

HF3004 - 0 - Centralized Aquifer-Property Database

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 Committee: **Environment And Natural Resources Finance And Policy**
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 Agency: **Natural Resources Dept**

State Fiscal Impact	Yes	No
Expenditures	X	
Fee/Departmental Earnings		X
Tax Revenue		X
Information Technology	X	
Local Fiscal Impact		X

This table shows direct impact to state government only. Local government impact, if any, is discussed in the narrative. Reductions shown in the parentheses.

State Cost (Savings)	Biennium			Biennium		
	Dollars in Thousands	FY2021	FY2022	FY2023	FY2024	FY2025
General Fund	-	-	421	-	-	-
Total	-	-	421	-	-	-
Biennial Total			421			-

Full Time Equivalent Positions (FTE)	Biennium			Biennium	
	FY2021	FY2022	FY2023	FY2024	FY2025
General Fund	-	-	2.5	-	-
Total	-	-	2.5	-	-

LBO Analyst's Comment

I have reviewed this fiscal note for reasonableness of content and consistency with the LBO's Uniform Standards and Procedures.

LBO Signature: Jim Carlson **Date:** 2/25/2022 2:40:45 PM
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State Cost (Savings) Calculation Details

This table shows direct impact to state government only. Local government impact, if any, is discussed in the narrative. Reductions are shown in parentheses.

*Transfers In/Out and Absorbed Costs are only displayed when reported.

State Cost (Savings) = 1-2		Biennium			Biennium	
Dollars in Thousands		FY2021	FY2022	FY2023	FY2024	FY2025
General Fund	-	-	-	421	-	-
Total		-	-	421	-	-
Biennial Total				421		
1 - Expenditures, Absorbed Costs*, Transfers Out*						
General Fund	-	-	-	421	-	-
Total		-	-	421	-	-
Biennial Total				421		
2 - Revenues, Transfers In*						
General Fund	-	-	-	-	-	-
Total		-	-	-	-	-
Biennial Total				-		

Bill Description

HF3004-0 provides funding for completion of the centralized aquifer-property database.

Assumptions

The bill refers to the authoritative database of aquifer test information collected in the state of Minnesota. It is called the Minnesota Aquifer Properties Database (MNAP). An interagency group of groundwater specialists and geologists began work on it in 2014 and the design was completed in 2018. The Department of Natural Resources was chosen as host and caretaker for the data, the database and the web application. Collaborators include Department of Health, Pollution Control Agency, Met Council (interested in data for use as part of an update for the groundwater model of the metropolitan area), the University of Minnesota (for use in a recharge study) and the U.S. Geological Survey (for groundwater modeling).

We assume that this legislation is intended to speed up the entry of aquifer test information into the database and to complete development of the web interface to allow Minnesotans easier access to aquifer properties for site characterization.

Additionally, we interpret this as a request to complete work within FY23, and assume an intensive effort to do so.

What is there to do?

As of February 2022:

- Available aquifer test data sets = 1,655 tests.
- 442 tests have been entered into the database.
- 858 tests are ready to be entered.
- 338 tests are not yet ready to be entered. Either the information tying the data to the local geology must be reviewed or the test needs to be analyzed with standard techniques to make sure that the resultant aquifer property information is representative of the aquifer. Of these, 101 require aquifer identification based on information about the wells used for the test, and 237 need to be analyzed.
- 17 tests are complex and need expert analysis.
- Prepare the database contents for public use by removing non-public data (public water supply well location data and non-public information about individuals whose wells were included in or the subject of the tests).
- Aquifer test reports produced before the accessibility standard was adopted in 2018 must be checked for accessibility.

- Add features to the data entry interface (duplicate removal, list alphabetization, data quality toggles and an improved search function) to make data entry easier and faster.
- Prepare a user-friendly public-side web interface so Minnesotans can search for and download information on their own.

At what rate are we getting it done?

- During FY21 we were able to invest 0.5 FTE and enter 228 tests.
- Expert level geologic and hydrogeologic staff have not been available due to drought activities and major projects. Negligible progress on analysis is being made.
- None of the reports have been reviewed for non-public data and older reports have not been checked for accessibility.
- With current resources it will take about 6 more years to clear the backlog. Thereafter, test information will be entered and the database will be maintained as part of the DNR's and MNIT's normal work.

How can we accomplish the rest of the work faster?

We can apply the following resources:

- One FTE senior hydrogeologist dedicated to aquifer test analysis and mentorship of newer hydrogeologist- 'analysts in training'.
- One and a half FTE junior hydrogeologists dedicated to learning about aquifer test analysis and reporting, while entering test data together with the 0.5 FTE currently in place.
- Additional resources to MNIT developers in the amount of \$30,000 for database refinements to aid data entry and \$95,000 to prepare the public-facing web interface.

Expenditure and/or Revenue Formula

One FTE of a skilled senior-level hydrogeologist would cost \$137K, given the high skill level required for this work.

One and a half FTE new hydrogeologists would cost [1.5 * \$106K] = \$159K

MNIT costs are estimated by reviewing requirements with IT supervisors to determine how many hours they'd need to invest to make the improvements. Overall the cost will be \$125,000: approximately \$30,000 for changes to make data entry easier and faster, and \$95,000 to develop a user-friendly public interface.

Long-Term Fiscal Considerations

The database will be added to the technology assets of the DNR, and ongoing maintenance and occasional upgrades will become part of what EWR must budget for on an ongoing basis.

Local Fiscal Impact

None

References/Sources

None

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