

Delaware River Basin Commission

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Executive Director

REQUEST FOR PROPOSALS (RFPs)

FEASIBILITY EVALUATION OF ADDITIONAL STORAGE OPTIONS FOR MEETING WATER DEMANDS AND MANAGING FLOWS IN THE DELAWARE RIVER BASIN

INFORMATION AND INSTRUCTIONS

1. GENERAL INFORMATION

- 1.1. The Delaware River Basin Commission (DRBC or Commission) intends to procure a qualified consulting engineering firm (the Engineer) to provide planning, cost estimating and feasibility analysis and to inventory and evaluate options for additional storage to meet potential water supply needs and flow management needs in the Delaware River Basin.
- 1.2. The additional storage options to be inventoried shall be located within the Delaware River Basin and shall be provided for the purpose of meeting water supply needs as well as flow objectives and/or salinity control objectives in the Delaware River and Delaware River Estuary, during periods of low flow or drought. At times within this Request for Proposals (RFP), this general description shall be referred to as “the Study.”
- 1.3. Any changes to this RFP will be in the form of an addendum, which will be furnished to all RFP holders.
- 1.4. The DRBC reserves the right to reject any or all submittals and to be the sole judge of the merits of the respective submittals received.
- 1.5. The Engineer will be selected based upon those responsive Proposals received during the procurement process.

There will be a mandatory pre-bid meeting held at the Commission headquarters on February 26th at 1:30 pm.

- 1.6. Technical questions should be directed to SeungAh Byun, PhD, PE; 609-883-9500 ext 237 or at SeungAh.Byun@drbc.gov.

2. STUDY OBJECTIVES

- 2.1. Identify, inventory and evaluate the feasibility of options that could provide the following additional usable storage:
 - A minimum of 1 billion gallons (BG)
 - A minimum of 5 BG

- A minimum of 10 BG
- A minimum of 20 BG

The storage volumes can be met by a combination of projects/sources.

2.2. Compile an inventory of storage projects that would meet these volume requirements based upon:

- 2.2.1. Projects previously identified by DRBC or others in prior plans (see Attachment A)
- 2.2.2. “New” projects and project concepts identified by current DRBC staff (see Attachment A)
- 2.2.3. “New” projects and project concepts identified by the Engineer.
- 2.2.4. Existing storage that may be available for purchase and/or lease.

2.3. STUDY APPROACH - EVALUATION/SCREENING

2.3.1. Develop an evaluation matrix for all storage projects which would enable ranking and prioritization. Evaluation metrics for each storage project should include at a minimum:

- Feasibility
 - Costs. Land acquisition, capital, operation & maintenance, etc. Cost estimates must be indexed for use in future years. The expected cost estimating level according to the AACE Scale should be Level 4.
 - Permitting. The full spectrum of regulatory approvals should be evaluated from local to federal, focused on the scope of the review and approvals from the agencies’ perspective.
 - Stakeholders. Identify anticipated / likely support and concerns from key stakeholders.
 - Legal.
- Geographic Considerations
 - Located within the Delaware River Basin.
 - Considerations for mainstem flow management
 - Upstream of the Montague, NJ USGS gage (Coordination with the USGS Rivermaster)
 - Upstream of the Trenton, NJ USGS gage (Coordination with DRBC).
 - Located above River Mile 38 (Salt front management).
- Tributary sub-basin.
- Storage Project Characteristics
 - Storage projects should be surface water storage or aquifers, or other underground storage chambers or facilities available during low flow periods in the basin.
 - Released water quality, raw or treated, should be able to meet applicable federal, state and Commission requirements regarding discharges to receiving streams in the basin.

- Storage projects can make releases/discharges either by gravity (preferred) or by pumping.
 - Storage projects can be filled either by gravity (in stream flow) or by pumping.
 - Sub-basin/local/regional benefits
 - Local (tributary) water supply/ availability
 - Environmental flow augmentation
 - Abandoned Mine Drainage/Discharge restoration
 - Recreation
 - Temporal Considerations
 - Travel time
 - Stored water should be available for immediate use and should not require a multi-week lead time prior to availability (e.g. available within 24 hours of need).
 - Construction completion
 - Time until site is available for storage (e.g. quarry that maybe still active, but may only have 5 years left and may become an available storage option)
 - Remaining designed or engineered life
 - Volume
- 2.3.2. Provide recommendations and identify workshop opportunities to obtain input and concurrence with Commission staff on identified projects to be included in the evaluation, additional evaluation metrics, the weighting of metrics, and ranking of projects.
- 2.3.3. Provide a Draft and Final Report that includes the recommendations for feasibility, storage option rankings (of those in the inventory under this scope), methods, criteria and weighting. The report is not intended to provide a final recommendation to the Commission as to the need for additional storage, nor is it intended to provide a final recommendation to the Commission comparing these storage options versus options that are being studied separately as noted in 2.4.2 and 2.4.3.

2.4. STORAGE PROJECTS NOT TO BE CONSIDERED

- 2.4.1. The following storage projects should not be considered during this study.
- Tocks Island Reservoir or any other main stem Delaware River dam.
 - Maiden Creek Reservoir (Maiden Creek upstream of Lake Ontelaunee, Berks County).
 - Trexler Reservoir (Jordan Creek, Lehigh County).
 - Hawk Mountain (East Branch Delaware River below Pepacton).
- 2.4.2. Storage project options in F.E. Walter Reservoir in the Lehigh River Basin should not be included as part of this study as there are ongoing studies by the Commission and other partners.
- 2.4.3. Any storage project options that involve the optimization of existing storage volumes in the New York City Reservoirs in the Delaware River Basin or the calculation, or re-

calculation, of the Excess Release Quantity (ERQ) as defined in the [2017 Flexible Flow Management Plan](#) should not be considered as part of this study. Evaluation of flow management requirements, diversions and releases under the US Supreme Court Decree of 1954 and subsequent jurisdiction, is not the subject of this study and are matters being considered by others. Expansion of the New York City reservoirs (raising the dams) in the Delaware River Basin has, at times, been evaluated in prior studies. The review of the feasibility of expansion of one or more of the reservoirs can be considered as part of this study, consistent with the scope of the feasibility alternatives analyses performed for other storage options.

2.5. STORAGE PROJECT OPTIONS TO BE CONSIDERED

2.5.1. Storage projects previously identified (see Attachment A)

2.5.2. Quarries and mines. The Engineer will inventory existing basin quarries and mines and characterize them. The following factors should be considered.

- Status: abandoned, inactive, remaining operational life as mine/quarry, etc.
- Potential volume

2.5.3. Existing excess available storage. Storage which may be considered in excess by the owner and may be available for acquisition (e.g. private and public reservoirs).

2.5.4. New project storage concepts not previously identified.

2.6. In addition to the Final Report, the Engineer will also deliver a story board in ESRI format (along with associated data) that

- Identifies and inventories all existing storage in the Basin used for DRBC flow management
- Identifies and inventories all significant storage used for flood control in the Basin
- Identifies and inventories all significant storage used for water supply and flow management that is not under direct control by DRBC (utilities, power, etc.)
- Identifies and inventories all options for additional storage in the Basin to meet DRBC study objectives.

3. SUBMITTAL REQUIREMENTS / PROPOSAL CONTENT

Firms interested in providing engineering services must address the following within the proposed study approach:

3.1. Proposed Approach/Scope of Work

3.1.1. Study understanding / approach

3.1.2. Specific tasks should include:

- Evaluation matrix – develop a feasibility evaluation matrix with metrics discussed in Section 2.3 and provide recommendations for additional evaluation metrics. Provide details on how the Engineer would workshop with DRBC staff on identifying and weighting the evaluation metrics.

- Review of existing storage project options previously identified – discuss briefly how the Engineer would evaluate projects included in Attachment A.
 - Quarries and mines – discuss briefly how the Engineer would identify and evaluate quarries and mines.
 - Review of existing excess storage that may be available for acquisition – Discuss briefly how the engineer will conduct an outreach effort to determine whether or not there is existing excess storage that may be available for acquisition.
 - New storage project concepts not previously identified – describe the approach the Engineer would utilize to identify new storage opportunities. Briefly describe potential types of sources and level of investigation. This task should involve a level of effort more than an extensive desktop GIS screening.
- 3.1.3. Contact with property owners is a sensitive matter for this study. The Commission will need to provide some form of approval for the Engineer to contact any property owners identified in this study. The Engineer should propose a process that takes these considerations into account.
- 3.1.4. Describe the project team involved and level of effort for each item listed in 3.1.2.
- 3.1.5. Describe how and when the Engineer would engage the DRBC project team for feedback and project updates.

3.2. Expected Deliverables

Description of the expected deliverables.

- Status Reports, Technical Memoranda, and Presentations, as determined by the Scope of Work and Milestones set for the Study.
- Final Report includes:
 - Executive Summary;
 - Methods/Methodology;
 - Evaluation Matrix, Metrics and Weights;
 - Storage Option Rankings
 - Feasibility Recommendations
 - 1-page summaries for each of the top 10 project recommendations
- GIS data used for the Study
- ESRI Story Map for the Study

3.3. Budget/Schedule

- Provide a proposed schedule for the Study that enables completion of the work within 18 months of the issuance of the contract.
- Provide a proposed budget for each task and total cost for the Study.

3.4. Qualifications of Personnel

Resumes, CVs, or equivalent of key personnel anticipated to work under this contract.

- 3.5. Information for a Point of Contact shall be provided.
- 3.6. There is no page minimum or page limit in responding to the RFP; however, the submittal should be efficient and brief.

4. CONTRACT COST LIMIT / PAYMENT TERMS

The Engineer shall propose a total cost for this study as a “not to exceed” total dollar amount. The total cost should be based on the proposed budget by tasks and/or deliverables.

See “*Time of Payment*” (Section 10.(a)) within the [DRBC Standard Contract](#) for additional information on standard DRBC payment terms.

5. PERIOD OF PERFORMANCE

The Engineer will commence work for this Study as soon as practicable after the execution of a contract between DRBC and the Engineer.

The Engineer will set up project meetings, workshops and provide status reports, technical memoranda, and presentations, as determined by the Scope of Work and Milestones set for the Study.

The Final Report will be due to DRBC within 18 months of the issuance of the contract.

6. SUBMISSION INSTRUCTIONS

Interested parties shall submit three (3) paper copies of their proposal and one (1) electronic copy on a flash drive to:

Elba Deck, Director, Finance and Administration
Delaware River Basin Commission
25 Cosey Rd.
P.O. Box 7360
West Trenton, NJ 08628

Submittals must be received at the Commission’s offices no later than **4:00 p.m., Friday, March 27, 2020**. Proposals received after this time will not be considered. Delaware River Basin Commission reserves the right to reject any submittals. The Commission’s standard contract is available for review at http://www.nj.gov/drbc/library/documents/DRBC_StandardContract.pdf. If the Contractor cannot execute the standard contract in its current form, the Contractor must describe the exceptions in their proposal.

7. ATTACHMENTS

- 7.1. Attachment A – Previous Reservoir / Storage Studies

ATTACHMENT A
PREVIOUS RESERVOIR / STORAGE STUDIES TO REVIEW

- 1960 Report on the Comprehensive Survey of the Water Resources of the Delaware River Basin. (House Document 522). Revised May 1961. United States Army Corps of Engineers.
- [1961 DRBC Comprehensive Plan](#)
- [1975 URS/Madigan-Praeger, Inc. and Conklin & Rossant, A Comprehensive Study of the Tocks Island Lake Project and Alternatives](#)
- Delaware River Basin Electric Utilities Group (DRBEUG) Studies
 - [Water Resources Study for Power Systems – Delaware River Basin – March 1972, Tippetts – Abbett- McCarthy – Stratton Engineers and Architects, New York](#)
 - [Alternative Water Supply Reservoirs in the Delaware River Basin – Report of the Delaware River Basin Electric Utility Group – Reservoir Contingency Study Subcommittee – May 1975](#)
 - [Site Study for a Water Supply Reservoir – Delaware River Basin – Prepared for the Delaware River Basin Electric Utilities Group – August 1976, Tippetts – Abbett- McCarthy – Stratton Engineers and Architects, New York](#)
- [1981 The Delaware River Basin Comprehensive Level B Study](#)
- [2001 DRBC Comprehensive Plan](#)
- [2008 Enhancing Multi-Jurisdictional Use and Management of Water Resources for the Delaware River Basin: NY, NJ, PA and DE](#)

Other Items to Consider

- Public Water Supply Reservoirs taken offline in the 1990's after EPA's Surface Water Treatment Rules (<https://www.epa.gov/dwreginfo/surface-water-treatment-rules>)
- [DRBC internal reservoir evaluation 2009](#)
- DiRenzo Coal / Blythe Township (<http://www.opportunityforblythe.com/>)