

**NONVULNERABLE
WELLHEAD PROTECTION PLAN EXTENSION**
for

*Empire Township
PWS ID #1190009*

*Wellhead Protection Plan Evaluation
Updated Implementation Table*

This plan extension is in effect from:
2022 to Year 2032

Empire Township Wellhead Protection Plan Evaluation

A. Documentation of the implementation of wellhead protection measures.

Implementation activities are included in the attached document. The highlighted measures have been completed, and the date completed is indicated in red font.

B. Additional Financial Resources

Have you taken advantage of local, state, or federal financial resources (such as Well Sealing Grants, SWP Grants, Clean Water Fund Grants or LCCMR funds) to help you implement your wellhead protection plan? YES NO

C. List problems and difficulties you have had with plan implementation.

Are there budget or staff constraints which are hindering implementation efforts? YES NO
Comments:

Do you lack the authority or expertise to implement some WHP Plan strategies? YES NO
Comments:

Have you experienced difficulties in working cooperatively with federal, state, or local agencies to protect your drinking water? YES NO
Comments: Implementation of plan action measure D-2 was attempted, but MNDOT staff prevented the placement of WHP signage.

Empire Township

Updated Wellhead Protection Plan Implementation Table

WHP Measure #	Description	Objective	Priority (Optional)	Responsible Party & Cooperators	Estimated Cost	Implementation Time Frame										
						2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
A-1	WHP Measure: Continue to collect and record water level data from the municipal supply wells	Obtain an accurate record of aquifer levels which will assist in updating the WHPP.	Low	Township Staff	Staff Time	X	X	X	X	X	X	X	X	X	X	X
A-2	WHP Measure: Analyze tritium samples from the supply wells.	Tritium analysis will assist the township in updating their WHPP.	Low	MDH. Township Staff	Staff Time										X	
B-3	WHP Measure: Update the IWMZ with an evaluation of existing potential contaminant sources as well as new potential contaminant sources.	Reduce the potential for contamination within the IWMZ.	High	Township Staff	Staff Time				X						X	

WHP Measure #	Description	Objective	Priority (Optional)	Responsible Party & Cooperators	Estimated Cost	Implementation Time Frame									
						2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
C-1	WHP Measure: Contact owners and well drillers of unused/unsealed wells to obtain information on depth to determine the potential for contamination.	Obtain information on unsealed/unused wells.	High	Township Staff Well Drillers Home Owners	Staff Time	A	S		N	E	E	D	E	D	
C-2	WHP Measure: Send letters to designated residents requesting information on their private wells.	Obtain information from residents that are likely to have wells that were not found during the PCSI.	Medium	Township Staff Home Owners	Staff Time & Postage	A	S		N	E	E	D	E	D	
C-3	WHP Measure: Update the PCSI as new wells are drilled or as other potential contaminant sources are discovered.	Maintain accuracy of the WHPP.	Medium	Township Staff	Staff Time	A	S		N	E	E	D	E	D	

WHP Measure #	Description	Objective	Priority (Optional)	Responsible Party & Cooperators	Estimated Cost	Implementation Time Frame									
						2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
C-5	WHP Measure: Seal all unused wells within the DWSMA. Prioritize sealing of wells based on information collected regarding the depth and size of any unused wells.	Reduce the contamination potential of sources discovered during the PCSI.	High	Township Staff Dakota County Owners	Variable, depending on well (\$800-\$1500)	A	S		N	E	E	D	E	D	
C-6	WHP Measure: Contact Dakota County requesting assistance with the problem of residents drilling wells in the DWSMA without permits.	Reduce the number of private wells being drilled without permits.	Medium	Township Staff Dakota County	Staff Time		X								
D-1	WHP Measure: Provide periodic billing inserts and information on the Township website that educate the public on wellhead protection.	Educate the public on the importance of wellhead protection.	High	Township Staff City Engineer	Staff Time & Postage	X	X	X	X	X	X	X	X	X	X

WHP Measure #	Description	Objective	Priority (Optional)	Responsible Party & Cooperators	Estimated Cost	Implementation Time Frame										
						2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
E-1	WHP Measure: Review the progress made in the implementation of the WHPP. Address goals that were not met and reevaluate implementation schedule for remainder of plan period.	Ensure proper implementation of the WHPP.	Medium	Township Staff City Engineer	Staff Time				X			X				X
F-1	WHP Measure: Work with the township engineer to evaluate future land development and its possible impacts on the WHPA.	Ensure future land use does not negatively impact the drinking water supply.	Low	Township Staff City Engineer	Staff & Engineer Time	A	S		N	E	E	D	E	D		

Attachment A--

Record of WHP Plan Implementation Activities

Record of WHP plan action measures implemented by Empire Township.

Table 10 - WHP Plan of Action

A. DATA COLLECTION:

Description	Objective	Priority	Responsible Party & Cooperators	Cost	Implementation Time Frame										
					2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
WHP Measure (A-1): Continue to collect and record water level data from the municipal supply wells.	Obtain an accurate record of aquifer levels which will assist in updating the WHPP.	Low	Township Staff	Staff Time	Every year										
					X	X	X	X	X	X	X	X	X	X	X
WHP Measure (A-2): Analyze tritium samples from the supply wells.	Tritium analysis will assist the township in updating their WHPP	Low	Township Staff, MDH	Staff Time	2021										
															X

Table 10 - WHP Plan of Action - Continued

C. POTENTIAL CONTAMINATION SOURCE MANAGEMENT:

Description	Objective	Priority	Responsible Party & Cooperators	Cost	Implementation Time Frame													
					2012	2013	2014	2015	2016	2017	2018	2019	2020	2021				
WHP Measure (C-1): Contact owners and well drillers of unused/unsealed wells to obtain information on depth to determine the potential for contamination.	Obtain information on unsealed/unused wells.	High	Township Staff, Well Drillers, Home Owners	Staff Time		August 2013 X												
WHP Measure (C-2): Send letters to designated residents requesting information on their private wells.	Obtain information from residents that are likely to have wells that were not found during the PCSI.	Medium	Township Staff & Home Owners	Staff Time/ \$100		August 2013 X												
WHP Measure (C-3): Update the PCSI as new wells are drilled or as other potential contaminant sources are discovered.	Maintain accuracy of the WHPP.	Medium	Township Staff	Staff Time/ \$1,000- \$2,000 in yearly Eng. Fees.		X	X	X	X	X	X	X	X	X	X	X	X	X
WHP Measure (C-4): Apply for grant money to assistance residents in sealing unused wells.	Encourages sealing of unused wells by taking the financial burden off of residents.	Medium	Township Staff/ Dakota County	Staff Time		November 2013 X												

Table 10 - WHP Plan of Action - Continued

Description	Objective	Priority	Responsible Party & Cooperators	Cost	Implementation Time Frame									
					2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
WHP Measure (C-5): Seal all unused wells within the DWSMA. Prioritize sealing of wells based on information collected regarding the depth and size of any unused wells.	Reduce the contamination potential of sources discovered during the PCSI.	High	Township Staff, Dakota County, Owners	Varies depending on well size and depth (\$800-\$1500)			X	X	X	X	X			
WHP Measure (C-6): Contact Dakota County requesting assistance with the problem of residents drilling wells in the DWSMA without permits.	Reduce the number of private wells being drilled without permits.	Medium	Township Staff/ Dakota County	Staff Time		X								

Table 10 - WHP Plan of Action - Continued

D. PUBLIC EDUCATION AND OUTREACH:

Description	Objective	Priority	Responsible Party & Cooperators	Cost	Implementation Time Frame										
					2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
WHP Measure (D-1): Provide periodic billing inserts and information on the Township website that educate the public on wellhead protection.	Educate the public on the importance of wellhead protection	High	Township Staff & Engineer	Staff time + \$100			X	X	X	X	X	X	X	X	X
WHP Measure (D-2): Provide signage along the main entrance corridors to alert the public that they are entering the Wellhead Protection Area.	Raise awareness of the Empire Township Wellhead Protection Area	Medium	Township Staff	Staff time + \$500		X									

E. REPORTING AND EVALUATION:

Description	Objective	Priority	Responsible Party & Cooperators	Cost	Implementation Time Frame										
					2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
WHP Measure (E-1): Review the progress made in the implementation of the WHPP. Address goals that were not met and re-evaluate implementation schedule for remainder of plan period.	Ensure proper implementation of the WHPP	Medium	Township Staff & Engineer	Staff time											

Table 10 - WHP Plan of Action - Continued

F. LAND USE MANAGEMENT:

Description	Objective	Priority	Responsible Party & Cooperators	Cost	Implementation Time Frame										
					2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
<p>WHP Measure (F-1): Work with the township engineer to evaluate future land development and its possible impacts on the WHPA.</p>	<p>Ensure future land use does not negatively impact the drinking water supply.</p>	<p>Low</p>	<p>Township Staff & Engineer</p>	<p>Staff/Engineer time</p>	<p>As Needed</p>					<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>	<p>X</p>