Request For Proposals

RFP Timeline

The Request for Proposal timeline is as follows:

	Date
Request for Proposal Issuance:	February 23, 2026
RFP Pre-submission Questions Due:	March 09, 2026
Request for Proposal Due Date:	March 16, 2026
Selection Notification:	March 30, 2026
Contract Negotiations:	Goal to conclude before: April 15, 2026

Purpose of the RFP

The purpose of this Request for Proposals (RFP) is to solicit proposals from qualified consulting firms to modernize and streamline the Jamestown S'Klallam Tribe's (JST) environmental data management systems. The selected Contractor will develop and implement open-source technology solutions—including R-scripts, SQL databases, and automated reporting tools—to enhance the Tribe's capacity for data collection, analysis, and EPA reporting. This project aims to replace manual spreadsheet-based processes with efficient, shareable, and scalable systems that support the Tribe's self-governance and environmental protection efforts.

Project Overview

The Jamestown S'Klallam Tribe is initiating a digital transformation of its Natural Resources data systems. As field monitoring shifts from discrete sampling to continuous sensor-based data, JST requires an updated infrastructure capable of managing larger datasets and meeting modern EPA reporting standards (WQX v3.0). This project involves developing automated data quality control (QC) systems, SQL-based time-series databases, and R-driven reporting tools. A core requirement of this project is the commitment to open-source development, with all deliverables hosted on GitHub to facilitate resource sharing among EPA partners and other Tribal nations.

Scope of Work (SOW)

The Jamestown S'Klallam Tribe (JST), a federally recognized Tribe located near Sequim Washington, is seeking a qualified consulting firm (CONTRACTOR) to enhance its environmental programs and self-governance through the development and implementation of improved technology. The Natural Resources Department's work heavily relies on data collection, analysis, and reporting, which is currently managed largely in spreadsheets, lacking an efficient mechanism for accessing key data, documents, and knowledge. Discrete (one measurement per parameter, per site, per visit) data sampling was the norm. Increasingly, sensors capable of collecting high-frequency (continuous, time-series) data are replacing or supplementing discrete sampling, resulting in larger datasets. JST does not have a streamlined method for submitting data to EPA and verifying that data is correctly submitted to EPA. JST lacks the capacity to efficiently develop and implement better tools. This project aims to modernize and streamline the JST's data and software systems, addressing increasing threats to treaty-protected resources and existing capacity challenges.

EPA developed a database schema WQX that has gone through several versions. In the last decade, EPA has upgraded WQX to v3.0. Northwest Indian Fisheries Commission (NWIFC) to support member Tribes developed and

helped deploy WQX v2.0 compliant discrete water quality database (MS-SQL). Recently NWIFC has developed a new version of TWQD that is WQX v.3.0 compliant and is rolling this out to interested Tribes. The JST does not yet have TWQD v3.0 installed. EPA does not have a database available to accept continuous (high-frequency) data. EPA expects Tribe's to calculate statistics (from continuous data) and submit only the statistics to WQX. NWIFC has developed a SQL-based Water Quality Time Series (WQTS) database to store time series data and calculate certain statistics for submission to EPA. JST has not yet put WQTS into practical use.

The JST has taken initial steps by:

- developing and implementing an enterprise geographic information system (ArcGIS Enterprise, Portal, Image Server). This work was supported by an outside contractor.
- With support from the Northwest Indian Fisheries Commission (NWIFC) and the EPA Tribal Exchange Group the JST currently has:
    - Deployed a production SQL Server-based Tribal Water Quality Database (TWQD) for discrete water quality data and EPA (WQX v2.0) submission.
    - For testing and developing R scripts to streamline data management, deployed a development environment on a local drive with 1) SQL Server-based Tribal Water Quality Database (TWQD) v2.0 (a snapshot of the production TWQD), 2) SQL Server-based Water Quality Time Series (WQTS).

This project emphasizes the development and implementation of open, and sharable systems, leveraging existing tools available from the EPA Exchange Network whenever possible. All supplied and/or developed products, documents, software, database schema, and code will be freely shareable and reusable by others, including EPA, other Tribes, and the public, and will be hosted on a public GitHub site. The contractor will work with JST staff on methods for sharing these products and it is expected that these products will support the growing network of Tribal coders using R, R Studio (Posit) through the developed tools and code.

The project encompasses the following key goals and tasks:

Project Goals:

- Increase Tribal staff capacity by streamlining how we collect, track, store, and submit data, inventories, analysis, and reports to EPA.
- Reduce time required for field data transfers to increase staff efficiency and allow more time for water quality monitoring.
- EPA reporting is correct and up-to-date.
- Implement continuous database storage and analysis solutions.
- Increase capacity for environmental protection and informed decision-making by simplifying, modernizing, and streamlining data and document management.
- Share R-scripts, tools, and databases.

The CONTRACTOR shall perform the following tasks:

- **Task 1: Upgrade the JST TWQD and existing records to be compliant with WQX v3.0**
    - **Problem Statement:** The Northwest Indian Fisheries Commission (NWIFC) previously developed a SQL Server-based discrete (low-frequency) database called the Tribal Water Quality Database (TWQD) that was compliant with WQX version 2.x. NWIFC has now developed a WQX v3.0 compliant version of TWQD and SQL scripts to test and update existing records that were compliant with v2.0 but are not compliant with v3.0.
    - **Resources Available:** The JST has SQL Server instances, ArcGIS Enterprise, Necessary hardware components and software licenses will be provided by EPA, BIA, and the JST.
    - **Requested Outcome:** The CONTRACTOR will work with NWIFC (support/mentor) and the JST (client Tribe) to update WQTS to WQX v3.0 and implement it at JST. NWIFC staff have developed a set of scripts to search for and correct lookup table values that have changed from v2.0 to v3.0. The resulting products must be freely shareable with other Tribes and Tribal organizations.

- **Deliverables:** Fully tested, documented, and functioning software applications, code, and a database, ready for immediate use upon completion of the project. For purposes of this RFP, “fully tested, documented, and functioning” means that the deliverable has been cloned from the GitHub repo, executed using representative JST data, produces expected outputs, includes README-style documentation, and can be run by JST staff without modification.

- **Task 2: Modernize and Streamline Data Collection, QC, Storage, reporting, and Upload to EPA WQX**
  - **Problem Statement:** The Tribe's Water Quality staff manually manage field and laboratory data in paper, spreadsheets, and CSV files, and undertake repetitive manual processes to prepare reports and submit data to EPA WQX. This manual process necessitates the development and implementation of a standardized, electronic data capture form to replace paper and manual spreadsheet-based entry.
  - **Resources Available:** The Tribe's SQL Server Tribal Water Quality Database (TWQD), the Northwest Indian Fish Commission (NWIFC) exchange node (which provides spreadsheet templates and domains for WQX compliance), ArcGIS Enterprise/Portal/Survey123/Field maps, R and R Studio, Quality Assurance Project Plans, and Kor Software (free download from YSI).
  - **Requested Outcome:** Streamline data collection, quality control (QC), storage, reporting, and upload of water quality data for the following parameters/equipment:
    - Streamlining shall be demonstrated by reducing or eliminating manual data re-entry steps currently performed in spreadsheets or CSV files.
    - Multi-parameter sonde: YSI ProDSS/Kor Software (Water Temperature)
    - Grab Samples: Fecal Coliform (lab results)
    - Grab Samples: Nutrients
    - This includes creating and implementing ArcGIS Survey123 electronic data collection forms for field and laboratory discrete data, automated quality control systems with the ability to send data automatically to the existing TWQD (SQL Server), R-scripts to automate frequently repeated analysis, and an automated reporting tool editable in Quarto for ease of future updates and sharing with other R users.
  - **Deliverables:** Implemented ArcGIS Survey123 electronic data collection forms for field and laboratory discrete data collection, automated quality control systems, R-scripts for automated analysis, and an automated reporting tool.

- **Task 3: Development and Implementation of a Continuous Water Quality Database with Automated Data Transfer and Analysis to SQL Server Instance**
  - **Problem Statement:** The existing Tribal Water Quality Database (TWQD) is not designed to handle time-series (continuous) data. The Northwest Indian Fisheries Commission (NWIFC) has developed a SQL Server-based time-series database called the Water Quality Time Series (WQTS) that is compliant with WQX version 2.x and has prebuilt SQL processes for generating summary statistics required by EPA. Note that the available NWIFC SQL scripts to check for and catalog lookup table changes from v2.x to v3.x are designed to search TWQD and do not cover WQTS. The CONTRACTOR's assessment must confirm WQTS's v3.0 compliance to support JST's goal of moving WQTS from the testing environment to production use. The Statistical generator feature works however, if run multiple times, it will generate duplicate results. A separate, volunteer-developed R script to bypass this issue will be provided by JST; the CONTRACTOR is NOT responsible for fixing the SQL statistical generator bug but IS responsible for integrating the provided R script into the workflow. However, WQTS needs to be updated to WQX v3.0, implemented for the JST, and requires a user-friendly interface as it currently demands knowledge of SQL queries.

- **Resources Available:** The JST has SQL Server instances, ArcGIS Enterprise. Necessary hardware components, database schema, and software licenses will be provided by EPA, BIA, and the JST.
- **Requested Outcome:** The CONTRACTOR will work with NWIFC (support/mentor) and the JST (client Tribe) to assess and, if necessary, update WQTS to be fully compliant with WQX v3.0. The contractor must either perform the necessary updates to WQTS or provide a technical justification that no updates are required for WQX v3.0 compliance. NWIFC staff have developed a set of scripts to search for and correct select values in lookup tables that have changed from v2.0 to v3.0. The resulting products must be freely shareable with other Tribes and Tribal organizations.
- **Deliverables:** Fully tested, documented, and functioning software applications, code, and a database, ready for immediate use upon completion of the project.

- **Task 4: Streamline quality control, analysis, and storage of seasonally deployed continuous data loggers**
  - **Problem Statement:** The JST seasonally deploys HOBO data logging devices to collect continuous water temperature and dissolved oxygen data. A comprehensive method for managing and reporting these data is currently lacking.
  - **Resources Available:** HOBO Dataloggers, HOBO USB Shuttle (some Bluetooth enabled), and HOBO Connect software (which outputs CSV files).
  - **Requested Outcome:** Develop data export processes/systems/forms and documentation. Investigate if HOBO provides an API. Create automated scripts (preferably R-scripts for ease of maintenance and sharing) to perform basic quality control, analysis, and storage in the continuous water quality database. These scripts should also generate summary statistics conforming to EPA requirements and facilitate easy upload.
  - **Deliverables:** Publicly accessible/shareable, working, documented, and tested processes and R-scripts. An R-Shiny application for data wrangling continuous data logger output from several different loggers, with a selectable logger interface. “User-friendly” means that core workflows can be completed by a JST staff member without writing SQL or modifying source code.
- **Task 5: Modernize and Streamline Tribal Assessment Report (TAR)**
  - **Problem Statement:** The Tribe's Water Quality staff manually perform repetitive analyses and generate the EPA-required Tribal Assessment Report (TAR). This tool must support an interactive, documented workflow for JST staff to update the annual TAR. While the JST has R Studio (POSIT) users, there is insufficient internal capacity to develop a project of this scope.
  - **Resources Available:** EPA TAR Template, a recent MS Word version of the Tribe's TAR, and the Tribe's SQL Server Tribal Water Quality Database (TWQD).
  - **Requested Outcome: Develop an R Markdown or Quarto tool** to streamline the generation of the Tribe's TAR. The generated report should align with the EPA Template. Analysis replicated in each report (most or all) should be automated with R code chunks within the Markdown or Quarto file. Data will be read from TWQD, analyzed, and the code will generate necessary tables, plots, and maps for the TAR.
  - **Deliverables:** A complete, working, tested, and shareable tool for streamlining TAR generation, plus a sample TAR generated from the final tested tool. The tool must be 'user-friendly,' ensuring JST staff with no programming experience can complete core workflows (like updating the annual TAR, making edits, and running code chunks) by following documented steps, without needing to modify the underlying source code.

General Deliverables Applicable to All Tasks:

- **Acceptance of Deliverables: Unless otherwise specified, a deliverable will be considered complete and acceptable when it:**
    - Executes without errors in the JST-designated development or production environment
    - Includes written documentation sufficient for JST staff to install, configure, and run the deliverable without contractor assistance
    - Produces outputs consistent with the described task objectives and applicable EPA WQX validation requirements
    - Has been demonstrated to JST staff and receives written acceptance (email sufficient) within five (5) business days, or documented feedback for revision
- **Establish, use, and maintain one or more publicly accessible GitHub sites/pages that serve as the permanent central platform for project delivery, including:**
    - **Hosting:** Publicly hosting all project software, scripts, code, documentation, and database schemas developed for this project (in alignment with open and sharable systems requirements).
    - **Collaboration and Communication:** Utilizing GitHub features (e.g., Issues, Discussion boards) to facilitate clear, transparent communication and collaboration between the CONTRACTOR, JST staff, and external partners (like NWIFC). This includes, but is not limited to, tracking bug reports, managing change requests, and addressing development questions.
    - **Project Management:** Using GitHub's project management features (e.g., Projects/Boards, Milestones) as the primary tool for tracking project timelines, task assignments, and overall progress. This ensures transparency and provides a real-time view of the project status.
    - **Documentation:** Serving as the repository for all project-related documentation, including READMEs, user manuals, and technical specifications, to ensure accessibility and maintainability.
- **Register all developed products with the EPA Exchange Network**. Registration of newly developed resources has been required since 2011, and reuse of existing resources since 2018.
- **JST Staff Training**- CONTRACTOR is responsible for ensuring that JST staff have sufficient documentation, understanding, and tools to operate and potentially maintain the scripts following the end of the contract. Training will be considered complete when JST staff have participated in at least one live and recorded walkthrough per major deliverable and have access to written or recorded materials sufficient to independently operate the systems.
- **Open-Source Licensing and Dependencies.** All original code developed specifically for this project shall be owned by the Jamestown S'Klallam Tribe (JST) and released in a public GitHub repository under the Apache License 2.0. The project may incorporate third-party libraries, packages, or platforms subject to their own licenses; such dependencies shall retain their original licensing and ownership. Any dependency that limits future reuse, modification, or redistribution of the project deliverables (including commercial or proprietary software) must be disclosed in advance, approved by JST, and clearly documented in the repository and associated README files

Required Contractor Capabilities & Approach:

The CONTRACTOR shall guide the design and development of software and hardware solutions to improve the efficiency of key processes that support self-governance and environmental programs. The Contractor will review the TRIBE's processes and the available shared resources from the EPA Exchange Network to advise the JST on the reuse of existing EN products and applicable systems.

Federal Compliance: The CONTRACTOR must demonstrate the ability to comply with all **[EPA Grant Terms and Conditions](Link)** and federal regulations applicable to Environmental Information (EI) and the EPA Exchange Network.

The CONTRACTOR should demonstrate a working knowledge of:

- Federally-recognized Tribes and cultural competency.
- EPA grant requirements, including the EPA Exchange Network and its projects.

- Creating and sharing open-source IT components, aligning with open-source best practices, including modularity, clear documentation, and licensing.
- Enterprise GIS, data collection, analysis, management, and document management.
- Developing software/hardware systems and tools for environmental programs and governments.
- Extensive experience using R for data science, automation, and workflow development.
- Hands-on experience with Microsoft SQL Server, including complex queries, stored procedures, and managing data schema.
- Proficiency in integrating R with ArcGIS Portal and Survey123 (e.g., using R packages (arcgis, arcgisbinding), REST APIs, or httr).
- Prior work supporting water quality monitoring, environmental data systems, or Tribal natural resources programs.
- Familiarity with EPA data standards and reporting formats (e.g., WQX).
- Ability to work remotely and communicate effectively via remote video or call platforms.

Project Timeline

Milestone Acceptance

Each milestone in the Project Timeline represents an interim acceptance checkpoint. A milestone will be considered achieved when the corresponding deliverable has been demonstrated to JST staff and meets the described acceptance criteria. Written acceptance (email sufficient) or documented feedback for revision will be provided by JST within five (5) business days of demonstration.

Milestone / Deliverable	Suggested Date	Corresponding SOW Task / Deliverable	Acceptance Criteria
Project Kick-off & Final Work Plan Approval	Mid-April 2026	General Deliverable: Formal start, establishing the GitHub repository and project management board.	
TWQD v3.0 & WQTS v3.0 Implementation Complete	Mid-May 2026	Task 1 & 3: Fully tested and documented databases (discrete and continuous) compliant with WQX v3.0.	EPA WQX v3.0 test submission successfully validates
Automated Data Collection & QC System Deployment	Late May 2026	Task 2: ArcGIS Survey123 Forms, automated QC systems, and R-scripts for low-frequency data.	Automated workflows execute without manual data re-entry
R-Shiny Application for HOBO Data Complete	Mid-June 2026	Task 4: Working R-Shiny application for continuous data wrangling and initial R-scripts for QC/analysis.	JST staff user completes core workflow without modifying code
Automated Tribal Assessment Report (TAR) Tool Complete	Late June 2026	Task 5: Complete, working, and tested R Markdown/Quarto tool for TAR generation.	Generated report reproduces results consistent with the most recent approved TAR

JST Staff Training & Documentation Complete	Early July 2026	General Deliverable: Training complete for all developed systems, including R-scripts and database operation.	Training materials delivered and walkthrough completed
Final Deliverable Submission & EPA EN Registration	Mid-July 2026	General Deliverable: All products registered with the EPA Exchange Network.	
Project End	July 31, 2026	Final Closeout.	

Submission Guidelines

Proposals must be submitted electronically in PDF format to rknapp@jamestowntribe.org as soon as possible and no later than March 16, 2026, 5PM PST. To ensure a streamlined review process, please organize your proposal into the following sections:

1. **Executive Summary**
    a. Provide a high-level overview of your firm's approach to the project objectives, emphasizing experience with Tribal environmental data and open-source development.
2. **Technical Approach & Work Plan**
    a. Modernization Strategy: Detail your plan for upgrading existing data structures to meet EPA WQX v3.0 standards.
    b. Automation & Scripting: Describe the methodology for developing automated R-scripts and SQL-based workflows for continuous water quality data.
    c. Open-Source Collaboration: Confirm your commitment to hosting all code and documentation on a public GitHub repository for shared use.
3. **Project Schedule**
    a. Provide a detailed timeline with key milestones corresponding to the "Phase" structure outlined in the Scope of Work.
4. **Budget & Cost Proposal**
    a. Include a firm fixed-price budget broken down by project phase.
        i. The project is subject to available grant funding and cost-effectiveness is a primary evaluation factor.
        ii. Itemize costs for personnel, technical development, and any necessary software/hardware recommendations.
    b. Itemize costs for personnel, technical development, and any necessary software/hardware recommendations.
5. **Key Assumptions and Risks**
    a. Proposals shall include a brief section identifying key technical, data, dependency, or capacity assumptions that underline the proposed approach, as well as any material risks to successful implementation.
    b. This may include, but is not limited to, assumptions regarding data quality, availability of third-party systems or APIs, staff availability, or external dependencies described in the Scope of Work.
6. **Required Qualifications & Key Personnel**
    a. Provide resumes for the specific individuals who will perform the work, highlighting expertise in R, SQL, and environmental data management.

    b. Include three (3) references for similar projects, preferably involving Tribal or government environmental agencies.
7. **Technical Portfolio (GitHub Link)**
    a. To streamline the evaluation of technical capacity, please provide a link to a public GitHub repository containing examples of relevant R-scripts or database schemas developed by your firm.
8. **External Dependencies and Scope Boundaries**
    a. This project relies on external systems, standards, and tools not fully controlled by JST or the Contractor (including EPA WQX validation behavior, NWIFC-developed databases and scripts, and third-party hardware or software platforms).
    b. Contractors are not expected to remediate defects or limitations in third-party systems beyond reasonable integration, configuration, and documented workarounds. Successful completion will be evaluated based on the functionality, transparency, and documentation of the solutions delivered within these constraints, rather than on modification of external systems outside the Contractor's control.

Evaluation Criteria

Proposals will be reviewed and scored based on the following weighted criteria to ensure objectivity:

- **Technical Expertise* (25%): Demonstrated proficiency in R, SQL, and WQX data standards.**
- **Experience (25%): Proven track record of working with Tribal nations or environmental data workflows.**
- **Project Plan & Timeline* (20%): Feasibility and clarity of the proposed work schedule.**
- **Cost Effectiveness (30%): Overall value and clarity of the budget proposal.**

  * Clarity and realism of identified assumptions and risks will be considered as part of the Technical Expertise and Project Plan evaluation criteria**.**

Potential Challenges

The selected Contractor should anticipate and address the following potential challenges in their proposal, demonstrating a clear understanding of the project's scope and the existing technical environment:

- **Integration and Data Migration Complexity:**
    - Migrating existing data from the current TWQD v2.0 and various spreadsheets/CSV files to the new WQX v3.0 compliant schema without data loss or corruption.
    - Successfully integrating and stabilizing the new WQTS database. The known issue of the statistical generator producing duplicate results is being addressed by a separate R script provided by JST, which the contractor must integrate into the automated workflow.
    - Ensuring seamless, reliable data flow from diverse sources (e.g., YSI ProDSS, HOBO Dataloggers, lab results) into the new SQL Server-based systems.
- **Technology and Capacity Transition:**
    - Developing user-friendly interfaces (like the R-Shiny application for HOBO data wrangling and the R Markdown/Quarto tool for the TAR) to overcome the current reliance on in-depth SQL knowledge for WQTS operation.
    - Addressing the Tribe's stated lack of internal capacity by providing comprehensive documentation and effective hands-on training to JST staff for long-term maintenance and operation of the developed R-scripts, Quarto tools, and databases.
- **Open-Source and Collaboration Management:**
    - Maintaining continuous, transparent communication and collaboration between the CONTRACTOR, JST staff, and external partners like NWIFC, especially when co-developing and implementing NWIFC's TWQD v3.0 and WQTS.
    - Ensuring all open-source deliverables are fully documented, adhere to best practices for modularity and licensing, and are successfully registered with the EPA Exchange Network for broader reuse.

- **Regulatory and Hardware Constraints:**
    - Navigating the complexities of EPA reporting, specifically the requirement to calculate statistics from continuous data for WQX submission, which currently lacks a dedicated EPA database.
    - Developing robust solutions that account for the various data output formats and transfer mechanisms from existing hardware (e.g., HOBO Dataloggers, HOBO Connect software).

Required Qualifications

The CONTRACTOR must demonstrate the following working knowledge, experience, and capabilities:

- **Extensive Technical Proficiency:**
    - Extensive experience using R for data science, automation, and workflow development.
    - Hands-on experience with Microsoft SQL Server, including complex queries, stored procedures, and managing data schema.
    - Demonstrated familiarity with EPA data standards and reporting formats (e.g., WQX v3.0).
    - Proficiency in integrating R with ArcGIS Portal and Survey123 (e.g., using R packages, REST APIs).
- **Open-Source and Data Management Expertise:**
    - Proven ability to create and share open-source IT components, adhering to best practices for modularity, clear documentation, and licensing.
    - Experience with Enterprise GIS, data collection, analysis, management, and document management systems.
- **Relevant Domain Experience:**
    - Prior successful work supporting water quality monitoring, environmental data systems, or Tribal natural resources programs.
    - Demonstrated working knowledge of Federally-recognized Tribes and cultural competency.
    - Familiarity with EPA grant requirements, including the EPA Exchange Network and its projects.
- **Compliance and Operations:**
    - Ability to comply with all EPA Grant Terms and Conditions and federal regulations applicable to Environmental Information (EI).
    - Ability to work remotely and communicate effectively via remote video or call platforms.

Appendices and Additional Information

Appendix A: Proposal Cover & Certification Form

EN-Grant-Request For Proposals-February2026: Environmental Data Management Systems

Instructions to Proposers: This form must be completed, signed, and included as the first page of your proposal submission. Proposals missing this signed certification may be deemed non-responsive.

1. Proposer Information

Firm Name	
Primary Contact Name/Title	
Email Address	
Phone Number	
Business Address	
Year Firm Established	
UEI Number (SAM.gov)	

2. Mandatory Technical Acknowledgments

By checking the boxes below, the Proposer confirms they have read and will adhere to the following project-specific requirements:

- [ ] **Open-Source Commitment:** We acknowledge that all code, scripts, and database schemas developed for this project must be hosted on a public GitHub repository and released under the **Apache License 2.0**.
- [ ] **Technical Stack Proficiency:** We certify that our key personnel possess expert-level proficiency in **R (Posit)**, **Microsoft SQL Server**, and **ArcGIS Survey123/Portal** integration.
- [ ] **EPA Compliance:** We certify our ability to develop systems compliant with **EPA WQX v3.0** standards and adhere to all EPA Grant Terms and Conditions (Appendix G).
- [ ] **Staff Training:** We agree to provide recorded walkthroughs and documentation sufficient for JST staff to independently operate the systems upon project completion.
- [ ] **Sovereign Immunity:** We acknowledge the Jamestown S'Klallam Tribe's reserved sovereign immunity as stated in the RFP and Sample Professional Services Agreement.

3. Submission Checklist

Please confirm your PDF proposal includes the following sections as required by the RFP:

- [ ] Executive Summary
- [ ] Technical Approach & Modernization Strategy
- [ ] Detailed Project Schedule (April – July 2026)
- [ ] Firm Fixed-Price Budget (Itemized)
- [ ] Key Assumptions and Risk Matrix
- [ ] Resumes of Key Personnel
- [ ] **Link to Public GitHub Portfolio/Repository** (Required for evaluation)

4. Financial Summary

Proposers must provide a firm fixed-price breakdown by project phase. Amounts should be inclusive of all labor, materials, and overhead.

Project Phase	Estimated Completion	Fixed-Price Amount
Phase 1: Project Management & Discovery	April 30, 2026	$
Phase 2: Database Architecture & QC Systems	May 30, 2026	$
Phase 3: R-Script & Reporting Automation	June 30, 2026	$
Phase 4: Training, Documentation & Handoff	July 31, 2026	$
TOTAL FIRM FIXED-PRICE		**$**

Total Price (In Words): _____

5. Certification and Signature

The undersigned, being a representative of the Proposer with proper authority to bind the firm, certifies that the information provided in this proposal is true and accurate. We agree to provide the services described in the RFP for the price stated above and to execute the Professional Services Agreement (Appendix D) without material modification unless specific revisions are attached here.

Is your firm a certified Disadvantaged Business Enterprise (DBE)? [ ] Yes [ ] No

If Yes, State of Certification & DBE Number: _____

Authorized Signature: _____

Printed Name: _____

Title: _____

Date: _____

*Submit this form along with your full proposal to rknapp@jamestowntribe.org by **March 16, 2026, 5:00 PM PST**.*

Appendix B: Existing Data, Software, and Systems

This appendix expands on the "Resources Available" sections within the Scope of Work (SOW) to provide potential contractors with a more detailed understanding of the Jamestown S'Klallam Tribe's (JST) current technical environment.

-----1. Database and Data Management Systems

The JST Information System Department manages server and software resources (mainly Microsoft based) including supporting the Nature Resources databases in a core Microsoft SQL Server environment for managing environmental data.

- Tribal Water Quality Database (TWQD):
    - Purpose: Production database for storing discrete (low-frequency) water quality data.
    - Compliance: Currently compliant with WQX v2.0 and is used for direct data submission to the EPA Exchange Network.
    - Status: Deployed on a production SQL Server instance.
    - Development/Testing Environment: A separate development environment hosts a snapshot of the production TWQD v2.0 for testing and R script development.
    - Notes: TWQD (525.44MB (67 MB ROWS, 460MB LOG)),
- Water Quality Time Series (WQTS):
    - Purpose: SQL Server-based database designed to store continuous (high-frequency, time-series) water quality data.
    - Compliance: Currently compliant with WQX v2.x and includes prebuilt SQL processes for generating EPA-required summary statistics.
    - Known Issue: The existing statistical generator feature will produce duplicate results if run multiple times.
    - Status: Deployed in the development environment but has not yet been put into practical use.
- Enterprise Geographic Information System (GIS):
    - Components: ArcGIS Enterprise, Portal, and Image Server.
    - Functionality: Fully implemented and supported by an outside contractor for managing spatial data. The system supports data collection workflows via Survey123 and Field Maps.
    - Specifications: ArcGIS Enterprise version 11.5 The JST system consists of three servers ARCGIS-CORE, ARCGIS-IMGSVR, and ARCGIS-SQL.
- Data Server Infrastructure:
    - Platform: All databases (TWQD and WQTS) run on SQL Server instances.

- **Specifications: Production and Development Servers:** SQL Server Management Studio 19. Server Environment: Window Server 2019 Standard, SQL_Latin1_General_CP1_CI_AS,

-----2. Software, Scripting, and Development Tools

The Tribe is committed to open-source development and currently utilizes industry-standard tools.

- **Statistical Computing:**
  - **Core Tool: R and R Studio (Posit). The JST Natural Resources Department has staff who are experienced R Studio users, although they lack the internal capacity for a project of this scope.**
  - **Existing R Scripts: There are existing R scripts deployed in the development environment to streamline data management.**
- **Continuous Data Acquisition:**
  - **YSI Sonde: Kor Software (free download from YSI) is used for managing data from the YSI ProDSS multi-parameter sonde.**
  - **Data Loggers: HOBO Connect software is used for configuring, downloading, and outputting data from the HOBO Dataloggers as CSV files.**
- **Discrete Data Acquisition:**
  - **Hardware:**
  - **Software:**
    - **Field Collection Forms:** To date, we primarily use ArcGIS Field Maps for data collection. We have installed ArcGIS Survey123 Connect (version 3.24.22)). We believe that in order to streamline and automate our data entry, data quality control, and overall data pipelines, Survey123 will provide more features than Field Maps.
- **EPA Reporting Client:**
  - **WQXClient: An existing component that is not included in the scope of this RFP for modification.**
- **Sharing and Collaboration:**
  - **GitHub: All deliverables for this project must be hosted on a public GitHub site. JST expects the CONTRACTOR to utilize GitHub features for project management and collaboration.**
  - **One option would be use Github site: RobertKnapp (Robert Knapp)**

-----3. Monitoring Hardware and Data Streams

The data systems must be capable of integrating data from the following key monitoring equipment:

- **Discrete Sampling:**
  - **Grab Samples: Fecal Coliform (lab results) and Nutrients (lab results).**
    - **Lab Data: For the purposes of this project our lab data comes from the Clallam County Environmental Health Lab. Lab reports are provided via pdf scans of hand written datasheets. The primary lab result is Fecal Coliform.**
  - **Discrete measurements:**
    - **YSI ProDSS-**
- **Continuous Monitoring:**
  - **Multi-parameter Sonde: YSI ProDSS (used for parameters like Water Temperature).**
  - **Data Loggers: HOBO Dataloggers (deployed seasonally to collect continuous Water Temperature and Dissolved Oxygen data). Data is transferred via a HOBO USB Shuttle (some Bluetooth enabled).**

Data Stream Type	SOW Task	Equipment/Data Source	Key Parameters & Use	Current Data Transfer & Pain Point (Addressed by RFP)
Discrete Grab Samples (Lab)	Task 2	Clallam County Environmental Health Lab	Fecal Coliform, Nutrients	Lab reports are PDF scans of handwritten data, requiring manual data re-entry to TWQD. Task 2 requires a new automated QC/data pipeline for this stream, utilizing the new Survey123 system connected to an R script for streamlined entry and quality check.
Discrete Grab Samples (Field)	Task 2	YSI ProDSS (ProDSS ODO+CT)	Multi-parameter spot checks (e.g., Temp/DO).	Data exported via Kor Software (CSV). Currently requires manual re-entry/processes for QC/upload to TWQD. Task 2 requires this process to be replaced by the new ArcGIS Survey123 form connected to an R script for streamlined entry and quality check.
Continuous Sonde	Task 2 & 3	YSI ProDSS (ProDSS ODO+CT)	Water Temperature (continuous).	Data is stored in WQTS. The existing statistical generator feature produces duplicate results if run multiple times. WQTS currently requires in-depth SQL knowledge to operate. **Not currently using ProDSS for continuous data collection.**
Continuous Data Loggers	Task 4	HOBO Dataloggers (U26-001, MX2202, UTBI-001)	Water Temperature, Dissolved Oxygen.	Data exported via HOBOware Pro/HOBO Connect (CSV). Task 4 requires a new R-Shiny application and R-scripts for streamlined QC, analysis, storage in WQTS, and summary statistic generation.
Spatial/Location Data	Task 2, 3, 4	ArcGIS Enterprise/Portal	Monitoring locations, Survey123/Field Maps data collection.	Fully implemented but needs integration with R-scripts and new SQL databases for automated, end-to-end data pipelines (e.g., automatically populating location data in the new Survey123 form and feeding that to TWQD/WQTS).

Table 1: **Summary of Environmental Data Streams.**

Note on HOBO API: The existing RFP explicitly asks the CONTRACTOR to "Investigate if HOBO provides an API" (Task 4).

Appendix C: Specialized R Packages and Scripts that will be of use:

Packages:

- dataQCtools
  - tribalxg/dataQCtools: Code for cropping data, doing quality control, and computing 7DADM
  - Automate data cropping, QC, and more • dataQCtools
  -
- TADA
  - EPA TADA (Tools for Automated Data Analysis) R Package • EPATADA
  - Developed by EPA
  - Tools for Automated Data Analysis (TADA) | US EPA
- ContDataQC
  - leppott/ContDataQC:
  - Quality control checks on continuous data. Example data is from a HOBO data logger with 30 minute intervals.
  - Developed by EPA
  - ContDataQC: An R package and Shiny app for quality control of continuous water quality sensor data | Risk Assessment Portal | US EPA
  - ContDataQC: An R package and Shiny app for quality control of continuous water quality sensor data - ScienceDirect
- driftR
  - Drift Correcting Water Quality Data • driftR
  - shaughnessyar/driftR: Drift Correcting Water Quality Data
  - **"...continuous water quality instruments drift over time, so it becomes necessary to correct the data to maintain accuracy."**

Existing R Scripts:

- **Github site:** RobertKnapp (Robert Knapp)

R Packages: JST staff have not developed any Packages so far. Nor are they maintaining any packages. The are at least 300 packages that JST staff have installed but we have not usage

stats. Key R Packages that may be relevant to this project. Tidyverse, dataQCtools, gt, odbc, shiny, rstudioapi,

R Studio:

APPENDIX D: SAMPLE PROFESSIONAL SERVICES AGREEMENT

THIS AGREEMENT is made and entered into this _____ day of _____, 2026, by and between the **JAMESTOWN S'KLALLAM TRIBE** (hereinafter "Tribe"), located at 1033 Old Blyn Highway, Sequim, WA 98382, and **[CONTRACTOR NAME]** (hereinafter "Contractor"), located at [Contractor Address].

1. PURPOSE & SCOPE OF WORK

The Contractor agrees to perform professional consulting services to modernize and streamline the Tribe's environmental data management systems as described in the **Request for Proposals (RFP) issued February 23, 2026**, and the **Contractor's Proposal dated [Date]**, both of which are incorporated herein by reference.

Key deliverables include:

- Migration of legacy data to a SQL-based time-series database.
- Development of automated Quality Control (QC) R-scripts.
- Implementation of WQX v3.0 data flow protocols.
- Development of an R Shiny dashboard for data visualization.

Notification: Contractor shall notify the Tribe's Project Manager of any concerns, technical barriers, or project delays as soon as they arise.

2. TERM OF AGREEMENT

This Agreement shall commence on **April 01, 2026**, and shall terminate on **July 31, 2026**, unless terminated earlier in accordance with Section 11 or extended by mutual written agreement.

3. COMPENSATION & PAYMENT

- **Total Contract Amount:** The Tribe shall pay the Contractor a total fixed price of **$[Amount]** for the

completion of all deliverables.

- **Invoicing:** Contractor shall submit monthly invoices based on progress.
- **Payment Terms:** Net 30 days upon receipt and approval of a valid invoice.

4. INTELLECTUAL PROPERTY & OWNERSHIP

- **Work for Hire:** All R-scripts, SQL schemas, and dashboards developed under this Agreement are "work for hire" and shall be the sole property of the Tribe.
- **EPA Rights:** In accordance with 2 CFR 200.315, the U.S. Environmental Protection Agency (EPA) retains a royalty-free, non-exclusive, and irrevocable right to reproduce, publish, or otherwise use the work for Federal purposes.
- **Open Source Commitment:** Code shall be documented and delivered in a format allowing the Tribe to maintain and modify it without proprietary restrictions.

5. DATA CONFIDENTIALITY & SOVEREIGNTY

Contractor shall not disclose sensitive Tribal environmental or cultural data without express written consent. Upon termination, all data must be returned and digital copies certified as deleted.

6. REQUIRED FEDERAL/EPA FINANCIAL ASSISTANCE CLAUSES

This project is funded by an EPA Exchange Network Grant. Contractor agrees to the following mandatory federal terms:

- **Retention and Access to Records:** Maintain all records for three (3) years from final payment.
- **Build America, Buy America (BABA):** Ensure products used are produced in the U.S. per EPA guidelines.
- **Disadvantaged Business Enterprises (DBE):** Conduct six good faith efforts for any sub-procurements.
- **Debarment:** Certify that neither the firm nor its principals are debarred from federal transactions.

7. ACKNOWLEDGMENT REQUIREMENTS

Any reports or dashboards for public distribution shall contain the mandatory EPA funding statement:

> *"This project has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreement [Grant Number] to the Jamestown S'Klallam Tribe..."*

8. INDEPENDENT CONTRACTOR STATUS

The Contractor is an independent contractor and not an employee, partner, or agent of the Tribe. Contractor is responsible for all taxes and benefits.

9. INDEMNIFICATION & INSURANCE

- **Indemnification:** Contractor shall indemnify and hold the Tribe and its officials, employees, and agents harmless from any and all claims, actions, suits, procedures, costs, expenses, damages and liabilities, including attorney's fees, arising out of the Contractor's performance under this Agreement.
- **Insurance:** Contractor shall maintain Professional Liability ($1M/$2M) and General Liability insurance naming the Tribe as an additional insured.

10. TRIBAL SOVEREIGN IMMUNITY

Nothing in this Agreement shall be construed as a waiver of the Jamestown S'Klallam Tribe's sovereign immunity from suit, which is expressly reserved.

11. TERMINATION

- **Convenience:** The Tribe may terminate this Contract for convenience with ten (10) days' written notice.
- **Immediate Termination:** The Tribe may terminate this Contract immediately due to the Contractor's negligence, misconduct, willful misfeasance, failure to perform, or other material breach.
- **Liability:** The Tribe shall be liable only for services rendered or goods delivered prior to the effective date of termination.

12. ASSIGNMENT

The Contractor may not assign its rights or delegate its performance under this Contract without the prior written consent of the Tribe.

13. GOVERNING LAW & VENUE

Governed by the laws of the Jamestown S'Klallam Tribe. Disputes shall be heard in the Jamestown S'Klallam Tribal Court.

Execution: The parties agree the contract may be executed and delivered by electronic means and such signatures shall have the same effect as an original.

JAMESTOWN S'KLALLAM TRIBE	**[CONTRACTOR NAME]**
By: _____	By: _____
Title: _____	Title: _____
Date: _____	Date: _____

Appendix E: TWQD

Northwest Indian Fisheries Commission
Salmon and Steelhead Habitat Inventory and Assessment Program
6730 Martin Way E., Olympia, WA 98516

Water Quality Data Exchange

Deployment Instructions& Support Documents

August 2019

STEP # 1 Pre-Launch Tasks:

In this step, the user must first acquire a NAAS account (security-access), followed by the installation of the database software (Microsoft's SQL 2012). Below are instructions to walk you through the process.

1) NAAS Account Information

2) Preparation for WQX Installation

STEP # 2 Deploying the WQX Data Exchange:

In this step, the user will access the instruction on how to launch the client and database.

1) Client Installation Instructions

2) Water Quality Data Exchange – Client User Guide

Support Information:

1) WQX Introduction
2) WQX Client Help
3) Data Template Help
4) WQX Schema Model
5) WQX SQL Help Doc
6) Running TWQD Scripts in SQL
7) WQX Data Dictionary

Appendix F: WQTS

CreateWQTS.sql

WQTS_writeStat2024.sql

WQTS_writeTWQD.sql

Appendix G: EPA General Terms and Conditions

The selected Contractor shall be required to comply with all applicable EPA General Terms and Conditions for Assistance Agreements. These terms govern the use of federal funds, reporting requirements, and intellectual property rights. The full text of these conditions can be found at the following link: https://www.epa.gov/system/files/documents/2025-10/fy_2026_epa_general_terms_and_conditions_effective_october_1_2025_or_later.pdf .