

Recommendations Matrix from the December 12, 2014, Final Report of The Water Use Advisory Council (WUAC)
updated July 6, 2021

Number	Recommendation (Per the December 12, 2014, Final Report)	Impact/ Effort/ Urgency	Implementation Complete? (Y/N/In Progress)	Comments (Including implementation status as of 12/2/2019)	Comment - 6/24/21	Comment - 7/6/21
TU 1.1	As quickly as possible, the Program should partner with Michigan NHD Steward to edit the NHDH, attributing all segments as intermittent that are symbolized as intermittent on the most current version of the 1:24,000 topographic maps.	HHH	In Progress	Scope of work received, and funding allocated for a pilot project to edit the 1:24,000 National Hydrograph Dataset (NHDH) stream layer. DNR Fisheries sent examples of their PERM agreements with MSU. EGLE needs to enter into its own procurement agreement with MSU.	Memoranda of Understanding between EGLE & MSU were signed last fall. MSU hired their project teams and is in the process of training them. Most of the GIS work for the NHDH editing project is done. The NHDH editing project team had a training session (along w/ a few WUAU staff) with the WRD aquatic biologists who do our perennial vs. non-perennial stream reviews to prepare them for field verification of stream reaches that they identify as potentially being non-perennial. Field work for both pilot projects will happen summer 2021.	
TU 1.2	As soon as an edited version of the NHDH is available, the DEQ should eliminate all intermittent segments and adopt this revised file as the hydrography used by the Program in both the WWAT and during site specific reviews.	HHH	Tied to TU 1.1	The pilot project to edit the 1:24,000 NHDH stream layer will include recommendations on whether and how to implement the editing process regionally or statewide.		
TU 1.3	Recognizing that such an effort could be lengthy, the Council recommends that the DEQ use a phased approach by giving first priority to those regions of the State where the majority of the current water withdrawal registrations have occurred.	HHH	Tied to TU 1.1	The pilot project to edit the 1:24,000 NHDH stream layer will include recommendations on whether and how to implement the editing process regionally or statewide.		
TU 1.3a	Prioritize regions for updating stream linework to 1:24,000 and truncating intermittent stream reaches.	HHH	Tied to TU 1.1	The pilot project to edit the 1:24,000 NHDH stream layer will include recommendations on whether and how to implement the editing process regionally or statewide.		
TU 1.3b	Phased implementation of updating stream linework & truncating intermittent stream reaches.	HHH	Tied to TU 1.1	The pilot project to edit the 1:24,000 NHDH stream layer will include recommendations on whether and how to implement the editing process regionally or statewide.		
TU 2.2	Make the WWAT registration number a required field in Wellogic (and on paper well logs) for high-capacity wells.	HHH	N	Collaboration necessary with EGLE, Drinking Water and Environmental Health Division (DWEHD) and Michigan Ground Water Association (well drillers).	Jim Milne will work on scheduling meeting with EGLE DWEHD (Anita Ladoucer), Buddy Sebastian, and others to discuss	Current work around is tht EGLE WUAU staff can run Wellogic to identify pumps with capacity of over 70 gallons per min. Drinking water does not support this recommended change. Impossible to implement and no support from industry and EGLE. RECOMMEND - Close the recommendation
TU 3.1	The process for checking the compliance of "as built" well construction details with WWAT and/or SSR registrations of groundwater LQWs should be automated. Discrepancies between these should be flagged for follow up by staff.	HHH	N	Compliance review process isn't automated. EGLE staff has geographic information system (GIS) data layers for, and compares, well logs, LQW registrations, and water use reporting data to determine compliance with Part 327 of the NREPA.		Not supported by EGLE DWEHD nor the MGWA. This is labor intensive at this point but EGLE has added staff and is keeping up with issues. RECOMMEND - Closing this recommendation
EM 1.4	When DEQ receives or acquires data of the quality and standards that would prompt the Department to change a Tool parameter for a Watershed Management Area, DEQ should not wait until a registration request triggers an SSR in that Watershed Management Area. The DEQ should incorporate that new data and make any appropriate changes at least bi-annually.	LHL	Plan is complete need funding to implement	Revised index flow values are used by the WWAT, SSR, alternative analyses under Section 32706c, and permit applications under Section 32723. Revised aquifer properties are available for use by SSRs, alternative analyses, and permit application reviews but don't get incorporated into the WWAT.	Once data becomes available need to change parameters used in WWAT. The main example is to update the Index Flow when new data become available, not wait for a SSR request. This can be done now, funding is not required. The Tool data base is automatically updated each time the IF is changed. Changing things like the default aquifer properties are not the target of this recommendation. That is covered by separate proposals the Council put in the most recent recommendation package.	TU 3.2 training will help resolve this issue moving forward.

IL 1.1	DEQ should review, and work with DNR, on the development of protocols and procedures for collecting bathymetric data so that data collected under these standards can be used to develop inland lake and pond maps that include information about lake and pond depth and volume. The Departments should publish and make available to the public these protocols and standards so that non-agency persons can participate in bathymetric data collection for inland lakes and ponds.	HLH	In Progress	Scope of work received, and funding allocated for a pilot project to conduct inland lake bathymetry mapping. The pilot project will use a bathymetry mapping protocol developed by DNR Fisheries Division. DNR Fisheries sent EGLE examples of its PERM agreements with MSU. EGLE needs to enter into a procurement agreement with MSU.	Currently pilot project at MSU field workd being conducted summer 2021 with estimated report winter 2022	
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Data Committee Items

EM 1.2	We recommend the DEQ invest resources to reasonably ensure continuous progress towards filling streamflow measurement data gaps.	HHH	In Progress	Joint funding agreements with USGS to install and operate several stream gages and to collect miscellaneous stream flow measurements at other locations to support the Water Use Program.	Data committee currently working on	
EM 1.1	To ensure prevention of adverse resource impacts, and to reduce potential for water user conflicts, the DEQ should prioritize and invest resources to ensure prompt, adequate and strategic acquisition of stream flow data in high water withdrawal areas or areas of potential conflict.	HHH	In Progress	Doing this now although continued stakeholder input concerning sub-watersheds of concern is welcome. Long-term program funding is needed to continue the operation & maintenance of existing stream gages, install additional stream gages, and to continue collecting miscellaneous stream flow measurements.		
EM 1.5	DEQ should develop a program for streamflow data collection by non-agency persons. This program should provide data collection procedures and guidance, explanation of how the data can be used, provide for training opportunities, and provide for the collection, storage and accessibility of the data collected.	HHH	In Progress	Michigan Clean Water Corps (MiCorps) developed a pilot project in 2016 for volunteer stream flow monitoring project procedures. Continued MiCorps funding uncertain. 3 rd party stream flow monitoring data needs to meet the USGS' data quality standards.	Data committee currently working on	
EM 1.6	The DEQ and DNR should invest in the strategic acquisition of research and/or monitoring to assess the real-world impacts of large-quantity water withdrawals.	HHH	In Progress	The Cass County Pilot Study (completed) and the USGS' study in the Wolf Creek and Skunk Creek watersheds (in their internal agency review process) will partially address this recommendation. Nestle's stream flow and stream temperature data may also be of use. Long-term program funding is needed to replace CMI funding (carried over through FY '20) for additional data collection projects.	Ask Data Committee for status/desire to move forward	
IL 1.2	DEQ should develop training modules through such means as its existing MiCorps program and crowd hydrology projects to encourage citizen participation in lake and pond water level data collection, and ensure that data collection is conducted according to protocols agreed upon by DNR and DEQ for both documenting changes in water levels over time as well as to create bathymetric maps from which mean depth and hypsographic curves can be derived.	HHH	N	No progress	Ask Data Committee for status/desire to move forward	

Models Committee Items

TU 2.1	Modify the WWAT's coding to use the top of bedrock depth from the WWAT's glacial thickness map GIS data layer at the proposed well location instead of using an average top of bedrock depth for the Watershed Management Area.	HHH	N	Top of bedrock depth should be in the Groundwater Inventory Mapping (GWIM) data set as glacial thickness. The Water Withdrawal Assessment Tool (WWAT) needs to be recoded to use the glacial thickness value as top of bedrock in areas that were formerly subject to the bedrock pass.	Ask Models Committee for status/desire to move forward	
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TU 6.1	Work with stakeholders to develop criteria describing site specific data analyses to estimate potential streamflow depletion by a new well. The criteria should specify desired quality assurance and quality control processes for the program.	HHH	In Progress	The Cass County Pilot Study (completed) and the USGS' study in the Wolf Creek and Skunk Creek watersheds (in their internal agency review process) will partially address this recommendation. Nestle's data for their Mecosta and Osceola County withdrawals may also provide some information. EGLE's Water Use Assessment Unit (WUAU) draft aquifer pumping test guidance document was shared with the WUAC for its input.	Ask Models Committee for status/desire to move forward	
EM 2.2	The State should publish its protocols and standards for the collection and use of groundwater data and glacial geology on its public websites.	HLH	In Progress	The Info Guide for LQW is on the Water Use web page. Draft aquifer pumping test guidance was shared with the WUAC for its comments.	Ask Models Committee for status/desire to move forward	

Water Conservation Committee Items

WU 2.1	DEQ should invest resources to produce and maintain an online set of resources (as described in Table WU-2) resource to provide technical, organizational and financial information to water users groups to support the formation and functioning of Water Resources Assessment and Education Committees (WRAECs) and Water Users Committees (WUCs).	HHM	N	No progress by EGLE.	Pat will provide update	
WU 4.1	Financial commitment should be made to support the facilitation of water user group negotiations.	HHH	N	No progress due to budget and staffing limitations.	dependent on WU 2.1	
WC 1.1	Michigan should improve its water use-related data management program. In particular, each water user should design the appropriate data sets in order to track water use, progress on water efficiency and conservation, and develop demand analysis. Development of these data sets must balance the need to be generally applicable to a sector or sub-sector and the ability to be tracked over time with the complexities of the circumstances faced by each particular user. The state-specific outcomes described in Recommendation WC 5.1 can inform the development of these data sets. Ideally, these data sets could be recommended for Great Lakes Basin-wide use.	HLH	N	No progress	Ask Water Conservation group for update/desire to move forward	
WC 2.3	Michigan should improve the administration of its current water conservation requirements. Specifically, the DEQ and MDARD should evaluate the efficacy of current requirements that farms submit conservation plans (if reporting usage to MDARD) and new registrants in Zone C self-certify compliance with generic or sector-specific conservation measures. The efficacy of these requirements should be considered with reference to the current lack of agency follow-up, the potential for and outcomes of actual enforcement of those requirements, and the opportunities provided by the incentive-based program described above.	HLH	In Progress	EGLE, WRD, WUAU compliance staff send compliance communications to property owners who haven't submitted their voluntary self-certifications of compliance with water conservation measures as part of their annual water use reporting or in response to receiving a Zone C SSR authorization.	Ask Water Conservation group for update/desire to move forward	

Completed (or being implemented)

Recommendation						
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WU 1.2	DEQ should establish a process, in advance of any efforts to comprehensively identify large quantity water users, for adding noncompliant large quantity users who have initiated withdrawal since February 28, 2006, without going through the required screening process into the formal list of registered and permitted users. Designing this process will require careful consideration of whether a distinction should be made between those withdrawals initiated prior to October 1, 2008, and those initiated after that date with respect to any decision to require the formal application and screening process to be undertaken by these users.	HLH	Y
WU 1.3	DEQ and MDARD should partner to develop and maintain a system for cross-checking annual water use reports against lists of registered and permitted users to monitor compliance with water use reporting requirements.	HHH	Y

Being addressed in 2020 WUAC Report

Number	Recommendation (Per the December 12, 2014, Final Report)	Impact/ Effort/ Urgency	Implementation Complete? (Y/N/In Progress)
TU 7.1	Work with stakeholders to develop criteria describing the required features of groundwater-flow models to be used in the water-withdrawal assessment process focusing on streamflow depletion.	HHH	Addressed in WUAC 2020 Report
EM 2.1	We recommend a database be created to gather and collate data on glacial geology, static water levels and aquifer characteristics collected by state and federal agencies as well as by universities and private industry. It should utilize a common set of accepted geologic and hydrogeologic terms and fields. Organizations or agencies collecting this data should have the ability to submit information to be entered into the database, and the data submitted shall conform to State program requirements. This database should be publicly viewable.	HHH	Addressed in WUAC 2020 Report
EM 2.4	The DEQ should use high quality data it receives, acquires, or collates from the data submitted to the groundwater database and integrate that data into the SSRs, develop numerical models to better understand the hydrogeology of certain areas, and develop better tools to predict streamflow depletion in those areas. Collection of this data and using updated models can ultimately inform and upgrade the screening tool once sufficient data is collected for the associated Watershed Management Areas.	HHH	Addressed in WUAC 2020 Report
