Noncommunity Public Water Supply Assessment Report For

MACKINAW MILL CREEK WELL-4 **WSSN: 2034316** **Source ID: 1**

What is SWAS?

The Source Water Assessment Score (SWAS) is a process that factors geologic and water well attributes, water chemistry, and the potential contaminant sources for each drinking water source into a ranking system to determine the relative potential for contamination. Generally, sources with lower scores are considered to be less susceptible to contamination than sources with higher scores. However, exceptions do exist. This assessment is required by the Michigan Source Water Assessment Program (SWAP) under the provisions of the 1996 amendments to the Federal Safe Drinking Water Act.

WSSN: 2034316 **Source ID:** 1

County: CHEBOYGAN

Contact

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City: MACKINAW CITY
State/Zip: MI 49701

Well Log and Location

A well log is a legal document describing the well location, construction, depth, soil formations penetrated, and capacity. Drilling contractors have been required to complete a well log and submit it to the owner, local health department, and State since 1967. The lack of information from a well log may increase the SWAS. Wellogic is an electronic database for well log information.

Well Log Available: N
Entered in Wellogic: N
Wellogic ID Number:

Geologic Sensitivity

This score represents the degree of natural protection afforded by the materials overlying the water-bearing formation. Lower scores indicate more protection. Points are deducted based on the thickness and type of geologic material that overlies the source of water. Surface contaminants migrate downward at varying rates dependent upon geological material and thickness. CCM stands for Continuous Confining Material (eg. clay). CPCM stands for Continuous Partially Confining Material (eg. mix of sand and clay). More points are deducted for a thick clay layer than a thick sand layer or a thinner clay layer. Point Range 0-30.

Geologic Sensitivity - SWAS(G)

CCM Points Deducted:	0
CPCM Points Deducted:	0
Total SWAS(G) Points:	**30**

Geologic Sensitivity Rating: ***High***

Well Construction

Points are added when a well lacks features that help protect the water supply from contamination. These include whether the well was grouted (sealing the annulus that is created between the casing and the soil formations during construction), the well age, how deep the casing extends into the ground, and how much water the well pumps, since larger volumes can pull contaminants from greater distances. Point Range 0-15.

Susceptibility increases one level if well construction reflects an adverse condition.

Well Construction - SWAS(W)

Well Grouting Points:	15
Well Age Points:	10
Casing Depth Points:	10
Pumping Rate Points:	0
Total SWAS(W) Points:	**35**

☐ Update Date: #Name? Entry Date: #Name?

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Water Chemistry and Isotope Data

Points are added if water sample results indicate detectable levels of nitrates or nitrites, volatile organic chemicals (solvents, fuel components), and/or synthetic organic chemicals (pesticides or herbicides). Tritium monitoring is included as a voluntary means of age-dating water. Generally, the older the water, the more protected the source. Point Range 0-50. (50 points = MCL violation)

Susceptibility is Very High if contaminants exceed the Maximum Contaminant Level (MCL).

Water Chemistry and Isotope Data - SWAS(C)

Nitrates and Nitrites:	0
SOC.VOC:	5
Tritium Results:	0

Total SWAS(C) Points: 5

Isolation from Sources of Contamination

Points are added based on the number and type of potential contaminant sources within the isolation distance (75 ft. from standard or 800 ft. from major contaminant sources). Examples of standard sources are septic tanks, sewer lines, and storm drains. Examples of major sources are chemical and fuel storage, landfills, lagoons, and known plumes of groundwater contamination.

Isolation from Contamination - SWAS(S)

Major Sources from 75 - 800 ft:	0	x 10	=	0
Major Sources within 75 ft:	0	x 20	=	0
Standard Sources within 75 ft:	1	x 10	=	10
Known Sources within 800 ft:	0	x 25	=	0

Total SWAS(S) Points: 10

Source Water Assessment Score (SWAS)

The total SWAS is factored with the Geologic Sensitivity to determine the overall susceptibility to contamination.

Source Water Assessment Score - SWAS

30	+	35	+	5	+	10	=	80
SWAS(G)		SWAS(W)		SWAS(C)		SWAS(S)		SWAS

Susceptibility Determination

Susceptibility is a means to identify the relative potential of contamination for public water supply sources.

Susceptibility Determination

Based on the above compilation of source geology, well construction, water chemistry, and potential contaminant sources, this public drinking water supply is determined to have a Susceptibility Rating of:

High

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