current river conditions using the USGS website.

All work tasks shall be conducted by the Consultant's staff operating under the direction of individual(s) experienced and properly qualified in the subject matter at hand. For all surveying work, this means a professional land surveyor (PLS) licensed in the State of New Jersey. For other activities, in general, this would mean an environmental professional with qualifications satisfactory to the NJDEP for the work being performed.

In preparing a response to this RFQ, the Consultant should assume responsibility for all work required to meet the project intent as represented herein, including but not limited to the specific tasks detailed below:

1. Based on the planned limits of disturbance and other available information, establish and mark-out the area of the site that must be included in the LOI to ensure all regulated areas subject to potential impacts will be accounted for (i.e. Attachment D, or as modified with concurrence of the Authority).
2. Within this area of interest, identify and delineate the boundaries of freshwater wetlands, transition areas, and State Open Waters in accordance with N.J.A.C. 7:7A-3.
3. Complete a topographic survey of the entire area of interest, including all control survey work and/or other incidentals as required to ultimately produce deliverables sufficient for purposes of obtaining the LOI (i.e. according to NJDEP's specifications). All survey work, whether performed using conventional or modern GPS methods, shall provide positional accuracy consistent with the care and standard expectation for professional survey work in New Jersey. In addition to meeting NJDEP requirements for the LOI application, the survey shall also be sufficient for the Consultant to provide base mapping deliverables suiting the Authority's purposes, as specified hereinafter (see item 5 below).
4. The Consultant shall set at least one temporary benchmark proximate to the waste gate structure for the Authority's later use during design activities; its positional information shall be indicated on the survey plan. In general, any appropriate location within 25 feet of the structure not likely to be disturbed would be acceptable, but the final location may be coordinated in the field with Authority staff.
5. As soon as possible after completion of the field work, the Consultant shall process the collected survey data to produce an AutoCAD formatted (.dwg) digital drawing version, and furnish the same to the Authority for its use as base mapping to prepare construction plans. The drawing file should include proper layering, linework, and all information generally

expected to be relevant, considering the intended application. Note the following minimum requirements for this deliverable:

- Horizontal coordinate system shall be NJ State Plane Coordinate System (NAD83) and vertical datum shall be North American Vertical Datum of 1988 (NAVD88); a note shall be included indicating the date and method by which these were established.
- Topographic contour lines shall be provided at an interval of one (1) foot throughout the entire surveyed area.
- The following shall be captured and depicted:
  - Proposed limits of State Open Waters, freshwater wetlands, transition areas, and/or other features regulated under N.J.A.C. 7:7A (per the wetlands delineation).
  - The limits of the floodway, flood hazard area, and riparian zone regulated under N.J.A.C. 7:13 (or a note as to location, if beyond site limits). Note, this RFQ assumes the elevation defining the floodway and flood hazard area can be determined by methods 1 or 2 provided by N.J.A.C. 7:13-3.1(a). Determination by calculation is not included in the scope.
  - All existing site features such structures, utilities, pavements and the multi-use trail, rock piles, limits of wooded and maintained areas, significant trees exceeding 8-inch diameter at breast height, top of bank adjacent to watercourses, and other features as deemed appropriate and consistent with standard practice.
  - Spot elevations shall be provided at all corners and changes of geometry for the waste gate inlet and outlet structures (typically top and bottom of walls). The approximate centerline and (presently exposed) limits of the 60-inch RCP, where it daylights through the outlet headwall, should also be captured.
  - Note that the water's edge and top of bank should be captured on both sides of the Canal (i.e. near the waste gate and also near Weston Canal Road on the opposite side)

6. Submit a complete application to the NJDEP for a line verification LOI. The Consultant shall be solely responsible for satisfaction of all application requirements given by N.J.A.C. 7:7A-16.2, -16.3, and/or -16.4. This includes, but is not necessarily limited to, all efforts enumerated on the application checklist in Attachment C. The Consultant may elect to utilize the "E-LOI" submission option offered by NJDEP, provided that any additional tasks occasioned thereby are performed by the Consultant at no additional cost to the Authority. The Authority will pay any application fees directly to NJDEP (no fee is anticipated as the Authority is a state agency). All hard copies of permit documents are to be included under this fee.
7. All documents submitted to NJDEP on behalf of the Authority shall be forwarded to the Authority project manager for their record. In addition to the hard copies of the survey required by NJDEP, the Consultant shall furnish the Authority with an electronic (.pdf) plus two (2) additional signed and sealed hard copies of the survey plan. An electronic (.pdf) and one (1) hard copy of the entire LOI application as submitted to NJDEP shall also be furnished to the Authority.

8. Manage the application on behalf of the Authority until NJDEP approves it and issues the final LOI. This may include correspondence with NJDEP reviewers to resolve inquiries, providing follow-up documentation, or producing revisions, changes, and/or resubmissions as required. Note that the Consultant will not be entitled to additional compensation for time spent correcting any deficiencies in their original application. The Consultant shall keep the Authority project manager apprised of the application's status and progress.
9. Upon issuance of the LOI, update the digital base mapping (.dwg) deliverable, as necessary, to reflect the final, approved limits of regulated areas and furnish to the Authority. The Consultant shall also provide a metes and bounds description of the wetland boundary approved under the LOI, such that the Authority can record this information with the county clerk pursuant to N.J.A.C. 7:7A-4.7(a)3.

4.0 - SUBMISSION REQUIREMENTS & EVALUATION:

For this project, fee proposals are being solicited concurrently with a statement of qualifications, project understanding, and proposed schedule. The Authority will evaluate the submitted information to verify that the firm and proposed staff are properly qualified and prepared to perform the work. The lowest responsive and responsible bidder will be selected. Submissions in response to this RFQ shall include the following, at minimum, to be considered complete:

1) Fee proposal:

- The fee proposal shall present a single lump sum cost to perform the entire scope of services as represented herein.
- Assume that 90% of the lump sum will be payable as of the date that Tasks 1-7 are satisfactorily completed, and that the remaining 10% will be withheld until the final, approved LOI is issued by NJDEP.
- In addition to the lump sum, proposals shall include a separately itemized **$2,500.00 reimbursable allowance** for miscellaneous administrative expenses related to the LOI application (e.g. mailing fees, advertisement fees, etc.). The Authority will reimburse hard costs only, certified by receipt, against this balance. Labor costs and hard copies of permit documents associated with these tasks will not be subject to reimbursement and should instead be considered in the lump sum price bid.
- Any other assumptions used to generate the fee proposal should be clearly stated.

2) Qualifications, Understanding, & Schedule:

- Include the following with the proposal for Authority review and evaluation:
    - A brief narrative demonstrating an understanding of the project, the intent of this solicitation, and the technical subject matter involved.
    - A brief description and/or resumes for the proposed staff, demonstrating their experience, credentials, and technical competence that qualifies them for this project.

- A brief statement as to the firm's relevant expertise, including record of satisfactory performance on similar example projects.
- Proposed schedule for completing the project tasks.