STATE OF INDIANA

REQUEST FOR INFORMATION 24-77891

INDIANA DEPARTMENT OF ADMINISTRATION

ON BEHALF OF THE
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

SOLICITATION FOR:
IDEM WATER MONITORING PROJECT MANAGEMENT DATABASE

RESPONSE DUE DATE:
MARCH 28, 2024 BY 3:00 PM EASTERN TIME

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1.0 INTRODUCTION

This is a Request for Information (RFI) issued by the Indiana Department of Administration (IDOA) on behalf of the Indiana Department of Environmental Management (IDEM) regarding a Water Monitoring Project Management Database for the Office of Water Quality within IDEM.

IDEM is conducting an evaluation of their current Assessment Information Management System (AIMS) Database to ensure primary business needs are being met considering their best interests in short- and long-term needs. The AIMS database is both a database for storage and retrieval of water quality related information and a project management system. The database is crucial to the functions and mission of the Office of Water Quality (OWQ) and houses environmental data from several statewide monitoring programs. It is also a tool for project planning and oversight and provides important services for automating processes for lab and field monitoring staff. Additionally, it provides mechanisms in reviewing, reporting, and calculating data for purposes of data quality and assessment determinations.

The solution should provide functions and automations including project, trip, and site management. It should be capable of housing environmental data from multiple program areas and be adaptable to future programmatic needs. It should provide user friendly abilities to view, export, and edit data and can complete simple to complex calculations. This project also needs the flexibility to interface with existing databases such as EPA's Water Quality Exchange (WQX) and contract laboratory database systems.

IDEM's preference is a highly configurable commercial off the shelf (COTS) product as opposed to a custom developed product; however, IDEM is open to creative alternatives.

It is the intent of IDOA to solicit responses to this Request for Information in accordance with the specifications contained in this document and associated attachments. Neither this RFI nor any response (proposal) submitted hereto is to be construed as a legal offer.

THE STATE MAY ELECT TO LIMIT PARTICIPATION IN ANY FUTURE COMPETITIVE SOLICITATION TO VENDORS THAT RESPOND TO THIS RFI.

2.0 RFI GENERAL INFORMATION

2.1 BACKGROUND AND OBJECTIVE OF THE RFI

The goal of this RFI is to gather general functionality and general pricing structures from vendors for the development of a potential Request for Proposal (RFP).

IDEM is interested in evaluating creative strategies, approaches, timelines, and costs for implementing a Water Monitoring and Project Management system that provides the earliest benefit to taxpayers and reflects the realization that time is the enemy of transformation projects.

IDEM is requesting information to formalize the scope of work for a potential RFP by allowing the vendor community to apprise IDEM on information that should be considered as part of the scope of work.

2.2 VENDOR QUALIFICATIONS

Qualified vendors must have the ability to deliver a dynamic system that has the functionality needed by Office of Water Quality's Watershed Assessment and Planning branch, including electronic management of its environmental monitoring requirements mandated through the Clean Water Act (CWA). Necessary capabilities are outlined in Section 4.0 of this RFI.

Qualified vendors can be individual companies or consortiums.

3.0 INDIANA DEPARTMENT OF ENVIRONMENT MANAGEMENT OVERVIEW

3.1 MISSION STATEMENT

IDEM's mission is to implement federal and state regulations to protect human health and the environment while allowing the environmentally sound operations of industrial, agricultural, commercial, and government activities vital to a prosperous economy. Additional information can be found on the IDEM web site (https://www.in.gov/idem/).

IDEM's database project mission is to review and improve our current processes and implement the most appropriate tools to deliver industry-leading, customer-centric services. IDEM goals include:

1) Provide a centralized service portal housing the agency's water monitoring data to allow superior customer service to our program area staff, our external funding and collaborative partners, and the citizens of Indiana.
2) Increase electronic data collection to reduce paper forms and improve data quality and operational efficiencies.
3) Establish robust data retrieval, reporting, and calculation capabilities to allow for informed and timely decision-making
4) Implement a modern technology solution that can be maintained internally, is scalable for future functionality, and reduces legacy systems risk.

3.2 OFFICE OF WATER QUALITY OVERVIEW

IDEM is a large environmental regulatory agency of approximately 800 staff in six locations that provides registration, notification, closure, permitting, compliance, enforcement, monitoring, remediation, UST billing, and technical support across air, land, and water media.

The Office of Water Quality's Watershed Assessment and Planning Branch includes four program areas: Targeted Monitoring, Probabilistic Monitoring, Watershed Planning and Restoration, and Technical and

Logistical Services. The Technical and Logistical services section provides the primary support roles for overseeing data management and managing the branch's database system. The branch currently maintains its surface water quality data in the Assessment Information Management System (AIMS) database. AIMS houses several types of data including: surface water chemistry data; diatom, fish and macroinvertebrate community data; assessments of habitat quality; results from algal monitoring; and fish tissue and sediment contaminant data.

The OWQ collects surface water quality, biological, and habitat data for the following purposes:

- To fulfill requirements of the CWA § 305(b), § 303(d) and § 314 to assess all waters of the state to determine if they are meeting their designated uses and to identify those waters that are not.
- To support OWQ programs including water quality standards (WQS) development, National Pollutant Discharge Elimination System (NPDES) permitting, and compliance.
- In accordance with section 106(e)(1), States must establish appropriate monitoring methods and procedures (including biological monitoring) necessary to compile and analyze data on the quality of waters of the United States and, to the extent practicable, ground-waters.
- The State's water monitoring program shall include collection and analysis of physical, chemical and biological data and quality assurance and control programs to assure scientifically valid data. The uses of these data include determining abatement and control priorities; developing and reviewing water quality standards, total maximum daily loads, wasteload allocations and load allocations; assessing compliance with National Pollutant Discharge Elimination System (NPDES) permits by dischargers; reporting information to the public through the section 305(b) report and reviewing site-specific monitoring efforts.
- To support public health advisories and address emerging water quality issues.
- To support watershed planning and restoration activities and identify water quality improvements accomplished by watershed restoration efforts funded through CWA programs.
- To determine water quality trends and to evaluate the performance of programs.
- To engage and support a volunteer monitoring network across the state.

The following monitoring programs are employed to achieve the above objectives:

- Probabilistic monitoring in one basin/year on a 9-year rotating basin cycle.
- Fixed Station monitoring at 165 sites across the state.
- Reference site monitoring to refine and validate measurements of biological integrity for aquatic life use assessments.
- Fish tissue contaminants monitoring on a 5-year rotating basin cycle.
- Targeted (watershed characterization) monitoring for Total Maximum Daily Load (TMDL) reassessments and development, watershed baseline planning, and performance measures determinations.
- Cyanobacteria monitoring of DNR operated swimming beaches at lakes/reservoirs around the state.
- Special studies such as remediation follow-up sampling and coolwater site monitoring.

- Thermal verification studies to characterize thermal plumes and biological communities in surface water near NPDES permitted facilities.
- Hoosier Riverwatch (HRW) program citizen volunteer monitoring.

The Watershed Assessment and Planning Branch serves as the authority on water quality related monitoring in the state serving that includes both collection and assessment of data for inclusion in EPA's 303(d) List of Impaired Waters. This serves as the authoritative list of waterbodies in the state on which regulatory and permitting decisions are determined. As such authority, they are also tasked with meeting EPA quality assurance requirements for project management and maintaining requirements of project Quality Assurance Project Plans (QAPPs) and work plans for all monitoring and laboratory activities.

4.0 CURRENT BUSINESS FUNCTIONS AND TECHNOLOGY FOOTPRINT

4.1 BUSINESS FUNCTIONS

This section is a consolidated summary of IDEM business functions related to WAPB's monitoring, assessments, analysis, and reporting requirements. The mission of IDEM's water monitoring project database is to meet business functions through utilizing technologies to improve customer service, increase electronic data collection, establish robust reporting capabilities, and implement a modern technology solution.

The Office of Water Quality (OWQ) is responsible for reviewing and proposing revisions to Indiana's statewide water quality standards (WQS) as required by the 1977 Clean Water Act (CWA). Section 305(b) of the federal Clean Water Act (CWA) requires states to prepare and submit a report on the water quality condition of state water resources to the U.S. Environmental Protection Agency (U.S. EPA) every two years. Indiana's Integrated Report (IR) contains two lists, the Consolidated List and the 303(d) List of Impaired Waters, which differ in purpose and scope. The Consolidated List provides site-specific water quality assessment information for waterbodies throughout the state of Indiana. The 303(d) List of Impaired Waters provides a subset of these to identify only those waters that are impaired, and for which total maximum daily loads (TMDLs) are required per CWA Section 303(d). The IR also provides IDEM's results for its CWA Section 314 assessments of lake trends and trophic state as well as information pertaining to Indiana's ground water and wetland resources. Environmental sample collection from waters, sediments, and fish tissues and their analyses for various pollutants to support water quality monitoring activities is an ongoing effort in the Watershed Assessment and Planning Branch (WAPB) and OWQ to meet CWA requirements. The data and other information generated in this process are vital to IDEM's mission in assuring adequate protection of human health and the environment.

Functions / Business Areas In-Scope	
Water Quality Monitoring	Collection of chemical data including water chemistry, nutrients, metals, toxics, and others for surface waters.

Functions / Business Areas In-Scope	
Bacteriology Monitoring	Collection of pathogens for recreational human health determinations including coliforms and *E. Coli* data for surface waters.
Fish/Macroinvertebrate Monitoring	Collection of fish and macroinvertebrates for biological community health determinations. Calculation of biotic indices and biological condition gradients for determining assessments of aquatic life use.
Habitat Assessments	Collection of qualitative and quantitative habitat information for habitat evaluations. Calculations of Qualitative Habitat Evaluation Indices for use in determing biological community assessments.
Fish Tissue Monitoring	Collection of fish tissue and toxicology data for determinations of fish consumption advisories.
Algae/Cyanotoxin/Diatom Monitoring	Collection and analysis of algae, cyanotoxin, and diatom monitoring for assessments of biological communities and issuance of public health recreational advisories. Calculation of biotic indices for determining assessments of aquatic life use.
Total Maximum Daily Load and Nonpoint Source Programs Monitoring	Develop Total Maximum Daily Loads to address impairments identified on Indiana's 303(d) list. Support development of National Pollutant Discharge Elimination System permit limits. Required for CWA § 106 funding. Support watershed planning and restoration efforts. Identify water quality improvements accomplished by watershed restoration efforts funded through CWA programs as required for CWA § 319 funding and to meet performance measures in U.S. EPA's Strategic Plan. Accept and evaluate data submitted as part of grantees monitoring efforts in developing and implementing watershed management plans.
Special Projects Monitoring	Develop water quality criteria, including nutrient criteria for lakes and reservoirs, rivers and streams. Determine trends and trophic status of Indiana's lakes and reservoirs under CWA § 314. Required for CWA § 106 funding.
Project Management	Conduct oversight and tracking of monitoring projects both ongoing and novel in nature. Aid staff in project set up and automation of processes necessary for proper tracking, reporting, and quality assurance/quality control (QA/QC) activities.

Functions / Business Areas In-Scope	
Site Management	Conduct oversight and tracking of monitoring sites. Manage site sampling for historical content and follow up monitoring needs. Track site information, reconnaisance details, and all historical monitoring across any program area.
Trip Management	Design sampling trips and routes and assign QA/QC practices for lab and field sampling. Creation and completion of forms and data sheets for monitoring and QA/QC records.
Data Reviewing	Querying of data for filling data requests. Analysis of data for assessments, determing trends, and/or aiding in permit, compliance, or enforcement needs. Organizing data for QA/QC determinations and calculations.
Data Reporting	Provision of data to internal and external sources. Formatting data to be used in decision making across all program areas. Providing authoritatitve source on data that is consistent and transparent. Sharing or uploading of data to meet legal and partnership requirements such as uploading of data to EPA's Water Quality Portal through the Water Quality Exchange.
Quality Assurance / Quality Control	Conduct QA/QC of monitoring data to ensure high quality and legally defensible data for all program areas. Ensure data meets necessary EPA approved criteria for intended uses including use in legal enforcement and compliance cases. Calculate measures to meet data quality goals and objectives using data quality indicators.
Assessments	Conduct water quality assessments pursuant to CWA § 305(b) to support the development of Indiana's Integrated Report to U.S. EPA. Development of Indiana's CWA § 303(d) List of Impaired Waters for Indiana's Integrated Report. Required for CWA § 106 funding.

4.2 TECHNOLOGY FUNCTIONS AND INFRASTRUCTURE

IDEM's Information Services team supports the agency's IT needs through helpdesk and telecommunications support, database and application development, and project management. IDEM and the State of Indiana through the Indiana Office of Technology has significant infrastructure to support the

above solutions and additional support, monitoring, and productivity tools. Additional information can be found on the IOT web site (https://www.in.gov/iot/iot-vendor-engagement/).

Essential integrations for system implementations include or may include non-IDEM systems such as EPA's Water Quality Exchange and the Assessment and Total Maximum Daily Load Tracking and Implementation System (ATTAINS). Additional integrations with IDEM systems may include, but not be limited to, the Virtual File Cabinet (VFC, Oracle WCC), IDEM's enterprise regulatory management system TEMPO360, , and others. Significant consideration will be given to solutions that provides a robust and mature REST API. The proposed solution should be able to integrate/interface using standard interfaces/methods to other agency/stakeholder systems (on-prem/cloud). The State prefers to leverage the MuleSoft API Managment and GoAnywhere Managed File Transfer (MFT) platforms; however, if the solution does not support these technologies, the State is willing to consider alternatives. IOT Data Exchange and IOT Security recommends that secure data transfer efforts should be focused on utilizing MuleSoft / GoAnywhere (option dependent upon complexity of data and/or file transfer) for the State to facilitate secure data and file transfer needs.

5.0 FUTURE REQUIREMENTS

5.1 PROCESS DRIVEN FUNCTIONAL REQUIREMENTS

As a regulatory authority, IDEM must adapt to ongoing needs and emerging topics of concern. Therefore, any database system needs to be adaptable to meet both anticipated and unanticipated needs. Examples of such needs include but are not limited to:

1) Storage and management of novel chemical, biological, or habitat related data involving new protocols or taxonomy from what currently exists. Management of data may include ability to both modify and develop new calculations for biological indices, metrics, or standards to meet ongoing programmatic needs or improvements.

2) Modifications or additions to data needs with novel spatial or temporal requirements (i.e., time-series, real time monitoring, etc.)

3) Integration with electronic field sheets.

4) Abilities to share data via public facing platforms.

IDEM is currently working on development of electronic field sheets through acquired grant funding. Additionally, significant funding has been spent recently and over the years to develop or improve biological indices for assessing water bodies for condition of biological communities. The system must provide capabilities for existing and future needs involving complex calculations or provide an appropriate approach for integrating these functions through secondary tools or systems.

The development of functional requirements remains in progress as of the release of this RFI. The information provided in this section is subject to ongoing development and refinement. Please refer to Attachment C – Business Functional Requirements for a more detailed list of functional requirements.

5.2 TECHNICAL STANDARDS AND REQUIREMENTS

For an on-premise implementation, IDEM prefers cloud-ready .Net and SQL applications. IDEM will manage all deployments to upper environments and requires any vendor to have documented and deployment ready artifacts. However, any implementation will have to conform and comply with all IDEM and IOT Security Standards. Additional information can be found on the IOT web site at https://www.in.gov/iot/iot-vendor-engagement. The development of technical requirements remains in progress as of the release of this RFI. The information provided in this section is subject to ongoing development and refinement.
High level technical requirements are outlined in Attachment D – Technical Requirements and include General Architecture, system security, on-premise implementation, system integrity, and cloud enablement.

5.3 SERVICE LEVEL REQUIREMENTS

Service levels for solution and infrastructure services are extremely important. IDEM expects strong, clear industry-leading service levels in order to maintain or transition to much higher levels of service than are currently being achieved. Service levels will be a key evaluation criteria during the RFP process. We will be seeking to understand any trade-off of cost versus performance clearly. The development of service level requirements remains in progress as of the release of this RFI. Service Levels should be described by the vendor in the response to this RFI.

6.0 SUBMISSION REQUIREMENTS

6.1 RESPONSE FORMAT AND ATTACHMENTS

Respondents should submit responses to the RFI, utilizing Attachment A – Response Template, describing how they will meet the specific requirements of this RFI and the deliverables included within. All narrative responses must be provided to the State in Microsoft Word format. Respondents must structure their response according to the sections outlined below to facilitate the State's review of the responses.
RESPONSE TEMPLATE – ATTACHMENT A SHOULD NOT BE MORE THAN 40 PAGES IN LENGTH.

If you would like to provide a response/feedback to this RFI for a potential RFP for IDEM, you must provide your response to State as shown in the RFI Timeline and Response Submission section below.

6.2 RFI TIMELINE

The following timeline is only an illustration of this RFI process. The dates associated with each step are not to be considered binding.

Anticipated RFI Dates:

Activity	Date

Issuance of RFI	January 8, 2024
Deadline to Submit Written Questions (3:00 PM Eastern Time)	February 22, 2024
Response to Written Questions/RFI Amendments	March 7, 2024
Due Date for Submissions	March 28, 2024

6.3 QUESTION / INQUIRY PROCESS

All questions/inquiries in regards to RFI 24-77891 must be submitted in writing via email using Attachment B - Questions and Answers Template by the deadline of **February 22, 2024 by 3:00 PM ET** to rfp@idoa.IN.gov. The email subject line should contain the following phrase:

"REQUEST FOR INFORMATION 24-77891, QUESTIONS AND INQUIRIES."

Following the question/inquiry due date, IDOA will compile a list of the questions/inquiries submitted by all Respondents. The responses will be posted to the IDOA website as soon as possible. Only answers posted on the IDOA website will be considered official and valid by the State. No Respondent shall rely upon, take any action, or make any decision based upon any verbal communication with any State employee.

Please note that Stephanie Nelson (SteNelson@idoa.in.gov) is the State's single point of contact for this RFI. **Inquiries are not to be directed to any other staff member of the IDEM.** Such action may disqualify respondent from further consideration in this RFI and any subsequent RFP process.

If it becomes necessary to revise any part of this RFI, or if additional information is necessary for a clearer interpretation of provisions of this RFI prior to the due date for submissions, an addendum will be posted on the IDOA website.

6.4 CLARIFICATIONS AND DISCUSSIONS

The State reserves the right to request clarifications on information submitted to the State. The State also reserves the right to conduct discussions, either oral or written, with the Respondents. These discussions could include requests for additional information, requests for cost information or technical requirements response attachment revision, etc. Additionally, in conducting discussions, the State may use information derived from the responses submitted by competing Respondents only if the identity of the Respondent providing the information is not disclosed to others. The State will provide equivalent information to all Respondents who have been chosen for discussions.

The Procurement Division will schedule all discussions. Any information gathered through oral discussions must be confirmed in writing.

6.5 CONFIDENTIALITY

It is important to note that all information submitted in Respondent's proposals to this RFI will be kept confidential and will not be made available to the public unless this RFI does not result in the release of a solicitation at a later date. If a solicitation results from this RFI, then the information contained in the proposal submissions for this RFI must be made available to the public once the resulting solicitation has been awarded and the protest period has ended.

Respondents are advised that materials contained in proposals are subject to the Access to Public Records Act (APRA), IC 5-14-3 et seq., and, after award, the entire solicitation file may be viewed and copied by any member of the public, including news agencies and competitors.

Please note citing "Confidential" on an entire section is not sufficient. The Public Access Counselor (PAC) provides guidance on APRA. Respondents are encouraged to read guidance from the PAC on this topic as this is the guidance IDOA follows:

- 18-INF-06; Redaction of Public Procurement Documents Informal Inquiry

Respondents claiming a statutory exception to the APRA must indicate so on a separate attachment labeled "**Confidential Documentation Listing**." That document should include the following information:

- List all documents where claiming a statutory exemption to the APRA;
- Specify which statutory exception of APRA that applies for each document;
- Provide a description explaining the manner in which the statutory exception to the APRA applies for each document.

When claiming confidential information, respondents should submit two versions of their response:

1) A confidential version (for the State's review and evaluation)
    a. Confidential Information must be clearly marked in a separate folder.
2) A redacted version (for public records requests)

If the Respondent does not identify the statutory exception, the Procurement Division will not consider the submission confidential. The State also reserves the right to seek the opinion of the PAC for guidance if the State has doubts the cited exception is applicable.

Prices are **NOT** confidential information.

6.6 RESPONSE SUBMISSION INSTRUCTIONS

Firms interested in providing information to IDOA should submit responses via email to rfp@idoa.IN.gov. All responses must be received no later than **March 28, 2024 by 3:00 PM ET.** The subject line of the email submission must clearly state the following:

"RESPONSE TO REQUEST FOR INFORMATION 24-77891"

Any information received after the due date and time may not be considered.

No more than one proposal per Respondent may be submitted.

Templates outlined in this document should be returned in their native file format.

The State accepts no obligations for costs incurred by Respondents in anticipation of being awarded a contract.

7.0 DESCRIPTION OF ATTACHMENTS

24-77891 Attachment A – Response Template

24-77891 Attachment B – Questions and Answers Template

24-77891 Attachment C – AIMS Business and Functional Requirements

24-77891 Attachment D – AIMS Technical Requirements