



MEMORANDUM

TO: Lower St. Croix Watershed Partnership Planning Team

FROM: Rebecca Nestingen, PE | WCD

DATE: Wednesday, February 14, 2024

RE: **LSC Implementation Tracking Tool**

The purpose of this memo is to provide a recommendation for a LSC implementation tracking tool to replace the existing spreadsheet tracking system for more efficient tracking and reporting of LSC implementation activities. The two tool alternatives that were evaluated were:

- development of an ArcGIS Online (AGOL) database and reporting dashboards similar to the current database used by WCD (*draft form* and *dashboard* have already been developed), or
- customization of the commercial web application MS4Front by a third-party contractor (Houston Engineering) based on the prototype developed for BWSR.

The two alternatives are similar in that they:

- are both web-based solutions that would allow for more streamlined partner collaboration,
- have a map-based location interface,
- allow for attachments (i.e. agreements, estimates) to database records,
- allow for integration with ArcGIS Survey123, Field Maps, and Collector for mobile field inspections
- report data out to a configurable AGOL dashboard for reporting, and
- take advantage of workflow automation for generating custom reports.

Advantages to the utilization of a AGOL database are that it utilizes Survey123 Connect by ESRI to build advanced smart forms with capabilities beyond those of MS4Front. For example, the answer field to the question "...in a priority area for vulnerable groundwater?" can be automatically populated once a location geopoint is defined by an automated query of ArcGIS spatial feature layer for the priority groundwater areas.

While the capabilities of Survey123 forms are advanced, this also results in a disadvantage in that configuring and adapting the form as partnership needs evolve would need to be completed by partnership staff with an advanced AGOL skillset. MS4Front, however, has an easy to use form configuration interface that doesn't require coding knowledge while still providing some basic smart form capabilities (i.e. prepopulating the landowner contact information from the provided land occupier contact information if "yes" is selected for the question "is the land occupier the same person as the landowner?").

Another advantage to utilization of a AGOL database is that LSC partner organizations may already be paying for AGOL subscription services and user accounts. At a minimum each partner organization would need to have one "Creator" user type account which is currently priced at \$550/yr. Additional user accounts with more limited capabilities for signed on users can be purchased for \$110-385/yr. User accounts would allow signed in users to publish, edit, download or view data securely while public facing dashboards would have 'view only' capabilities. Configuration of data entry forms, dashboards, and custom reports is estimated

to cost \$8,000 for labor. Comparatively, for MS4Front, the estimated cost of initial setup is \$12,000 and the annual subscription cost is \$6,000 with unlimited user.

Advantages of MS4Front are the set cost for an unlimited number of users, the user-friendly interface for adapting forms as needs evolve, and BWSR supported development of a prototype configuration of MS4Front for consistency with other Comprehensive Watershed Management programs around the state.