



MISSISSIPPI
WATERSHED
MANAGEMENT
ORGANIZATION

Request for Board Action

Attachment 6.3

Agenda Item: MS4Front: Addition of Monitoring and Asset Management Modules

Presenter: Emmy Baskerville Doeckel and Emily Resseger

Meeting Date: 12 May 2026 **Flexibility:** Yes No

Estimated Time: Consent Agenda 10 Min. 15 Min. 30 Min. 45 Min. 1 Hour

Action Request: Information/Review Motion to approve Budget Change Other

Board Action: Approved Denied Tabled Accepted Report Other

Date of Action: 12 May 2026

Background (Attach Supporting Documents as needed)

Over the past year, MWMO staff, in collaboration with our consultant HEI, have completed the initial phase of development and configuration of our online mapping and project database tool, MS4Front. This platform allows us to input, track, and store our project and grant information. The tool also includes an integrated map viewer that houses project location and general data about our watershed, making it readily accessible to all staff.

In recent months, staff have focused on updating the existing project data to ensure that the platform includes all relevant information needed to support the ongoing mapping, tracking, monitoring, inspection, and maintenance activities that we are responsible for. Moving forward, the system will allow field inspection data to be collected and uploaded directly into the project database. Beginning this summer, staff will utilize MS4Front to inventory and collect data on all previously completed MWMO projects, totaling more than 300 projects.

While staff have completed this first phase of developing this platform, staff would like to initiate the expansion of the platform to include two new modules, Monitoring and Asset Management, while

also completing a GIS needs assessment to ensure our GIS system is set up to successfully support the growing use of GIS and MS4Front.

Proposed Software Tool Expansion

MWMO staff are proposing to implement two (2) additional modules within our existing MS4Front account. The additional modules to be added will include Monitoring and Asset Management.

The additional Monitoring module will allow staff to track monitoring site visits and equipment deployed, monitoring site documentation, and add connections to Capital and Stewardship Grant projects. Monitoring site visits and deployed equipment are currently tracked in a combination of Google Drive and spreadsheets and are not currently cross-referenced with Capital and Stewardship Grant projects. Bringing all monitoring information into MS4Front will improve knowledge of monitoring work throughout the organization and increase efficiency.

The Asset Management module will allow staff to take inventory and track all our monitoring equipment, including types, brands and model numbers. The Asset Management module will connect to the Monitoring module and allow tracking of equipment deployments at monitoring sites over time. The Asset Management tool will also track purchase and repair records, help us anticipate repair and replacement needs, and document equipment calibration information. MWMO has over 100 monitoring assets and has not previously had an adequate tool to store asset purchase, repair, deployment, and calibration information all in one place. This level of asset management should significantly improve equipment performance in the field, especially by facilitating proactive asset replacement planning that minimizes downtime.

GIS needs assessment

The third task included in this scope of work is a GIS needs review and assessment. MWMO uses ArcGIS (an industry-standard subscription-based map software) and related tools to complete geographic analysis related to monitoring and project siting. MWMO has begun increasing its use of ArcGIS by implementing MS4Front. In addition, the ArcGIS software ecosystem continues to mature, especially related to cloud deployment capabilities and AI/machine learning. MWMO wants to ensure we utilize available ArcGIS tools in a way that best supports our current and future needs. The consultants will evaluate our existing GIS environment, including staff interviews to identify current workflows, needs, and challenges. They will then assess whether our existing ArcGIS licensing, access controls, and data management practices align with our expanding operational requirements. The task will result in recommendations to improve and optimize our current system.

MWMO staff is recommending a not-to-exceed amount of \$22,200 for the initial Monitoring and Asset Management module setup and configuration, existing data migration, testing, and final configuration, and an ArcGIS needs review and assessment.

Mississippi Watershed Management Organization

RESOLUTION 2026-015

A RESOLUTION APPROVING THE PROPOSAL FOR THE SCOPE OF WORK TO IMPLEMENT THE MS4FRONT DATA MANAGEMENT SOFTWARE TOOL

WHEREAS, the MWMO strives to protect and improve water quality and habitat within its jurisdiction through planning and implementation of stormwater best management practices and restoration of ecosystem functionality;

WHEREAS, the MWMO maintains an ongoing watershed monitoring program to collect data, track conditions, and measure changes in water quality over time, complemented by a long history of project implementation across the watershed;

WHEREAS, the MWMO has identified the need for a more sophisticated tool to help collect, track, organize, and summarize years of project and monitoring data, as well as our monitoring assets;

WHEREAS, staff have previously implemented this software solution, allowing us to collectively track, organize and summarize project information and geographic data;

WHEREAS, staff have identified that incorporating a Monitoring and Asset Management tool into the existing MS4Front GIS and Project Database would enhance the functionality and effectiveness of MWMO's ability to track data and manage our programs, and a GIS needs assessment would ensure MWMO is best utilizing its existing software;

WHEREAS, the MWMO has available funds in the General Administrative Fund to cover the cost of the proposed work, and

WHEREAS, Staff recommend the Board of Commissioners approve funding for the implementation of the Monitoring and Asset Management modules in our existing MS4Front data management tool, as well as a GIS needs assessment.

NOW THEREFORE BE IT RESOLVED, the MWMO Board of Commissioners approves the proposal for \$22,200 for the development and implementation of the MS4Front software and annual software subscription fee and authorizes MWMO staff to take all necessary administrative actions to implement the resolution.

Adopted this on the 12th day of May, 2026.

Review for the Board: _____

Connie Buesgens, Chair

Review for Administration: _____

Kevin Reich, Executive Director