

Road-Stream & Tidal Crossing Prioritization Tool: Expansion Project

Request for Qualifications

Seatuck Environmental Association
Save the Sound

Timeline

- Ad Date: May 5, 2023
- Qualifications Due Date: May 19 [2 week turnaround], 2023 by 5:00pm EST time
- Tentative Award Selection: May 31, 2023
- Contract Award: June 7, 2023
- Seatuck Project Completion: October 31, 2023
- Save the Sound Project Completion: July 31, 2024
- Total budget: \$40,000

Qualifications Submittal

Qualifications are to be submitted digitally by email (document link or pdf) to both:

Seatuck Environmental Association Contacts: Enrico Nardone, egnardone@seatuck.org and must CC Emily Hadzopoulos (Hall), ehall@seatuck.org

and

Save the Sound Contact: Katie Friedman, kfriedman@savethesound.org, and must CC Megan Lung, mlung@savethesound.org

Qualifications should include:

1. The expertise of the team assembled by the consultant to carry out the work, and
2. A list of comparable projects undertaken by the consultant and/or team members.



Overview

Rivers and streams in Nassau and Westchester Counties play an important role in Long Island Sound's coastal ecosystem. They link marine and terrestrial habitats, transport sediment and provide passage for migratory fish and other native wildlife, such as river otters and turtles, that travel between feeding, nursery and breeding grounds.

However, many of the region's culverts are undersized (sometimes squeezing waterways into small underground pipes), which restricts flow and causes water to accumulate upstream. The resulting impoundments of warm, stagnant water create a host of ecological and maintenance problems, including an inhospitable environment for cold-water fish and conditions that allow invasive aquatic vegetation to flourish, and may degrade water quality. Undersized culverts also create flooding during rain events, which damage homes, roads and bridges and disrupt transportation and critical services. Culverts within the tidal zone can also present an additional flooding problem: they fail to allow the full spectrum of tidal and storm flow to pass from their downstream side – a situation that is increasingly problematic in an era of rising seas.

Seatuck Environmental Association (Seatuck) and Save the Sound (STS) are undertaking separate but parallel two-year projects to assess the condition, size, and suitability for wildlife passage of existing culverts in key watersheds in Nassau County (Seatuck) and Westchester County (STS), New York. The goal of these assessments is to prioritize the replacement of damaged or undersized culverts with wildlife- and climate-friendly structures that facilitate wildlife movement, restore stream continuity, and improve the ecological health and sustainability of our coastal waterways. The Nature Conservancy in New York (TNC) conducted a similar assessment in Suffolk County, and produced the [Road-Stream and Tidal Crossing Prioritization Tool](#). Through these current projects, it is Seatuck and STS's goal to incorporate Nassau and Westchester County data into a tool for the region that is based on TNC's tool. TNC will advise the selected contractor to develop the expansion of this tool. Please see the full Scope of Work in Attachment A for more details.

Attached to this RFQ please find:

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Attachment A: Scope of Work

The services required include: 1) compiling geospatial data and information, 2) creating a prioritization mapping tool, and 3) producing a platform management and guidance documentation.

The scope of work will be split between two contracts: one contract between Seatuck and the consultant related to Nassau County, and a second contract between Save the Sound and the consultant related to Westchester County. The two contracts will be largely similar in scope (apart from geography), but may differ in their terms and conditions based on the two organizations' standard contracts and requirements from their respective funders. The Work Product described in this RFP will be produced by the selected contractor as work for hire for Seatuck and STS. The Nature Conservancy (TNC) will advise the selected contractor and will provide access to access to TNC's [Road-Stream and Tidal Crossing Prioritization Tool](#) off of which this project will be based.

Seatuck's grant requires that the Nassau County component of the project be completed by October 31, 2023. Save the Sound's work is funded through a separate grant on a different schedule, therefore the contract for Westchester County will extend through July 2024. Specific tasks for the project are outlined below.

Task 1: Project Management

- 1a. Attend project kick-off meetings led by Seatuck and STS.
- 1b. Attend routine project progress meetings.
- 1c. Provide consistent, timely communication via email/phone outside of progress meetings.



Task 2: Compile Geospatial Data and Information

2a. Gather appropriate data for culvert prioritization in both Nassau and Westchester County based on The Nature Conservancy's [Road-Stream and Tidal Crossing Prioritization Tool](#) (Atlas).

2b. Organize data into the following prioritization categories, 1) Ecological Benefit, 2) Resilience Benefit, 3) Transportation Benefit, 4) Infrastructure Benefit. Below are examples of data sets gathered by Atlas for Non-Tidal and Tidal Crossings. More information can also be found in the Atlas [Non-Tidal and Tidal Protocol Prioritization Summary Documents](#). Additional or new data sets may need to be identified that are appropriate to this prioritization project such as, but not limited to, the Cornell Culvert Model Program and the University of Wisconsin Risk-of-Failure model.

	Non-Tidal Crossings		Tidal Crossings	
	Metrics	Data Sources	Metrics	Data Sources
Ecological	River size	USGS National Hydrography Dataset Plus (High resolution), 2017.	Salt Marsh Complex Size	National Wetlands Inventory
	Length of river reconnected	USGS National Hydrography Dataset Plus (High resolution), 2017; NAACC Freshwater culvert crossings, 2019; NYSDEC Dams, 2019.	Salt Marsh Size upstream	SLAMM Initial Conditions layer from: NYSERDA/Warren Pinnacle Sea Level Affecting Marshes Model (SLAMM), 2016.
	Number of downstream barriers	USGS National Hydrography Dataset Plus (High resolution), 2017; NAACC Freshwater culvert crossings, 2019; NYSDEC Dams, 2019.	Degree of tidal restriction and AOP	*Composite of multiple other metrics such as tidal range ration, crossing ration, and erosion classification.
	Aquatic organism passage	North Atlantic Aquatic Connectivity Collaborative (NAACC), 2019	Vegetation Score	Field data (TNC 2016-20190



Resilience	Risk of sea level rise inundation of Road	NYSERDA/Warren Pinnacle Sea Level Affecting Marshes Model (SLAMM), 2016.	Risk of sea-level rise inundation of Road	NYSERDA/Warren Pinnacle Sea Level Affecting Marshes Model (SLAMM), 2016.
	Risk of storm surge inundation of road	NYSERDA/Warren Pinnacle Sea Level Affecting Marshes Model (SLAMM), 2016.	Risk of storm surge inundation of road	NYSERDA/Warren Pinnacle Sea Level Affecting Marshes Model (SLAMM), 2016.
	Heavy rainfall flood risk within the watershed	USGS National Land Cover Dataset, 2016; USGS Watershed Boundary Dataset, 2019.	Heavy rainfall flood risk within the watershed	USGS National Land Cover Dataset, 2011
			Area of Potential Tidal Marsh Advancement US of restriction	SLAMM Data
Transportation	Road functional classification	NYSDOT Roadway Inventory Database, 2018.	Road functional classification	NYSDOT Roadway Inventory Database, 2018.
	Evacuation Route	Suffolk County Coastal Evacuation Routes; NYSDOT Roadway Inventory Database, 2018.	Evacuation Route	Suffolk County Coastal Evacuation Routes; NYSDOT Roadway Inventory Database, 2018.
Infrastructure	Structural condition	North Atlantic Aquatic Connectivity Collaborative (NAACC), 2019	Structural condition	Field assessments (TNC 2017-2019)
			Partner priority	Multiple lists of priority locations provided to TNC, 2017-2019.
	Partner priority	Multiple lists of priority locations provided to TNC, 2018-2019.	Risk of high water- Lack of clearance	Field assessments conducted by TNC, 2017-2019.
			Erosion classification	Field and desktop assessments conducted by TNC, 2017-2020.



Task 3: Develop a Map Platform based on The Nature Conservancy’s Road-Stream & Tidal Crossing Prioritization Tool

3a. Evaluate Existing Methodologies and Adjust as Needed

Evaluate existing methodologies in the Atlas framework and adjust as needed based on new or different data sources. To rank each metric on a 1-5 scale, the data is evaluated using certain methodologies. Below are examples of methodologies used to scale Non-Tidal and Tidal Crossing metrics. More information can also be found in the Atlas [Non-Tidal and Tidal Protocol Prioritization Summary Documents](#).

3b. Develop new methodologies as needed, with input from TNC, Seatuck, and STS.

	Non-Tidal Crossings		Tidal Crossings	
	Metrics	Methodologies	Metrics	Methodologies
Ecological	River size	Utilized the Total Drainage Area of each river line segment metric provided in NHD+ hi-res product after identifying nearest river line segment to the crossing location.	Salt Marsh Complex Size	Scoring assigned by manual classification of crossings based on proximity to, and sizes of, neighboring marsh complexes (hydrologically connected). Crossings in or adjacent to large complexes (>~15 acres in size) scored a 5. Crossings in or adjacent to smaller sized complexes were scored a 3 And crossings disconnected from any marsh complex were scored a 1.
	Length of river reconnected	Using the Barrier Analysis Tool (BAT), calculated the length of upstream & downstream functional hydrologic network to the next identified barrier both upstream & downstream. Crossings identified as “no barrier” are excluded from the analysis tool.	Salt Marsh Size upstream	Upstream catchment unit defined by topography in GIS.



Ecological Cont.	Number of downstream barriers	Using the Barrier Analysis Tool (BAT), calculated the number of downstream barriers down to the river mouth. Crossings identified as “no barrier” are excluded from the analysis tool.	Degree of tidal restriction and AOP	*Composite of multiple other metrics
	Aquatic organism passage	Collected in the field through surveying each crossing under the NAACC data collection protocol.	Vegetation Score	Field observation at the time of site assessment.
Resilience	Risk of sea level rise inundation of Road	Extracted flood frequency values from each inundation frequency raster for each culvert crossing location for each of the five 2080s sea level rise scenarios (Low, Low-Medium, Medium, High-Medium, High).	Risk of sea-level rise inundation of Road	Extracted flood frequency values from each inundation frequency raster for each culvert crossing location for each of the five 2080s sea level rise scenarios (Low, Low-Medium, Medium, High-Medium, High).
	Risk of storm surge inundation of road	Extracted flood frequency values from inundation frequency raster for each culvert crossing location based on the ‘present-day’ inundation scenario.	Risk of storm surge inundation of road	Extracted flood frequency values from inundation frequency raster for each culvert crossing location based on the ‘present-day’ inundation scenario.
	Heavy rainfall flood risk within the watershed	Calculated the percentage of each watershed (12-digit Hydrologic Units) covered by impervious surfaces using NLCD percent impervious 30m resolution product. Each crossing was joined spatially to the watershed that it is located within to assign it a percent impervious value.	Heavy rainfall flood risk within the watershed	Calculated the percentage of each catchment covered by impervious surfaces using NLCD percent impervious 30m resolution product.
			Area of Potential Tidal Marsh Advancement US of restriction	SLAMM/Catchment Area

Transportation	Road functional classification	Crossings were joined to the nearest road segment in the road inventory database and evaluated based on the road segment's functional classification code. Crossings not near a road segment were evaluated manually using aerial imagery.	Road functional classification	Crossings were joined to the nearest road segment in the road inventory database and evaluated based on the road segment's functional classification code. Crossings not near a road segment were evaluated manually using aerial imagery.
	Evacuation Route	Evacuation routes were identified and selected from the NYS Roadway Inventory database. Crossings were joined to the nearest road segments in the road inventory database and evaluated as to whether or not those road sections were categorized as evacuation routes.	Evacuation Route	Evacuation routes were identified and selected from the NYS Roadway Inventory database. Crossings were joined to the nearest road segments in the road inventory database and evaluated as to whether or not those road sections were categorized as evacuation routes.
Infrastructure	Structural condition	Collected in the field through surveying each crossing under the NAACC data collection protocol.	Structural condition	Collected in the field through surveying each crossing under the NH DEP/TNC data collection protocol. Metric averaged across multiple structure condition assessments.
			Partner priority	Priority locations identified by partners were cross-walked to the TNC database of crossing locations manually.
	Partner priority	Identified priority locations were cross-walked to the TNC database of crossing locations manually.	Risk of high water- Lack of clearance	Collected in the field through surveying each crossing under the NH DEP/TNC data collection protocol.
			Erosion classification	Ratio of the scour pool width to channel width as measured by imagery with field validation where field assessments were available.

3c. Automate Prioritization Scoring based on Metric Data

Create tool and map platform to automate prioritization scoring from metric data. Within the Atlas, the individual metrics within each benefit category are scored on a scale of 1-5. Within each benefit category, metrics are summed and then rescaled to a 1-5 scale. Then, all four benefit scores are summed to calculate the Total Prioritization Score. Tool and map should be able to host and update regularly as data is added or updated, and should be transparent and replicable for locations outside the project areas.

3d. Formulate map platform based on The Nature Conservancy's Atlas.

Formulate a map platform based on the tools and design of the [Atlas](#). Such tools and design elements should include but are not limited to:

- Project Background and Disclaimer Pop Up
- User Guide
- Basemap Gallery
- Chart Function
- Select by Area Function
- Filter Function
- Search Bar Function
- Points as different shapes and colors based on non-tidal/tidal crossings and prioritization
- Separation of Layers based on each benefit separately and benefits compiled
- Pop up box for each point showing the crossing code, road, road jurisdiction, town, estuary, stream, prioritization, and link to summary sheet

3e. Input readily-available data for crossings in Suffolk, Nassau, and Westchester Counties

Input data from Suffolk, Nassau, and Westchester Counties into the map platform to showcase prioritization.



Task 4. Documentation and Guidance

4a. Develop documentation and guidance pertaining to the type of data used, methodology to score metrics, how to use the map platform, and guidelines to input data into map platform. Final documentation should include but is not limited to:

- Prioritization Scoring Summaries for Tidal and Non-Tidal Crossings
 - Can be based on Atlas [Non-Tidal and Tidal Protocol Prioritization Summary Documents](#)
- Map Platform User Interface Guide
 - Can be based on [Atlas User Interface Guide](#)
- Guidance Document for other Agencies to Input Data and Information into Map Platform
- Metadata compliant with USGS guidance and standards

Task 5: Reporting Services

5a. Assist Seatuck and STS in preparing their respective grant reporting, such as a Quality Assurance Project Plan, by drafting narrative description of the work performed to develop the deliverables specified in Tasks 1-4.



Attachment B: General Guidelines

Communications

Any oral communications by Seatuck or Save the Sound Contact Person(s) or designee concerning this RFQ are not binding and shall in no way modify the RFQ or the obligations of Seatuck, the Proposer, or the selected Contractor.

Changes to RFQ

If it is necessary to make material changes to the RFQ, Seatuck and Save the Sound will notify all those who have confirmed interest in submitting a proposal that an addendum has been posted to the website and is available for viewing and downloading. It shall be the responsibility of the Proposer to inquire as to any addendum issued. All addenda issued shall become part of the RFQ.

Exceptions or Deviations

Any exceptions or deviations from the requirements set forth in this RFQ must be declared in the proposal submitted by the Proposer. Such exceptions or deviations must be segregated as a separate element of the of the proposal under the heading "Exceptions and Deviations." Seatuck and STS may waive any immaterial deviation or defect in a qualifications package. Seatuck's or Save the Sound's waiver shall in no manner modify the RFP documents or excuse the Proposer from full compliance with the RFP requirements if awarded the contract.



Precontractual Expenses

All qualifications prepared in response to this RFQ are at the sole expense of the Proposer and with the express understanding that there will be no claim for reimbursement from Seatuck or Save the Sound for the expenses of preparation. Seatuck and Save the Sound shall not be liable for any expenses incurred by the Proposer prior to the date of award and commencement of contract services.

Insurance Requirements

Seatuck and Save the Sound require their contractors to maintain Workers Compensation and General Liability insurance. More details will be provided to applicants selected for funding. Note this applies for all contractors, including sole proprietors. If you cannot provide proof of insurance, please do not apply for this contract.

Withdrawal; Proposal Irrevocable

A Proposer may withdraw its qualifications at any time prior to the submittal deadline by sending Seatuck a request in writing from the authorized person who signed the submitted proposal. As of the deadline for submittal, any proposal received by Seatuck and Save the Sound and not withdrawn becomes an irrevocable offer available for acceptance by Seatuck immediately and for one hundred and twenty (120) days thereafter. Seatuck and Save the Sound reserve the right to extend time for acceptance of the proposal for an additional thirty (30) days. The Proposer is responsible for the accuracy of the qualifications submitted, and no allowance will be made for errors or price increases that the Proposer later alleges are retroactively applicable.

Confidentiality

Qualifications are confidential until the evaluation and selection process has been completed and Seatuck and Save the Sound has issued a notice of tentative award. Any information a Proposer submits in response to the RFQ that the Proposer considers a trade secret or confidential proprietary information, and Proposer wishes to protect from public disclosure, must be clearly labeled with the following:



“This information constitutes a trade secret or confidential proprietary information and is not to be disclosed except in accordance with applicable public disclosure laws.”

Any document of Seatuck or Save the Sound, or any document created by the selected Contractor and used in rendering the services, shall remain the property of Seatuck and Save the Sound and shall be kept confidential in accordance with applicable laws, rules, and regulations.

Record Keeping

The selected Contractor shall retain all accounts, books, records, and other documents relevant to the contract for seven (7) years after final payments are made by Seatuck and Save the Sound. Federal, state, and/or county auditors and any persons duly authorized by Seatuck or Save the Sound shall have full access and the right to examine any said materials during said period. Such access is granted notwithstanding any exemption from disclosure that may be claimed for those records which are subject to nondisclosure agreements, trade secrets and commercial information, or financial information that is privileged or confidential.

Media Statements and News Releases

News releases pertaining to any award resulting from this RFQ may not be issued without the prior written approval of Seatuck and Save the Sound. The selected Contractor agrees that no brochure, news/media/press release, public announcement, memorandum, or other information of any kind regarding the proposed contract shall be disseminated in any way to the public, nor shall any presentation be given regarding the proposed contract without prior written approval from Seatuck and Save the Sound, which written approval shall not be unreasonably withheld.



Reservation of Rights

Seatuck and Save the Sound expressly reserve the right to:

- a. Reject or cancel any or all qualifications packages or any part thereof submitted in response to this RFQ;
- b. Withdraw the RFQ at any time, at Seatuck or Save the Sound's sole discretion;
- c. Disqualify any Proposer whose conduct and/or proposal fails to conform to the requirements of the RFQ;
- d. Prior to Bid opening, amend the RFQ specifications to correct errors, or oversights, or to supply additional information as shall become available;
- e. Prior to Bid opening, direct Proposers to submit proposal modifications addressing subsequent RFQ amendments;
- f. Change any of the dates concerning the RFQ and award schedule;
- g. Eliminate any mandatory, not-material specification that cannot be complied with by all of the prospective Proposers;
- h. Waive any requirements that are not material;
- i. Award negotiated contracts to one or more Proposers;
- j. Negotiate with the successful Proposer(s) within the scope of the RFQ, in the best interest of Seatuck or Save the Sound;
- k. Conduct contract negotiations with the next responsible Proposer should Seatuck or Save the Sound be unsuccessful in negotiations with the selected Proposer;
- l. Require clarification at any time during the procurement process and/or require correction of arithmetic or other apparent errors for the purpose of assuring a full and complete understanding of a qualifications package and/or to determine a Proposer's compliance with the requirements of the RFQ.



Attachment C: Proposal Evaluation

Evaluation Procedures

All qualifications received in accordance with these RFQ instructions will be evaluated to determine if the proposal is complete and meets the requirements specified in this RFQ. If an alternative qualifications package is submitted, any consideration of such a package is at Seatuck and Save the Sound's discretion. An award will be made to the Proposer whose qualifications are the most advantageous to Seatuck and Save the Sound's goal for the project. Seatuck and Save the Sound reserve the right to reject all submissions and make no award under this RFQ. All qualifications will be reviewed, analyzed, and evaluated in accordance with the established criteria below.

Seatuck or Save the Sound may require supplemental information in order to evaluate a Proposer's qualifications. The Proposer will be notified if supplemental information is required, and be permitted a reasonable period of time to submit the information.

Evaluation Criteria

General Qualifications

The submissions will be evaluated on the Proposers' history, expertise, experience, reliability, financial viability, and references. The proposal will be evaluated on projects of similar scope and nature completed in the last five years. The Proposer must demonstrate experience with data management, development of geospatial mapping tools, and project documentation. Submission of sample reports or products from previous projects is encouraged, particularly if development of a QAPP was involved. Experience with non-profit organizations is also preferred.

The Proposer must also provide a list of all person(s) who will be assigned work pursuant to this RFQ (including subcontractors). A resume of the key person(s) should be included showing qualifications, education background, training, and experience.



Notification of Awards

Award notification to applicants is expected by May 31, 2023. Award recipients may be asked to submit a work plan, timeline, and budget at this time. Projects cannot start until the relevant contract (Seatuck and Save the Sound will contract with the chosen Proposer separately) is signed by both parties and all mandatory documentation, including proof of General Liability Insurance and Worker's Compensation, is received by Seatuck and Save the Sound. Seatuck and Save the Sound will not pay for expenses incurred prior to the contract start date. Payment for costs incurred will be on a reimbursement basis per the contract payment schedule and contingent upon completion of quarterly progress reports and project deliverables.

