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Title: Contract No. 2003901
Regional River Water Quality Monitoring Program
O&M

Sponsors: Cheryl Porter, Todd King

Indexes: Water Operations

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Date	Ver.	Action By	Action	Result
11/25/2020	1	Board of Directors	Approved	Pass
11/12/2020	1	Operations and Resources Committee	Recommended for Approval	Pass

Contract No. 2003901
Regional River Water Quality Monitoring Program
O&M

Agenda of: November 25, 2020
Item No.: **2020-397**
Amount: \$1,365,000.00

TO: The Honorable
Board of Directors
Great Lakes Water Authority

FROM: Sue F. McCormick
Chief Executive Officer
Great Lakes Water Authority

DATE: November 4, 2020

RE: **Contract No. 2003901**
Regional River Water Quality Monitoring Program
Vendor: U.S. Geological Survey

MOTION

Upon recommendation of Cheryl Porter, Chief Operating Officer - Water and Field Services, the

Board of Directors (Board) of the Great Lakes Water Authority (GLWA), authorizes the Chief Executive Officer (CEO) to **enter into Contract No. 2003901 “Regional River Water Quality Monitoring Program” with U.S. Geological Survey, at a cost not to exceed \$1,365,000.00 for a duration of five years;** and authorizes the CEO to take such other action as may be necessary to accomplish the intent of this vote.

BACKGROUND

One of the key outcomes of the GLWA Wastewater Master Plan was to use a regional focus to maximize existing infrastructure and measure impacts from future system improvements in accordance with their expected improvements to receiving stream water quality. In order to measure and document current impacts to the receiving water bodies, the GLWA Wastewater Master Plan proposed a River Water Quality Monitoring Program to garner a better understanding of river health in the region. The program was conceived as a two phased approach. GLWA is committed to leading regional efforts to protect receiving waters by controlling combined sewer overflow (CSO) and sanitary sewer overflow (SSO) discharges, fostering green infrastructure and MS4 (municipal separate storm sewer system) compliance, and increasing resource recovery and operational efficiency at the Water Resource Recovery Facility (WRRF). Development of a regional water quality monitoring program for all major receiving waters will demonstrate and quantify the benefits of these efforts, identify long term trends, inform regional investment priorities, and provide value in public education and outreach.

The proposed comprehensive river water quality monitoring program will further advance regional water quality goals to measure progress and identify remaining impairments by characterizing ambient conditions and long-term trends. The program is intended to be collaborative, with cooperating partners such as the U.S. Geological Survey (USGS), GLWA members, Michigan Department of Environment, Great Lakes, and Energy (EGLE), and watershed groups. Based on the USGS’ nationwide expertise in measuring riverine depth, flow, and water quality parameters, and their peerless operations, maintenance, QA/QC, and reporting infrastructure, GLWA staff is recommending this contract to fund USGS to support GLWA and our regional partners in securing high quality data to demonstrate and document impacts and improvements to the receiving water bodies within the GLWA service area.

GLWA staff recommends that we provide funding to USGS to install new sensors on the existing USGS water quality monitoring stations and to collect monthly water quality samples from new sampling locations. USGS will collect the online water quality data, QA/QC the data and will provide the data via the USGS online portal. USGS will collect and report stream flow, nutrients, sediment, and Escherichia coli (E. coli) in the Rouge, Clinton, and Detroit Rivers. The monitoring will work in concert with water quality modeling tools. Together, monitoring and modeling will provide GLWA and member partners with cause and effect insights to support progressive, adaptive, and effective compliance strategies that are directly aligned with regional water quality conditions and goals.

GLWA service area receiving waters include the Clinton River, Lake St. Clair, Detroit River, and the Rouge River.

The USGS is a pioneer in riverine flow, depth, and water quality monitoring programs and the GLWA service region has relied on the USGS data to gauge the receiving water bodies quantity and quality historically. By collaborating with the USGS, the sampling and data will be collected in a scientifically valid and consistent basis and provides GLWA with the most cost-effective solution to reliably collect this type of data on a peer-reviewed, regional basis.

JUSTIFICATION

Establishing a partnership with USGS is crucial to this project. The USGS is a pioneer and the pre-eminent organization in the US to measure, collect, and report flow and water quality monitoring parameters necessary to support GLWA's regional operational and planning goals. USGS uses standardized, peer-reviewed methods to operate stream gages and water quality stations to assess water resources. The region has historically relied on USGS for water quality monitoring in the past. Existing USGS projects and sampling locations will be leveraged as part of this proposed work. This will provide valuable historical data, allowing for evaluation of long-term trends. As new sampling sites are created at the direction of this project, it will be valuable to have the USGS install the stations and perform the work because relying on their turn-key services is a cost-effective approach, there will be consistent sampling collection and data reduction methods used, and robust quality assurance/quality control protocols developed by the USGS will be utilized. This study will develop a relationship between the GLWA and the USGS, where expertise related to water operations and water science can be shared.

FINANCIAL PLAN IMPACT

Summary: The proposed contract with U.S. Geological Survey encompasses Operations & Maintenance expense only. Potential positive variances of other contractual services as well as the use of this service may vary by year. Sufficient funds will be provided in the Operations & Maintenance (O&M) financial plan for this contract related to contractual professional services.

Funding Source: Operations & Maintenance (O&M) Budget

Cost Center(s): Systems Operations Control Water.....Operations cost center 882301

Expense Type(s): Contractual Professional Services (617903)

Estimated Cost by Year and Related Estimating Variance: See table below.

<u>Fiscal Year</u>	<u>Amount</u>
FY 2021 Budget	\$ 0*
FY 2022 Financial Plan	273,000
FY 2023 Financial Plan	273,000
FY 2024 Financial Plan	273,000
FY 2025 Financial Plan	273,000
FY 2026 Financial Plan	<u>136,500</u>
Financial Plan Forecast	\$1,228,500

Proposed Contract Amount	<u>\$1,365,000</u>
Variance (positive/ (negative))	(\$136,500)

*FY 2021 total budgeted amount is \$0.00 for the water quality monitoring program. A budget amendment will be required to capture the FY 2021 prorated amount of \$136,500 for U.S. Geological Survey.

SAVINGS, COST OPTIMIZATION, AND REVENUE ENHANCEMENT IMPACT

The award of this contract provides a variance of \$136,500 (\$1,228,500 financial plan forecast less \$1,365,000 proposed contract amount). Contractual services are dependent on several factors such as, delays in estimated start and end dates, environmental constraints, and other unforeseen circumstances that can cause the expenses to fluctuate from fiscal year to fiscal year.

COMMITTEE REVIEW

This item was presented to the Operations and Resources Committee at its meeting on November 12, 2020. The Operations and Resources Committee unanimously recommended that the GLWA Board adopt the resolution as presented.

SHARED SERVICES IMPACT

This item does not impact the shared services agreement between GLWA and DWSD.