Water Use Advisory Council 2020 Recommendations									2022	2023	2024	2025	2026	
	WRD Priority Order to Implement				One-time expenses	Ongoing expenses with 5-year totals	Ongoing expenses with 10 year totals	Annual ongoing expense	Year one expense	Year Two Exense	Year Three Expense	Year four Expense	Year five expense	Total Expense
RECOMMENDATIONS TO ADVANCE WATER CONSERVATION														
		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	$50,000				$ 50,000.00					$ 50,000.00
	OGL to administer	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. ******Determine if any of the QOL agencies have existing agreements with MSU Extension that can be modified to include this task.******	$600,000 over three years ($200,000 per year)	$600,000				$ 200,000.00	$ 200,000.00	$ 200,000.00			$ 600,000.00
RECOMMENDATIONS TO CONTINUE AND IMPROVE CURRENT OPERATIONS AND DATA COLLECTION														
		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)	$250,000				$ 125,000.00	$ 125,000.00				$ 250,000.00
		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)	$4,000				$ 2,000.00	$ 2,000.00				$ 4,000.00
	1	U.S. Geological Survey (USGS) and EGLE Streamflow Gages	a. Existing streamflow gages are 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. Current joint funding agreement (JFA) w/ USGS ends 9/30/2024. Costs in cells 9M through 9O reflect additional O&M costs for 2025 & 2026.	$350,000 annually	$350,000	$1,750,000	$3,500,000	Ongoing expense $350,000 annually to support existing streamflow gages	$ 350,000.00	$ 350,000.00	$ 350,000.00	$ 350,000.00	$ 350,000.00	$ 1,750,000.00

	2		b. In the long-term planning recommendation below, a study is recommended to determine where and how many new stream gages are needed to fill gaps in the existing streamflow gage network:a new streamflow gage costs $24,000 to install and $16,000 annually to operate and incorporate the data it collects. This recommendation likely needs up to 20 additional stream gages to adequately cover the State's major watersheds. 9 major watersheds in MI do not have any stream gages and there are many areas that need better definition of their hydrology to accurately run the program. ********Funding for up to 20 gages - placement to be determined but should include depleted watersheds, Zone B cold-transitional or Zone C WMAs.******	$480,000 to install up to 20 new gages; $320,000 annually for O & M for up to 20 new gages;	$480,000	$2,080,000		Ongoing expense $320,000 annually for up to 20 new gages	$800,000	$ 320,000.00	$ 320,000.00	$ 320,000.00	$ 320,000.00	$2,080,000
RECOMMENDATIONS FOR NEW OPERATIONS TO IMPROVE DATA COLLECTION AND MODELING														
	3	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)	$2,100,000			Ongoing operations and maintenance of network and models, approx. $36,000 annually	$ 900,000.00	$ 700,000.00	$ 500,000.00	$ 36,000.00	$ 36,000.00	$ 2,172,000.00
	3		b. Creates three regional models to more accurately assess water withdrawal impacts within the Framework, and to assess its functionality.											
	3		c. Assess metamodeling processes on a regional model to develop a rapid method to evaluate potential water use impacts.											
		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. 25 priority counties are estimated to be able to be finished in 10 years. *******Funded by PA 53 - ongoing $3M annually******	$3,000,000 annually	$3,000,000	$15,000,000	$30,000,000	Ongoing expense $3,000,000 annually - to receive funding from USGS, minimum $500,000 of this total annually is needed from *state* funding resource as a match (can't match federal funds with federal funds) - see below	$ -	$ -	$ -	$ -		$ -
		Monitoring Well Network	a. USGS to propose a scope of work for installing additional monitoring wells and adding groundwater elevation and/or groundwater quality data to the National Groundwater Monitoring Network. EGLE & USGS to enter into a new joint funding agreement (JFA).	$259,000 for first year and then $226,000 thereafter	$259,000	$1,163,000	$2,293,000	Ongoing expense $226,000 annually	$ 259,000.00	$ 226,000.00	$ 226,000.00	$ 226,000.00		$ 937,000.00

	4		b. EGLE to apply for a grant from USGS to have Michigan become a new data provider to the National Ground Water Monitoring Network by submitting groundwater elevation and/or groundwater quality data from monitor wells at EGLE regulated facilities into the National Ground Water Monitoring Network.	Project budget being developed for EGLE's grant application to become a new data provider to the NGWMN. If approved, grant funding should be for 2 years.										
RECOMMENDATIONS FOR ADDITIONAL ACTIVITIES TO IMPROVE DATA COLLECTION AND MODELING AS CONTINUED AND NEW OPERATIONS ARE UNDERWAY														
		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)	$100,000				$ 50,000.00	$ 50,000.00				$ 100,000.00
		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	$50,000				$ 50,000.00					$ 50,000.00
		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)	$110,000				$ 55,000.00	$ 55,000.00				$ 110,000.00
	5	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)	$80,000				$ 40,000.00	$ 40,000.00				$ 80,000.00
		Well Logic log Digitalization and database population	Michigan Geologic Survey to finish digitalization and database population	$1.7 M neeeded to finish project over two years, $1M to come from WUAC	$1,700,000				$ 1,700,000.00					$ 1,700,000.00
				TOTAL:	One-time costs	One-time costs plus 5 years of ongoing costs	One-time costs plus 10 years of ongoing costs	Ongoing annual expenses (including if the State wishes to continue the MGS geologic mapping project beyond its initial 25 priority areas)						
					$9,133,000	$29,126,000	$44,926,000	$4,400,800	$ 4,581,000.00	$ 2,068,000.00	$ 1,596,000.00	$ 932,000.00	$ 706,000.00	$ 9,883,000.00

$ 10,000,000.00

All funds must be enumbered by 12/31/2024 and used by 12/31/2026

Remaining $ 117,000.00