Water Use Advisory Council 2020 Recommendations

RECOMMENDATIONS TO ADVANCE WATER CONSERVATION

Comments
6/24/2021

1	Advance Michigan's Water Conservation and Efficiency Efforts through State Climate, Energy, and Water Infrastructure Initiatives	Assess current climate, energy, sustainability, and water infrastructure policies and programs to identify gaps and opportunities to incorporate water conservation and efficiency, technological improvements, other state and national programs, and education	$50,000 for one year	In progress. The Office of the Great Lakes is sponsoring a Dow Fellows team of graduate students that is conducting an assessment and preparing a white paper in December 2020 on their findings.
2	Increasing Water Efficiency and Conservation Practices in the Agriculture Industry	Provide funding for two Full-Time Equivalent (FTE) positions through Michigan State University Extension (MSUE) to develop and launch an educational program for agricultural water use efficiency for both plant and animal industries	$600,000 over three years ($200,000 per year)	

RECOMMENDATIONS TO CONTINUE AND IMPROVE CURRENT OPERATIONS AND DATA COLLECTION

1	Michigan Integrated Water Management Database	A database to facilitate geologic and hydrologic data collection and modeling by making current data accessible and available in a common geospatial format	$250,000 over two years ($125,000 each year)	
2	Well Driller Trainings for Improved Data	Information collected for the water withdrawal assessment program depends on accurate and consistent subsurface data input to the Wellogic database submitted by well drillers, who must be trained to accurately identify and submit subsurface and well data	$4,000 over 2 years ($2,000 each year)	
3	U.S. Geological Survey (USGS) and EGLE Streamflow Gages	This program is funded from several local, state and federal sources; however two of the state sources: the Clean Michigan Initiative (CMI) and the Renew Michigan Program, will no longer provide funding after fiscal year 2022 and will need to be replaced	$350,000 annually	

RECOMMENDATIONS FOR NEW OPERATIONS TO IMPROVE DATA COLLECTION AND MODELING

1	Michigan Hydrologic Framework	a. Facilitate the creation of groundwater/surface water models to improve water management decision making through centralized access to up-to-date hydrologic data, comprehensive hydrologic analysis, and other models. The framework will incorporate new data and analysis, and link GIS databases and the Michigan Integrated Water Management Database to help create regional models	d. $2,100,000 over three years ($900,000 in year 1, $700,000 in year 2, and $500,000 in year 3)	
		b. Creates three regional models to more accurately assess water withdrawal impacts within the Framework, and to assess its functionality		
		c. Assess metamodeling processes on a regional model to develop a rapid method to evaluate potential water use impacts		
2	Geologic Data Collection and Mapping in up to 25 targeted areas of Michigan	a. Expands geologic information with data from drilling, soil sampling, seismic and gamma ray logging to produce accurate geological maps, static groundwater levels, and bedrock topography	$3,000,000 annually	SB 488 introduced 5/27/21 by Rep Outman and sent to Senate Appropriations Committee
		b. Michigan Geologic Survey will conduct data collection, which can be used in multiple program areas including the water withdrawal assessment program, PFAS tracking, waste leachate tracking, sand and gravel assessments, and others		
3	Monitoring Well Network	a. Install monitoring wells and join the National Groundwater Monitoring Network	$259,000 for first year and then $226,000 thereafter	
		b. EGLE and U.S. Geological Survey to partner on effort		

RECOMMENDATIONS FOR ADDITIONAL ACTIVITIES TO IMPROVE DATA COLLECTION AND MODELING AS CONTINUED AND NEW OPERATIONS ARE UNDERWAY

1	Long-term planning	Analysis of streamflow, groundwater, and geologic data to identify critical gaps and needs, and identify data collection priorities	$100,000 over two years ($50,000 each year)	
2	Water Withdrawal Assessment Tool (WWAT) user interface update	Display registration information and current status of water management areas	$50,000 single expense in one year	
3	Compiling Key Aquifer Properties for use in the WWAT	Update statewide estimates of transmissivity, and identify water management areas where storage coefficients may be changed to more accurately reflect geologic conditions	$110,000 over two years ($55,000 each year)	

4	3D Glacial Aquifer Mapping in Two Counties	Use transition probability geostatistical mapping in two Michigan counties: Cass and Calhoun, to assess the ability of this mapping process to identify glacial aquifer properties and compare with Geological Survey 3D interpretations	$80,000 over two years ($40,000 each year)	

NEW AND ONGOING ACTIVITIES THAT DO NOT NEED ADDITIONAL STATE FUNDING

1	Develop Water User Committee (WUC) User's Manual	This manual will equip WUCs with information, tools, and resources to develop realistic shared solutions to sustainably manage water use	$250,000 will be provided by the EGLE Office of the Great Lakes through the Michigan Great Lakes Protection Fund to develop this manual and convene one to two WUCs as case studies to inform the manual development	Funded and in progress. EGLE's OGL has cofunded a competitive grant opportunity with Michigan Sea Grant through Sea Grant's Integrated Assessment Research Program to develop the user manual and conduct case studies to refine the manual. OGL is providing 175k and Sea Grant is providing $150,000 in National Oceanic Atmospheric Administration funding. Sea Grant is conducting the review proposal process and will make a final decision on a potential grant award this Fall. If funded, the project will begin February 2022.
2	Develop standards & protocols for collection and use of new data within the program	This process is ongoing with EGLE staff and the Water Use Advisory Council (WUAC)		currently being addressed by data and models committee
3	Well-owner outreach on registration completion requirements	This process is ongoing with EGLE staff and the WUAC		in-process, ongoing education and outreach
4	Continue review and work on Cass County water use pilot study model	This process is ongoing with EGLE staff, partners, and steering and technical committee members for the pilot project		EGLE will provide updates and this study progresses