2018

City of New Germany, MN
WELLHEAD PROTECTION PLAN

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CLEAN WATER LAND & LEGACY AMENDMENT

MN RURAL WATER ASSOCIATION

MINNESOTA MDH DEPARTMENT OF HEALTH

Introduction—

This document presents the wellhead protection (WHP) plan for the City of New Germany that will help provide for an adequate and safe drinking water supply for community residents. It contains the following components:

- Assessment of the data elements used to prepare the plan;
- Delineation of the wellhead protection area;
- Delineation of the drinking water supply management area;
- Assessments of well and drinking water supply management area vulnerability;
- Impact of land and water use changes on the public water supply well used by the water supplier;
- Issues, problems, and opportunities affecting the well, well water, and the drinking water supply management area;
- Wellhead protection goals for this plan;
- Objectives and plan of action for achieving the wellhead protection goals;
- Evaluation program for assessing the effectiveness of this plan; and
- Contingency strategy to address an interruption of the water supply.

Water Supply Wells Included in This Plan

Unique Number	Well Name or Number	Use/Status
748660	Well 2	Primary

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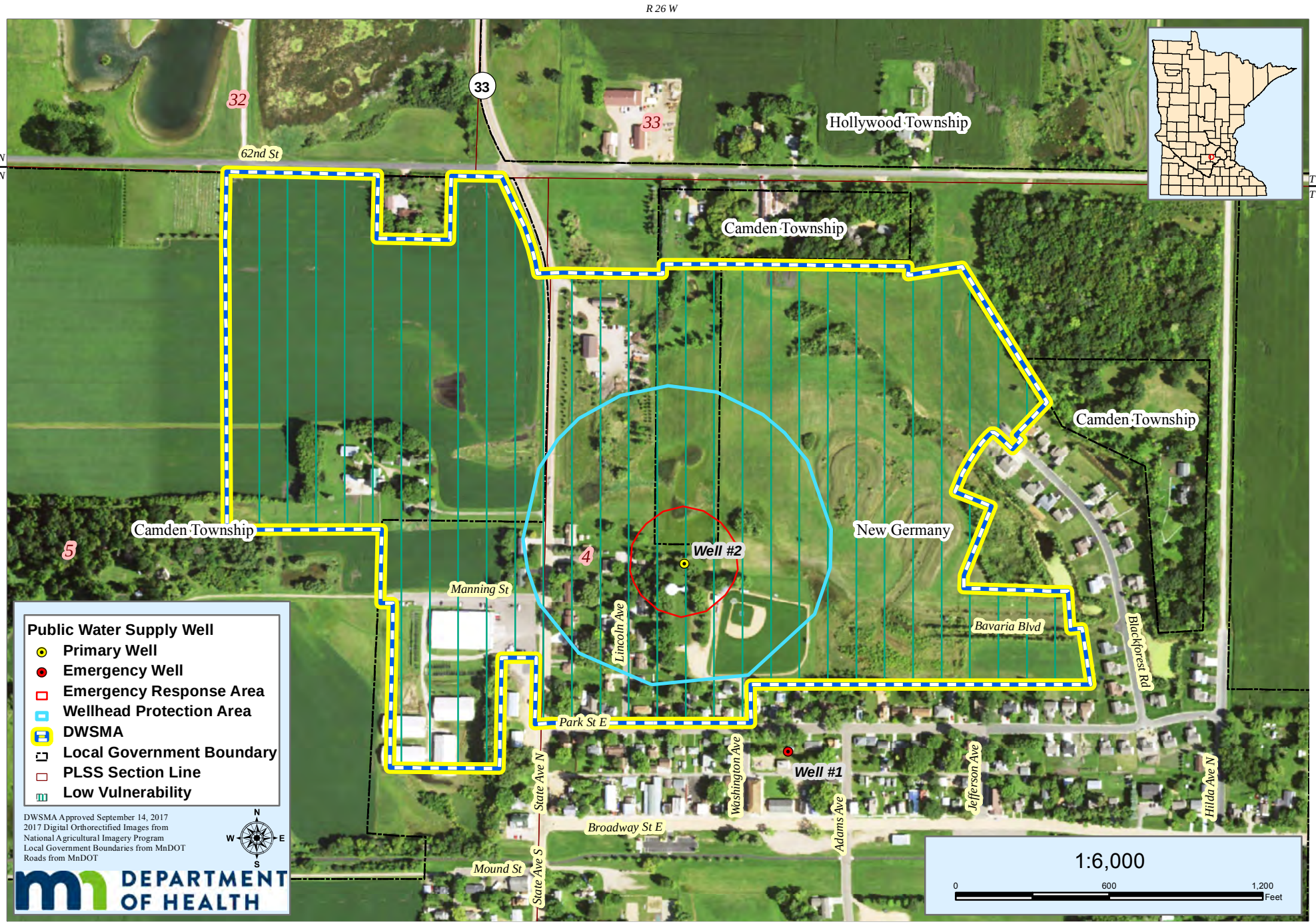
New Germany
Carver County
Minnesota

New Germany Drinking Water Supply Management Area (DWSMA) MN-01001 - Low Vulnerability

FIGURE 1

Minnesota Department of Health
Environmental Health
Source Water Protection Unit



Chapter 1 - Introduction

1.1 Background

The wellhead protection (WHP) plan for the City of New Germany was prepared in cooperation with the Minnesota Department of Health (MDH) and the Minnesota Rural Water Association. It contains specific actions that the city will take to fulfill WHP requirements that are specified under Minnesota Rules, part 4720.5100 to 4720.5590. Also, the support that Minnesota state agencies, federal agencies, Carver County, and others will provide is presented to identify their roles in protecting the city's drinking water supply. The plan is effective for 10 years after the approval date specified by MDH and the city is responsible for implementing its WHP plan of action, as described in Table 8 of this report. Furthermore, the city will evaluate the status of plan implementation at least every two-and-one-half years to identify whether its WHP plan is being implemented on schedule.

1.2 Plan Appendices

Much of the technical information that was used to prepare this plan is contained in the appendices but is summarized in the main body of this plan. In particular:

- Appendix I contains information relating to the required data elements and the assessment of data elements. The data elements required to be assessed were indicated in the MDH scoping 2 document.
- Appendix II contains the delineation of the wellhead protection area (WHPA), the drinking water supply management area (DWSMA), and the vulnerability assessments for the public water supply wells and the DWSMA. This part of the plan is summarized in Chapter 3.
- Appendix III contains the inventory of potential contamination sources for the entire DWSMA and for the Inner Wellhead Management Zone. This inventory is discussed in Chapter 4 in terms of assigning risk to the city's water supply and is also discussed in Chapter 6, relating to issues, problems or opportunities.
- Appendix IV contains the contingency strategy to provide for an alternate water supply if there is a disruption caused by contamination or mechanical failure. This information is discussed in Chapter 11.

Chapter 2 - Identification and Assessment of the Data Elements Used to Prepare the Plan

The city met with representatives from MDH on two occasions to discuss required data elements that are specified in Minnesota Rules, part 4720.5400, for preparing a WHP plan. The first scoping meeting, held on April 18, 2016 addressed the data elements that were needed to support the delineation of the WHPA, the DWSMA, and the well and DWSMA vulnerability assessments. The second scoping meeting, held on December 5, 2017, discussed the data elements to be assessed for the purpose to 1) identify potential risks, and issues, problems and opportunities to the public water supply and 2) develop effective management strategies to protect the public water supply source. The results of each meeting were communicated to the city by MDH through a formal scoping decision notice and the information contained in the Scoping 2 Notice are presented in Appendix I relating to data elements and assessment.

Each data element is required to be assessed for its impact on 1) the use of the public water supply well, 2) delineation of the WHPA, 3) the quality and quantity of water supplying the public water supply wells, and 4) land and groundwater uses within the DWSMA. Presented in Appendix I is information about the availability of information regarding each data element and the results of assessing each data element relative to the overall impact each data element may have on the four items listed above.

The availability of the information relating to each data element that is used in this plan was assessed by the Minnesota Department of Health, MRWA technical staff, and the City of New Germany. During the assessment process the City of New Germany, Minnesota Department of Health and MRWA staff 1) reviewed the completeness of the information available relating to each data element that is used in this plan and 2) determined if a data element is considered an issue, concern or opportunity that the City of New Germany can address in this plan.

The data elements specified by the MDH relating to the **physical environment** are considered sufficient to provide an adequate assessment. No concerns or issues have been identified with these data elements. The assessment of the data elements relating to **land use** identified the following:

- Land in the northwestern portion of the DWSMA is mostly undeveloped, though the property is platted and municipal utility service has been brought out to the area. The undeveloped property may be developed with single or multi-family housing over the next 10 years.

Finally, the data elements relating to **water quantity and quality** are considered sufficient to provide an adequate assessment. The city depends primarily on one well (Well 2, Unique #748660), with an additional well (Well #1) that functions as the emergency back-up well. Water quality and quantity has not been an issue for the city, to date.

Actions needed to address identified issues, concerns or opportunities as a result of the data element assessment process are included in the plan of action (Chapter 9). Not all of the data elements listed in the WHP rule had to be addressed in the WHP plan because of the non-vulnerable nature of the city's source of drinking water.

Chapter 3 - Delineation of the Wellhead Protection Area, Drinking Water Supply Management Area and Vulnerability Assessments

A detailed description of the process used for 1) delineating the WHPA and the DWSMA, and 2) preparing the vulnerability assessments of the city water supply well and DWSMA is presented in Appendix II. The Public Water Supplier requested that MDH do this work and it was performed by John Woodside, Hydrologist, MDH and James Lundy, P.G., MDH Hydrologist who is a licensed geoscientist by the State of Minnesota.

3.1 WHPA and DWSMA Delineation

Figure 1 shows the boundaries of the WHPA and the DWSMA. The WHPA was delineated using computer simulations of groundwater movement to generate the underground capture zones for city Well 2 (Unique #748660). Figure 1 also indicates the political boundaries of the City of New Germany and Camden Township. The DWSMA boundaries were designated using the following criteria:

- Center-lines of highways, streets, roads, or railroad right-of ways,
- Public Land Survey coordinates, and
- Property ownership (parcel) boundaries (Figure 2) or fence lines.

3.2 Well Vulnerability Assessment

The construction and water quality obtained from the primary well used by the Public Water Supplier is included in the assessment of well vulnerability. The vulnerability of the city well is considered low, or non-vulnerable, because the well is adequately sealed into the borehole and does not pump water that contains human-caused contaminants.

3.3 DWSMA Vulnerability Assessment

The low vulnerability assigned to the DWSMA (Figure 1) was determined using geologic, soils, and groundwater chemistry information and indicates that at least 10 feet of clay-rich geological material covers the source water aquifer.

Chapter 4 - Establishing Priorities and Assigning Risk to Potential Contamination Sources

The low vulnerability determination for the DWSMA results in a focus for the potential contaminant source inventory of wells between 261 to 480 feet in depth of the open interval or screened section of the well and wells of undocumented or unknown depths, other types of boreholes or excavations that may reach the aquifer, and certain types of Environmental Protection Agency Class V Wells.

4.1 Contaminants of Concern

None of the human-caused contaminants regulated under the federal Safe Drinking Water Act have been detected at levels indicating that any well itself serves to draw contaminants into the aquifer as a result of pumping.

4.2 Inventory Results and Risk Assessment

A thorough search for wells of the above description was completed by referencing information from the Minnesota Well Index (MWI), MDH public well disclosure database, MDH Old Municipal Well Inventory report, and city records/local knowledge. To the best of the WHP team's knowledge, no other wells besides the city's own municipal Well #2 exists in the DWSMA that meet the description required (between 261 to 480 feet in depth). There was one active domestic well identified to be in the eastern part of the DWSMA, but the well was much shallower than the above criteria and was not included in the inventory.

The WHP team was also required to determine locations of potential Class V wells within the protection area, at request of the USEPA Region 5. After consulting EPA records and local knowledge, no such wells are thought to be located in the protection area.

Table 1 - Potential Contamination Sources and Assigned Risk for DWSMA

Potential Source Type	Total Number	Number Within Emergency Response Area and Level of Risk		Number Within Remainder of the DWSMA and Level of Risk	
Municipal Well	1	1	L	0	--
Wells 261 – 480 feet deep, or of unknown depth	0	0	--	0	--
Class V Well	0	0	--	0	--

Land within the DWSMA is within the City of New Germany and Camden Township jurisdiction (Figure 1). Land use within the DWSMA currently consists of residential uses, agricultural production, industrial, commercial and business, and park land (refer to Figure 3 and 4). The current uses appear to coincide with the designated zoned use of the properties (refer to Figure 5 and 6). Furthermore, the Carver County Comprehensive Land Use Plan to 2030 predicts very little population within the City of New Germany (refer to Figure 7). The properties within the NE portion of the DWSMA are already platted and planned for residential housing, and municipal utilities are readily accessible.

The areas 200 feet around city well #2, or the Inner Wellhead Management Zone (IWMZ) was also surveyed to determine whether there are potential sources of contamination that may cause acute health

effects. The survey indicates that there are municipal sanitary utility lines in this area. All sanitary lines are located such that they meet set back distances from wells identified in the Minnesota Well Code regulations. Also, these sanitary lines would not generally be considered problematic relative to the city's drinking water quality due to the protected nature of the aquifer that the city utilized for drinking water provided that they and the city's well remain in good repair.

Chapter 5 - Impact of Land and Water Use Changes on the Public Water Supply Well(s)

Changes to the physical environment, land use, surface water, and groundwater that may occur over the 10-year period that the WHP plan is in effect are indicated in Table 2 as well as 1) the influence that existing governmental land and water programs and regulations may have on the anticipated change, and 2) administrative, technical, and financial considerations of the Public Water Supplier and property owners within the DWSMA.

Table 2 - Expected Land and Water Use Changes

Expected Change (Physical Environment, Land Use, Surface Water, Groundwater)	Impact of the Expected Change On the Source Water Aquifer	Influence of Existing Government Programs and Regulations on the Expected Change	Administrative, Technical, and Financial Considerations Due to the Expected Change
Physical Environment: No change is anticipated.	Does Not Apply	Does Not Apply	Does Not Apply
Land Use: (1) There may be additional wells constructed in or near the city's DWSMA (though somewhat unlikely) that have the ability to impact the city's wells.	(1)The newly constructed wells may impact the static water level of the aquifer, or may influence the direction of ground water flow resulting in alterations of the city's WHPA and/or DWSMA.	(1) The MDH Well Management Unit and MNDNR Appropriations Unit commonly work cooperatively to determine the impacts of proposed high capacity wells on WHP areas and existing municipal wells.	(1) The city should remain in contact with the MDH and DNR in the event that a high capacity well is proposed for construction in the DWSMA, or within 1 mile of the DWSMA boundary. No additional administrative, technical, or financial consideration will result from this potential change.
(2) The undeveloped land in the eastern portion of the DWSMA may be developed over the next 10 years into single-family or multi-family housing.	(2) While residential housing slightly increases any likelihood for contamination of the public water supply source, this land use is much less intensive than other possibilities that would be more problematic for groundwater protection purposes.	(2) The undeveloped land most likely to be developed during the life of this plan is within jurisdiction of the City of New Germany. The city has adequate ordinances to address issues that may arise during development, and municipal utilities have already been extended to the area in anticipation of future development.	(2) The city feels that it currently has adequate land use controls through its zoning ordinance to direct land use changes in the DWSMA to reduce risk of contamination to the city's drinking water aquifer. No additional costs should be associated with this concern because the activities fall within the established policies and procedures currently observed by city staff. No additional administrative or technical considerations are necessary at this time.
Surface Water: No change is anticipated.	Does Not Apply	Does Not Apply	Does Not Apply
Groundwater: Residential housing units may be constructed in the eastern portion of the DWSMA.	Additional residential housing units and drinking water system users will increase demand on the city's municipal drinking water supply.	The city's existing zoning ordinance and utility ordinance are adequate to ensure that these properties will be connected to the city's municipal utility system.	The city's existing municipal utility infrastructure will support the connection of the additional projected residential properties. Current water treatment and water storage are adequate. There will be no additional costs due to the WHP program associated with the addition of these properties to the city's municipal utilities.

Chapter 6 - Issues, Problems, and Opportunities

6.1 Identification of Issues, Problems and Opportunities

The City of New Germany has identified water and land use issues and problems and opportunities related to 1) the aquifer used by the city water supply well, 2) the quality of the well water, or 3) land or water use within the DWSMA. The city assessed 1) input from public meetings and written comments it received, 2) the data elements identified by MDH during the scoping meetings, and 3) the status and adequacy of the city's official controls and plans on land and water uses, in addition to those of local, state, and federal government programs. The results of this effort are presented in the following table, which defines the nature and magnitude of contaminant source management issues in the city's DWSMA. Identifying issues, problems and opportunities, including resource needs, enables the city to 1) take advantage of opportunities that may be available to make effective use of existing resources, 2) set meaningful priorities for source management and 3) solicit support for implementing specific source management strategies.

6.2 Comments Received

There have been several occasions for local governments, state agencies, and the general public to identify issues and comment on the city's WHP plan. At the beginning of the planning process, local units of government were notified that the city was going to develop its WHP plan and were given the opportunity to identify issues and comment. A public information meeting was held to review the results of the delineation of the wellhead protection area, DWSMA, and the vulnerability assessments. The meetings of the city's wellhead protection team were open to the public. Also, a public hearing was held before the completed WHP plan was sent to MDH for state agency review and approval. No comments from the public were received during the comment period or hearing.

Table 3 - Issues, Problems, and Opportunities

Issue Identified	Impacted Feature	Problem Associated with the Identified Issue	Opportunity Associated with the Identified Issue	Adequacy of Existing Controls to Address the Issue
(1) There is the slight potential for wells to be constructed in the DWSMA that pump water from the same aquifer as the city's wells (wells between 261 ft. to 480 ft. in depth).	Aquifer DWSMA	The City has no authority over the construction and pumping rates for newly constructed high capacity wells. Also, these wells may alter the WHPA boundary and provide a pathway for pollutants to enter into the aquifer.	The City will need to work closely with Carver County, the MDH SWP Unit and the DNR-Waters Unit in the identification of new high capacity wells which might be drilled within the DWSMA or 1 mile of the DWSMA boundaries and their potential impact on the WHPA boundaries. The Carver County Water Management Plan may include language that states the County's intention to work cooperatively with other entities that are pursuing the sealing of unused/unsealed wells, and may have funding available to assist with the sealing costs.	Current local and state rules are considered adequate insofar as allowing private wells to be constructed according to construction codes and setbacks. But, state rules do not consider drinking water wells as a land use and therefore, well ownership and usage cannot be controlled by a LGU.
(2) There may be land use changes from undeveloped land to residential land use within the DWSMA.	Aquifer	(2)) Properties developed in the DWSMA will be connected to city utilities which will increase the treated water demand.	(2) The current capacity of the water system is adequate to service the anticipated additional residences.	(2) The development of the land in the DWSMA will ensure that, long term, will be a low impact land use that will not likely to result in increased risk of contamination for the city's drinking water well. The demand on the city's drinking water supply utility will increase, but the system is currently able to meet the projected increased demand.
(3) There is the slight possibility that an unused/unsealed well may be discovered within the DWSMA.	Aquifer Water Quality DWSMA	(3) The city needs to locate unused and unsealed wells and assess which wells present a risk to the drinking water aquifers based upon their depth, construction, and state of repair.	(3) The city can partner with Carver County and/or the MN Department of Health grant programs to help property owners pay for the costs of properly sealing unused wells.	(3) The city does not have authority to require that unused/unsealed wells be sealed. Searching for unused/unsealed wells may become a demand on city staff time and financial resources. The MDH may require the sealing of unused/unsealed wells.

Chapter 7 - Existing Authority and Support Provided by Local, State, and Federal Governments

In addition to its own controls, the City of New Germany will rely upon partnerships formed with local units of government, state agencies, and federal agencies with regulatory controls or resource management programs to help implement its WHP plan.

7.1 Existing Controls and Programs of the Public Water Supplier

Table 4 shows the legal controls for the management of potential contamination sources within the DWSMA.

Table 4 - Controls and Programs of the Public Water Supplier

Type of Control	Program Description
Land Use Zoning Ordinance	Provides an opportunity to require performance standards to offset potential risk posed by a land use.
Utility Ordinance	Provides the city authority to regulate the connection to- and use of- city's water and waste water utility.
Comprehensive Land Use Plan	A public process that defines goals and objectives to achieve a city's vision. Land use plans and zoning maps, when consistent with a comprehensive plan, can protect the health, welfare and safety of community residents.

7.2 Local Government Controls and Programs

The following departments or programs within Carver County may be able to assist the city with issues relating to potential contamination sources that 1) have been inventoried or 2) may result from changes in land and water use within the DWSMA:

Table 5 - Local Agency Controls and Programs

Government Unit	Name of Control/Program	Program Description
Carver County	(1) Emergency Management (2) Land Use, Comprehensive Planning	(1) Directs the response and the extent of initial clean-up of fuel, chemical, or other hazardous substances that are released due to transportation accidents. (2) A public process that defines goals and objectives to achieve the county's vision. Land use plans and zoning maps, when consistent with a comprehensive plan, can protect the health, welfare and safety of community residents. The Carver County 2030 Comprehensive Plan is found at: https://www.co.carver.mn.us/home/showdocument?id=590
Carver County Water Management Organization (CCWMO)	Carver County Water Management Plan	Establishes countywide goals and priorities towards protecting water resources and administers a cost share program for implementation of water protection activities. The plan's Groundwater chapter : https://www.co.carver.mn.us/home/showdocument?id=638

7.3 State Agency and Federal Agency Support

MDH will serve as the contact for enlisting the support of other state agencies on a case-by-case basis regarding technical or regulatory support that may be applied to the management of potential contamination sources. Participation by other state agencies and the federal government is based on legal authority granted to them and resource availability. Furthermore, MDH 1) administers state regulations that affect specific potential sources of contamination and 2) can provide technical assistance to property owners to comply with these regulations.

The following table (Table 6) identifies the specific regulatory programs or technical assistance that state and federal agencies may provide to the Public Water Supplier to support implementation of the WHP plan. It is likely that other opportunities for assistance may be available over the 10-year period that the plan is in effect due to changes in legal authority or increases in funding granted to state and federal agencies. Therefore, the table references opportunities available when the city's WHP plan was first approved by MDH.

Table 6 - State and Federal Agency Controls and Programs

Government Unit	Type of Program	Program Description
MDH	State Well Code (Minnesota Rules, Chapter 4725)	MDH has authority over the construction of new wells and the sealing of wells. MDH staff in the Well Management Program offer technical assistance for enforcing well construction codes, maintaining setback distances for certain contamination sources, and well sealing.
MDH	Wellhead Protection Program (Minnesota Rules, part 4720.5100 to 4720.5590)	MDH has staff that will help the city identify technical or financial support that other governmental agencies can provide to assist with managing potential contamination sources.
DNR	Water appropriation permitting (Minnesota Rules, Chapter 6115)	DNR can require that anyone requesting an increase in existing permitted appropriations, or to pump groundwater, must address concerns regarding the impacts to drinking water if these concerns are included in a WHP plan.
U.S. EPA Region 5	Class V Injection Well Program (40 Code of Federal Regulations 144, Subpart G)	Automatic closure of Class 5 automotive waste disposal wells in WHPA, inventory of all Class V wells, regulatory authority (permitting) of large-capacity septic systems serving 2 or more households, or 20 or more people per day.

7.4 Support Provided by Nonprofit Organizations

The Minnesota Rural Water Association will assist the City of New Germany with implementing its WHP plan by providing 1) reference education and outreach materials for land owners, 2) technical support for implementing individual WHP action items listed in the plan, and 3) assisting the city with assessing the results of plan implementation.

Chapter 8 - Goals

Goals define the overall purpose for the WHP plan, as well as the end points for implementing objectives and their corresponding actions. The WHP team identified the following goals:

A. ***To promote public health, economic development and community infrastructure by ensuring a potable drinking water supply for all residents of the community.***

B. ***Maintain the current level of drinking water quality which meets or exceeds all state and federal standards.***

C. ***Provide ongoing collection of data to support future wellhead protection efforts.***

Chapter 9 - Objectives and Plan of Action

Objectives provide the focus for ensuring that the goals of the WHP plan are met and that priority is given to specific actions that support multiple outcomes of plan implementation.

Both the objectives and the wellhead protection measures (actions) that support them are based on assessing 1) the data elements (Chapter 2 and Appendix I), 2) the potential contaminant source inventory (Chapter 4, Appendix III), 3) the impacts that changes in land and water use present (Chapter 5) and 4) issues, problems, and opportunities referenced to administrative, financial, and technical considerations (Chapter 6).

9.1 Objectives

The following objectives have been identified to support the goals of the WHP plan for the City of New Germany:

1. Create public awareness and general knowledge about the importance of WHP for ensuring an adequate and safe drinking water supply;
2. Collect additional information that is needed to support management of potential contamination sources, assessment of the adequacy of management measures, and future update of the wellhead protection plan;
3. Serve as an example to others by effectively managing the potential contamination sources that the City of New Germany owns or operates;
4. Develop capabilities with other governmental units to manage priority contamination sources that present the greatest risk to the community's drinking water supply;
5. Assess the effectiveness of the measures that are contained in the City's wellhead protection plan.

9.2 WHP Measures and Action Plan

Based upon the above factors, the WHP team has identified WHP measures that will be implemented by the city over the 10-year period that its WHP plan is in effect. The objective that each measure supports is noted as well as 1) the lead party and any cooperators, 2) the anticipated cost for implementing the measure and 3) the year or years in which it will be implemented.

The following categories are used to further clarify the focus that each WHP measure provides, in addition to helping organize the measures listed in the action plan:

- Data Collection
- IWMZ Management
- Land Use Management
- Potential Contamination Source Management
- Public Education and Outreach
- Reporting and Evaluation
- Water Use and Contingency Strategy

9.3 Establishing Priorities

WHP measures reflect the administrative, financial, and technical requirements needed to address the risk to water quality or quantity presented by each type of potential contamination source. Not all of these measures can be implemented at the same time, so the WHP team assigned a priority to each. A number of factors must be considered when WHP action items are selected and prioritized (part 4720.5250, subpart 3):

- Contamination of the public water supply wells by substances that exceed federal drinking water standards.
- Quantifiable levels of contamination resulting from human activity.
- The location of potential contaminant sources relative to the wells.
- The number of each potential contaminant source identified and the nature of the potential contaminant associated with each source.
- The capability of the geologic material to absorb a contaminant.
- The effectiveness of existing controls.
- The time needed to acquire cooperation from other agencies and cooperators.
- The resources needed, i.e., staff, money, time, legal, and technical resources.

The Public Water Supplier defines a priority for implementing a WHP measure as an action that will have a substantial impact, either direct or indirect, on the reduction of the risk of contamination of the city's drinking water supply by human-caused activity. The following table lists each measure that will be implemented over the 10-year period that the city's WHP plan is in effect, including the priority assigned to each measure.

Table 7 - WHP Plan of Action

DATA COLLECTION:

Description	Objective	Priority	Responsible Party & Cooperators (if not the City)	Cost	Implementation Time Frame									
					2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
WHP Measure (1): The city will continue to search for the existence of wells in the DWSMA by (1) remaining aware of local conditions, and (2) performing a search on the Minnesota Well Index Online database. The MWI online application can be found at : **http://www.health.state.mn.us/divs/eh/cwi/**	2	X		Staff Time	●	●	●	●	●	●	●	●	●	●
WHP Measure (2): The city will continue to cooperate with the MDH in completing the Federal Safe Drinking Water Act testing requirements. Review test results for indications of water quality degradation.	2, 3, 4		MDH	Staff Time	●	●	●	●	●	●	●	●	●	●
WHP Measure (3): Upon the condition that an abandoned or unused/unsealed well is found to exist within the DWSMA, the city may consider evaluating potential funding sources to assist the property owner with the costs of sealing the well.	3	X		Staff Time			AS NEEDED							
WHP Measure (4): City staff will contact the MDH hydrologist, planner, or MRWA planner to coordinate the collection of water samples from Well 2 (#748660) for Tritium and other isotopic analysis at the discretion of the MDH hydrologist. The sampling is contingent on funding assistance from MDH for sampling and analysis, however the city may be asked to collect the samples and ship them to MDH.	2		MDH	Staff time						●				

Table 7 - WHP Plan of Action - Continued

IWMZ MANAGEMENT:

Description	Objective	Priority	Responsible Party & Cooperators (if not the City)	Cost	Implementation Time Frame									
					2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
WHP Measure (5): The city will request guidance from MDH/MRWA staff when new potential contaminant sources are proposed within the IWMZ to ensure that setback distances in the MN Well Code for new potential contamination sources are met.	3, 4	X	MDH/MRWA Planner	Staff Time	A	S		N	E	E	D	E	D	
WHP Measure (6): The city will implement measures that are specified in both the MDH sanitary survey report, Element #1 "Water Source" section and the IWMZ surveys as the city becomes aware of the information.	3	X		Staff Time/ Costs Unknown	A	S		N	E	E	D	E	D	
WHP Measure (7): City staff will assist with updating IWMZ potential contamination source inventory every 5 to 6 years, or as directed by MDH staff. Cooperate with MDH staff or MRWA planner**.**	3, 4		MDH or MRWA Staff	Staff Time					●					●

Table 7 - WHP Plan of Action - Continued

LAND USE MANAGEMENT:

Description	Objective	Priority	Responsible Party & Cooperators (if not the city)	Cost	Implementation Time Frame									
					2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
WHP Measure (8): The city will send a map of the DWSMA along with a cover letter to the Carver County Planning Department to request that changes to land use in Camden Township in the DWSMA consider the groundwater protection priorities of the New Germany Wellhead Protection Plan.	2, 4	X		Staff Time	•									

Table 7 - WHP Plan of Action - Continued

PUBLIC EDUCATION AND OUTREACH:

Description	Objective	Priority	Responsible Party & Cooperators (if not the city)	Cost	Implementation Time Frame									
					2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
WHP Measure (9): The city will provide a brochure to the public with information that describes the goals and objectives of the city's WHP program. The brochure will be placed on the city's website, and copies will be kept for distribution at city hall. MRWA will develop the brochure and provide the electronic file to the city.	1		MRWA staff		•									
WHP Measure (10): The city will provide a link to the MDH publication, *The Well Owner's Handbook*, on the city's web site. The publication is currently found at the following address: http://www.health.state.mn.us/divs/eh/wells/construction/handbook.pdf	1		MRWA staff		•									

Table 7 - WHP Plan of Action - Continued

EVALUATION AND REPORTING:

Description	Objective	Priority	Responsible Party & Cooperators (if not the city)	Cost	Implementation Time Frame									
					2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
WHP Measure (11): City staff will prepare an assessment of WHP plan implementation efforts a minimum of every 2.5 years. Contact MRWA or MDH planner for assistance with completion of this action.	**5**		MRWA or MDH Planner	Staff Time			●			●			●	
WHP Measure (12): City staff will summarize all WHP plan implementation efforts in a report to MDH in the 7th year. Contact MRWA or MDH planner for assistance with completion of this action.	**5**	X	MRWA or MDH Planner	Staff Time								●		

Table 7 - WHP Plan of Action - Continued

WATER USE AND CONTINGENCY STRATEGY:

Description	Objective	Priority	Responsible Party & Cooperators (if not the city)	Cost	Implementation Time Frame									
					2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
WHP Measure (13): City staff will review and update the entire WHP water supply contingency plan every 5 years. Request assistance from MRWA planner or MDH planner.	**5**	X	MRWA/MDH Planner	Staff Time					●					●
WHP Measure (14): City staff will review and update the city and local contact sections of the WHP water supply contingency plan annually to reflect changes in city staff and the results of local elections.	**5**	X	MRWA/MDH Planner	Staff Time	●	●	●	●	●	●	●	●	●	●
WHP Measure (15): The city will explore the benefits of becoming members of the mutual aid organization, MnWARN.	**5**	X		Staff Time	●									

Chapter 10 - Evaluation Program

Evaluation is used to support plan implementation and is required under Minnesota Rules, part 4720.5270, prior to amending the city's WHP plan. Plan evaluation is specified under Objective 5 and provides the mechanism for determining whether WHP action items are achieving the intended result or whether they need to be modified to address changing administrative, technical, or financial resource conditions within the DWSMA. The city has identified the following procedures that it will use to evaluate the success with implementing its WHP plan:

1. The WHP team will meet, at a minimum, every two-and-one-half years to assess the status of plan implementation and the results of each action item that has been taken to determine whether the action item has accomplished its purpose, or whether modification is needed. The WHP team will also identify issues that impact the implementation of action steps throughout the DWSMA. A briefing of the assessment results will be provided to the city council, and a copy of the report will be sent to MDH as documentation of implementation.
2. The city will prepare a written report that documents how it has assessed plan implementation and the action items that were carried out. The report will be presented to MDH at the first scoping meeting held with the city to begin amending the WHP plan.

Chapter 11 – Water Supply Contingency Plan

The WHP plan includes a Water Supply Contingency Plan that addresses disruption of the water supply caused by either contamination or mechanical failure. The contingency strategy was developed using a template provided by MDH. The Water Supply Contingency Plan is presented in Appendix IV of this plan.

Chapter 12 - Glossary of Terms

Data Element. A specific type of information required by the Minnesota Department of Health to prepare a wellhead protection plan.

Drinking Water Supply Management Area (DWSMA). The surface and subsurface areas surrounding a public water supply well, including the wellhead protection area, that must be managed by the entity identified in the wellhead protection plan. (Minnesota Rules, part 4720.5100, subpart 13). This area is delineated using identifiable landmarks that reflect the scientifically calculated wellhead protection area boundaries as closely as possible.

Emergency Response Area (ERA). The part of the wellhead protection area that is defined by a one-year time of travel within the aquifer that is used by the public water supply well (Minnesota Rules part 4720.5250, subpart 3). It is used to set priorities for managing potential contamination sources within the DWSMA.

Emergency Standby Well. A well that is pumped by a public water supply system only during emergencies, such as when an adequate water supply cannot be achieved because one or more primary or seasonal water supply wells cannot be used.

Inner Wellhead Management Zone (IWMZ). The land that is within 200 feet of a public water supply well (Minnesota Rules, part 4720.5100, subpart 19). The public water supplier must manage

the IWMZ to help protect it from sources of pathogen or chemical contamination that may cause an acute health effect.

Primary Water Supply Well. A well that is regularly pumped by a public water supply system to provide drinking water.

Vulnerability. Refers to the likelihood that one or more contaminants of human origin may enter either 1) a water supply well that is used by the public water supplier or 2) an aquifer that is a source of public drinking water.

WHP Area (WHPA). The surface and subsurface area surrounding a well or well field that supplies a public water system, through which contaminants are likely to move toward and reach the well or well field (Minnesota Statutes, part 103I.005, subdivision 24).

WHP Plan Goal. An overall outcome of implementing the WHP plan, e.g., providing for a safe and adequate drinking water supply.

WHP Measure. A method adopted and implemented by a public water supplier to prevent contamination of a public water supply, and approved by the Minnesota Department of Health under Minnesota Rules, parts 4720.5110 to 4720.5590.

WHP Plan Objective. Strategies or implementation steps to attain the identified goals. Unlike goals, objectives are specific, measurable, and have a defined completion date. They are more specific and outline the "who, what, when, where, and how" of reaching the goals.

Chapter 13 – References

Carver County Water Management Plan (2010), go to
https://www.co.carver.mn.us/departments/public-services/planning-water-management/planning/plans/water-management-plan

Carver County 2040 Comprehensive Plan (2010), go to:
https://www.co.carver.mn.us/home/showdocument?id=590

Chapter 14 – FIGURES

New Germany
Carver County
Minnesota

New Germany Drinking Water Supply Management Area (DWSMA) MN-01001 - Low Vulnerability

FIGURE 1

Minnesota Department of Health
Environmental Health
Source Water Protection Unit

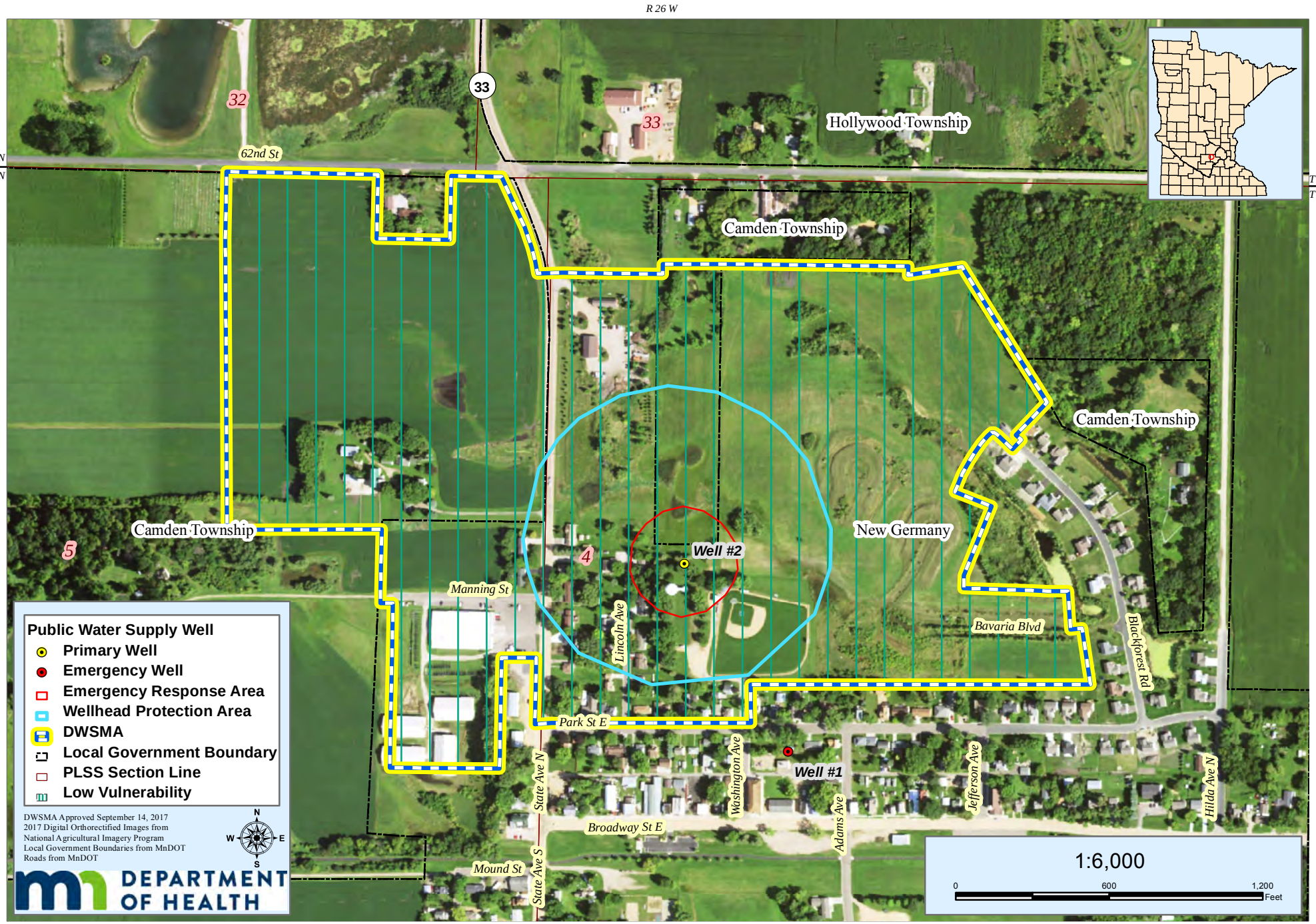


FIGURE 2

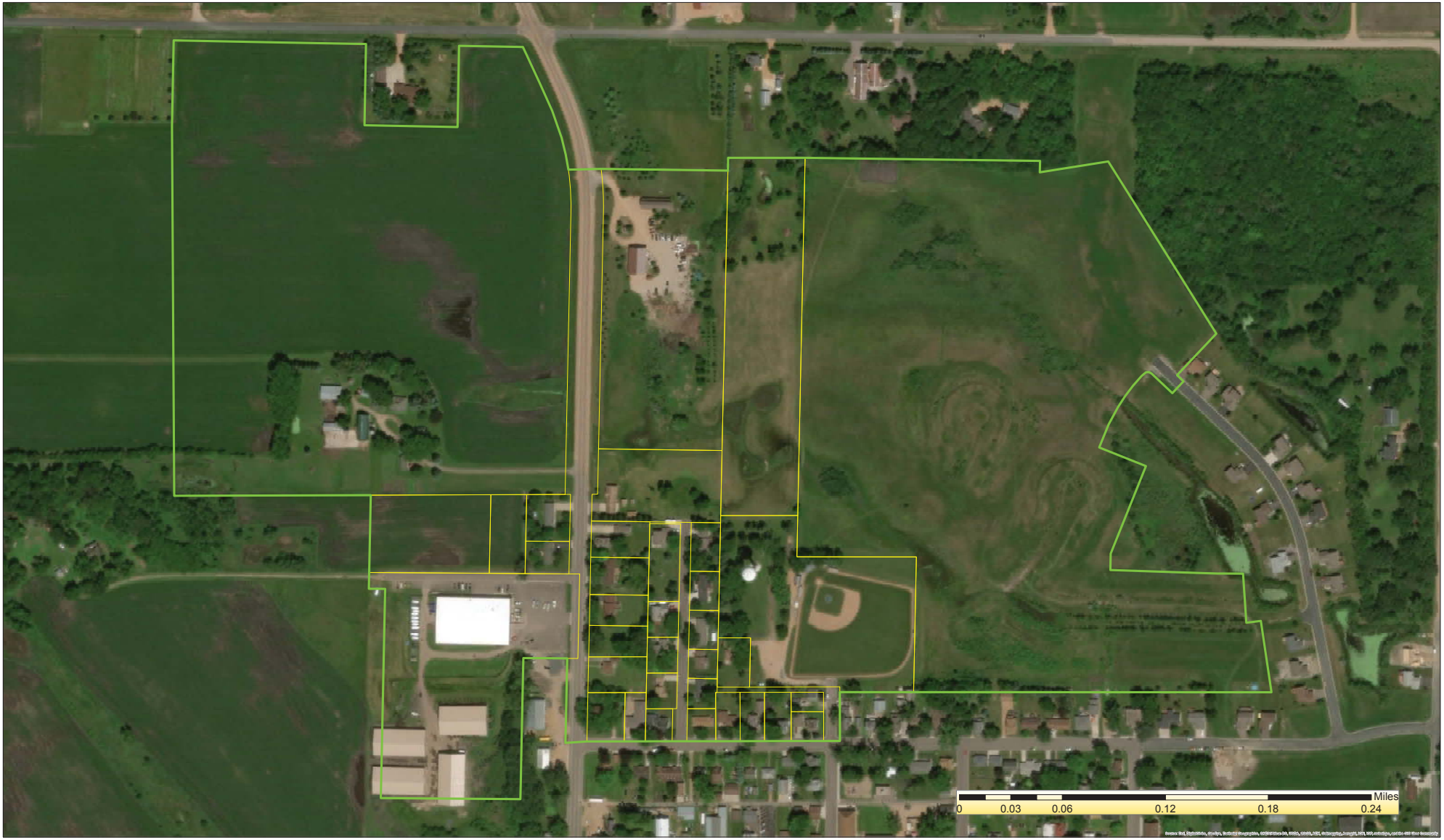
City of New Germany
Parcel Boundary Map

Legend

DWSMA

Parcel

N
W E
S



New Germany
Carver County
Minnesota

New Germany Drinking Water Supply Management Area (DWSMA) MN-01001 - Land Use 2016

FIGURE 3

Minnesota Department of Health
Environmental Health
Source Water Protection Unit

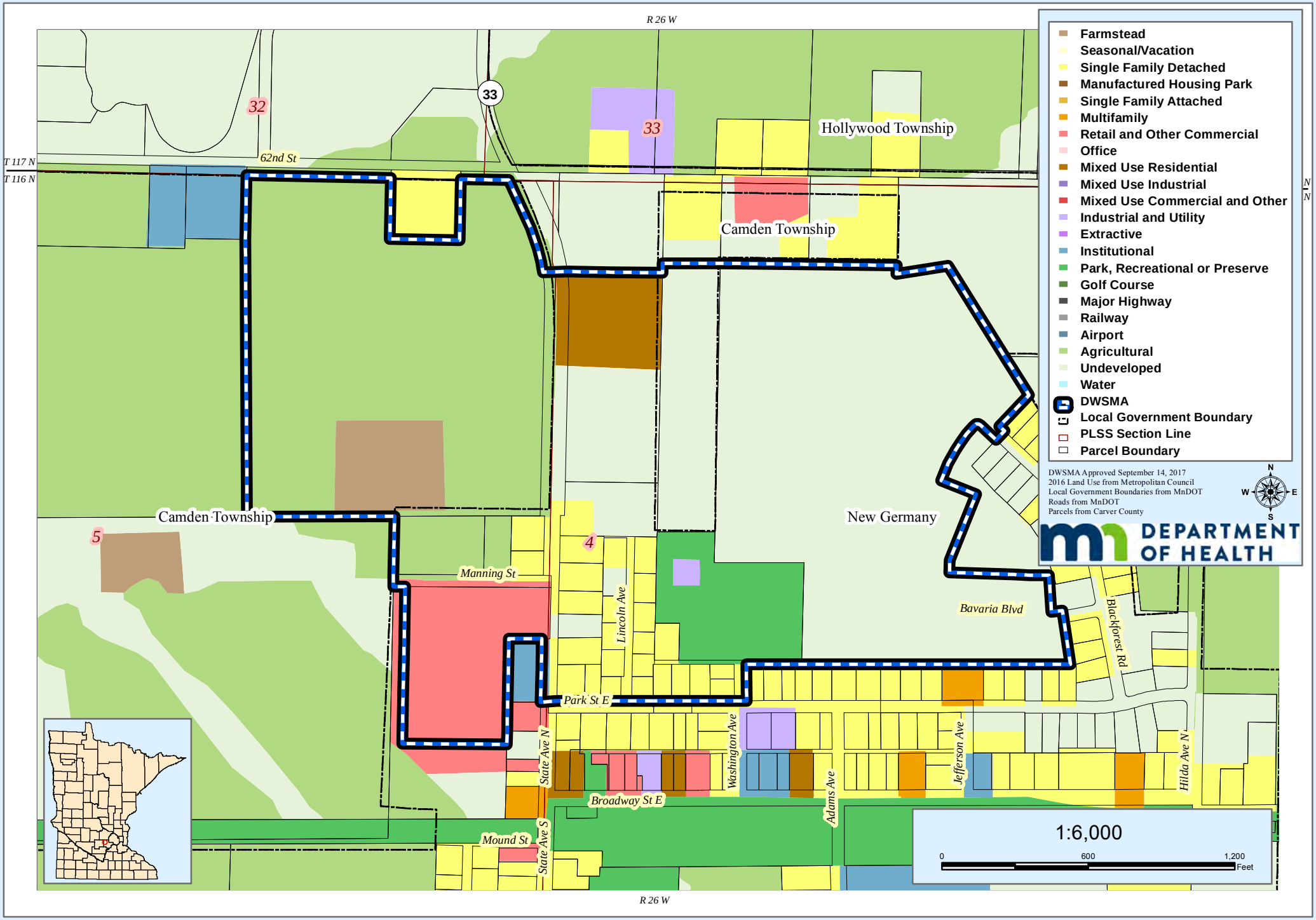
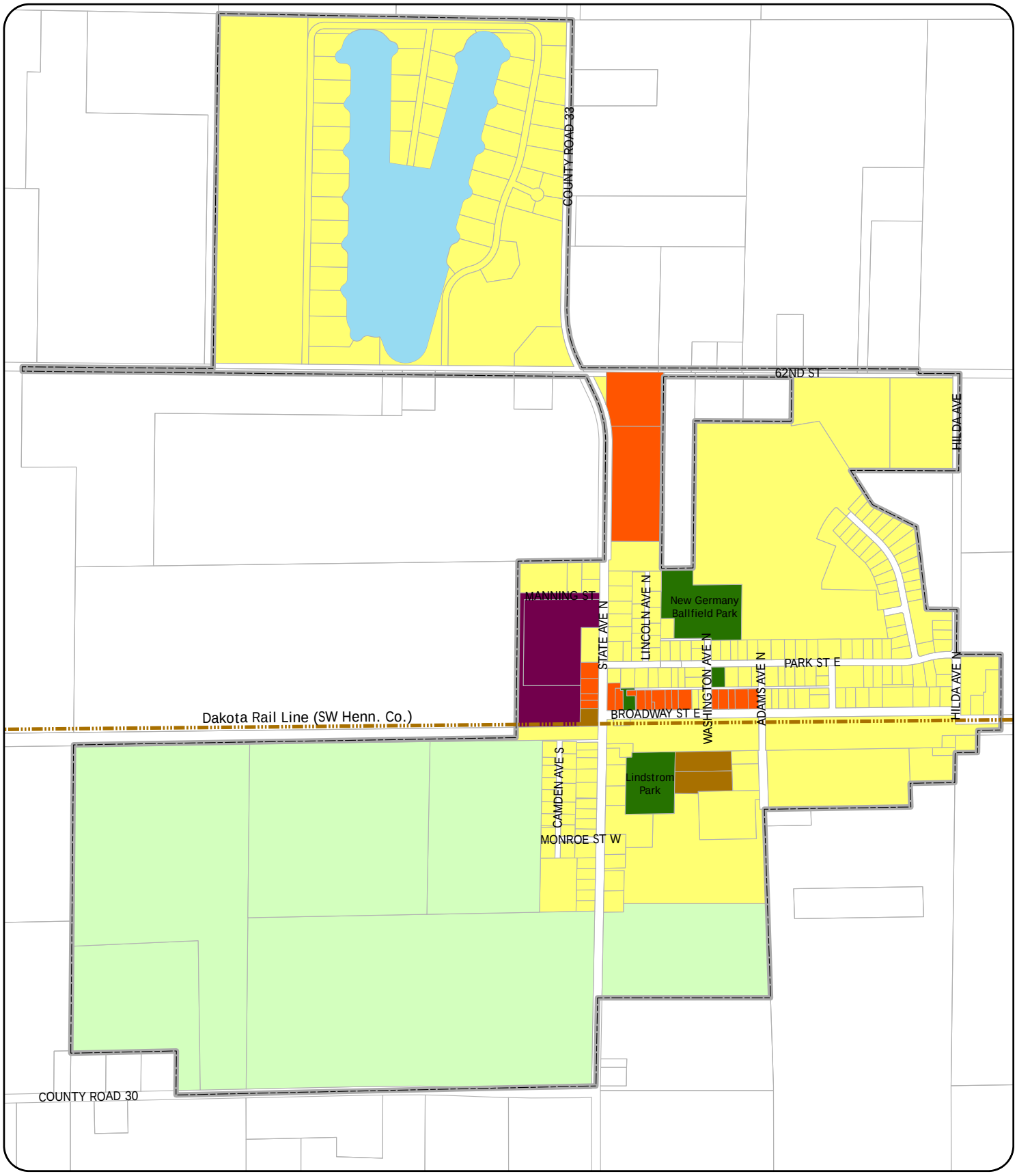


FIGURE 4--New Germany DWSMA Land Use (2016) Data

LAND USE (2016)	ACRES	PERCENTAGE
Agricultural	37	31
Farmstead	4	3
Single Family Detached	9	8
Retail and Other Commercial	8	7
Mixed Use Residential	4	3
Park-Recreational-Preserve	6	5
Undeveloped	52	43
TOTAL	**120**	



Zoning Districts

- A - Agricultural District
- R-1 Single Family Residential District
- R-2 Duplex/Townhouse/Multi-Family District
- B - Business/Commercial District
- I - Industrial District

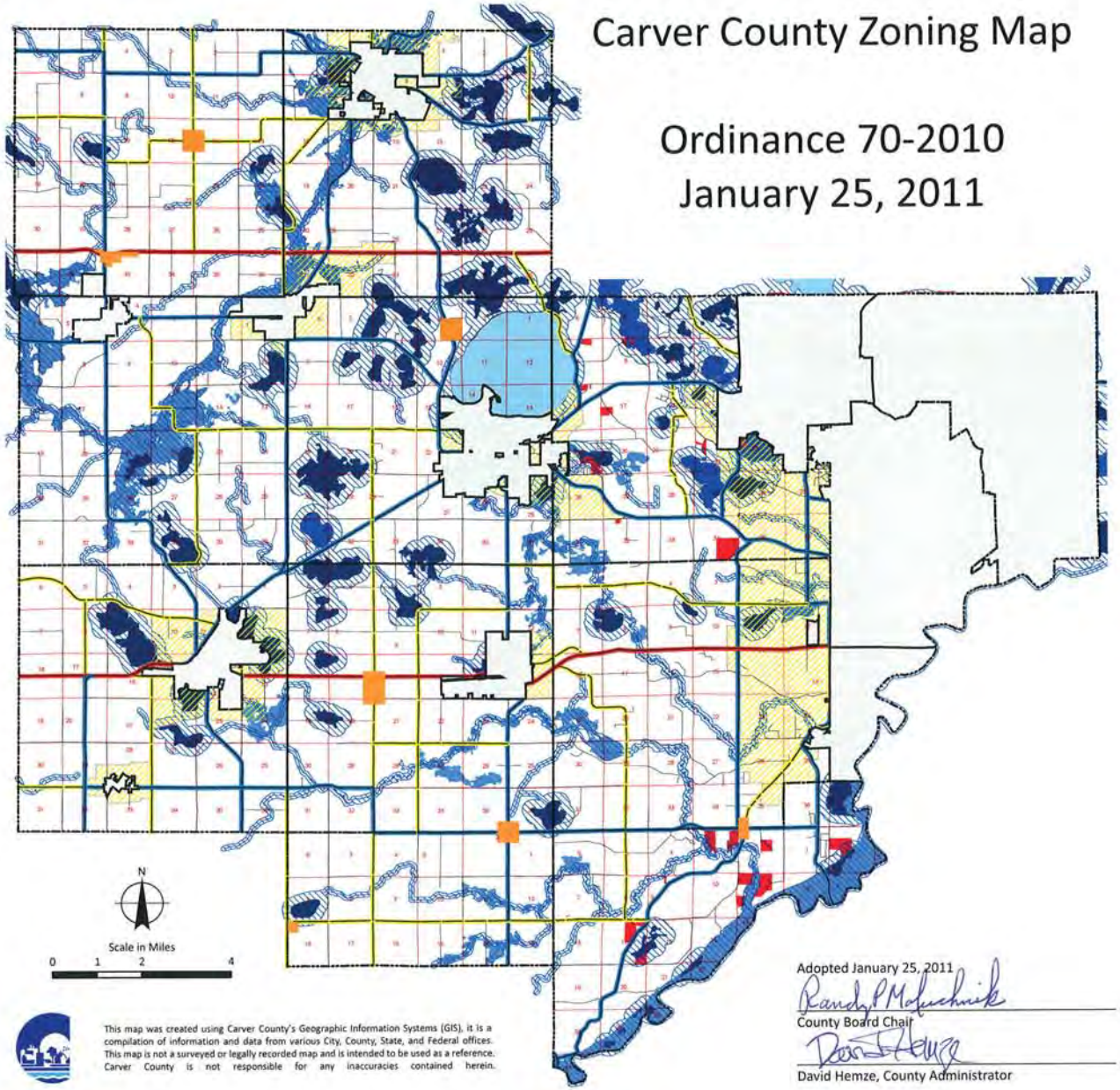
FIGURE 5

Official Zoning Map
New Germany

- 2011 City Boundary
- Park

Date Adopted: November 15, 2011

FIGURE 6



"A" Agriculture District

The County has and may in the future enter into or be affected by a variety of official controls, orderly annexation agreements, joint powers agreements, or other similar agreements that affect the actual extent of this district. Such controls or agreements shall supercede the boundaries shown on this map.

Transition Area Overlay District

The extent of the District as shown on this map is illustrative of Transition Areas as shown on the map in the Comprehensive Plan on the date of the adoption of this ordinance. The actual extent of the District shall be governed by the Transition Policy Area as shown in the Comprehensive Plan. A change in the Plan map shall constitute a change in the District boundaries.

Rural Service Overlay District

Residential Cluster District

These lands were rezoned to this District under a previous ordinance. No new zones of this type are permitted. The actual boundaries of the zone are defined in Appendix A of the Zoning Ordinance.

Floodplain Overlay District

The map illustrates the approximate extent of the Floodplain Overlay District. Actual determination of the Floodplain Zone boundaries is made according to the rules for interpretation specified by the County Code.

Shoreland Overlay District

The map illustrates the general extent of the Shoreland Overlay District and the classification of the lakes. Actual determination of the Shoreland Zone is made by measurement on air photos or on the ground on a site by site basis.

LAKE SHORELAND CLASSIFICATIONS

General Development

Recreational Development

Natural Environment

BOUNDARY LINES

Sections

Cities

City/Township Boundaries

ROAD CLASSIFICATIONS

Principal Arterials

Minor Arterials

Collectors

Local Roads

FIGURE 7

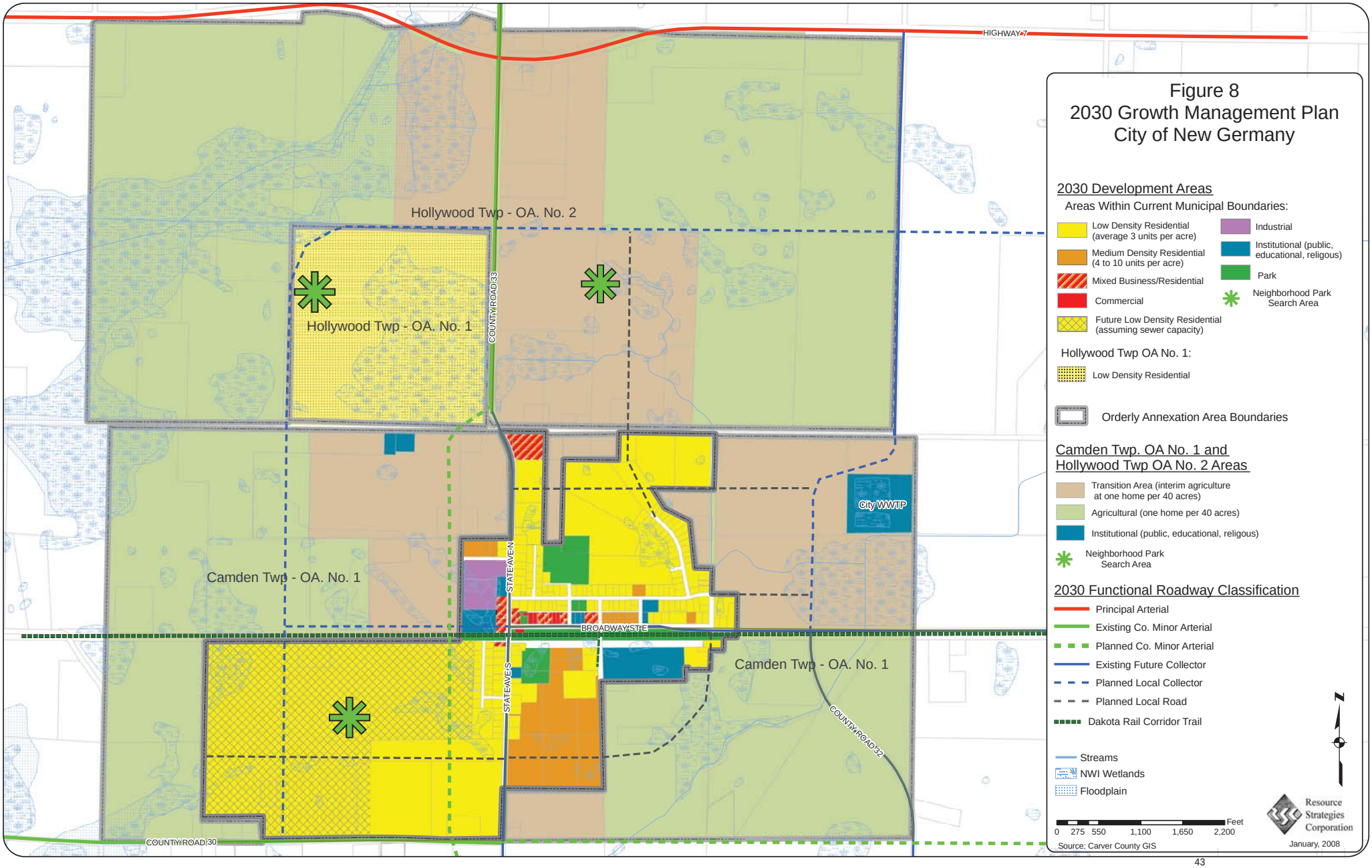
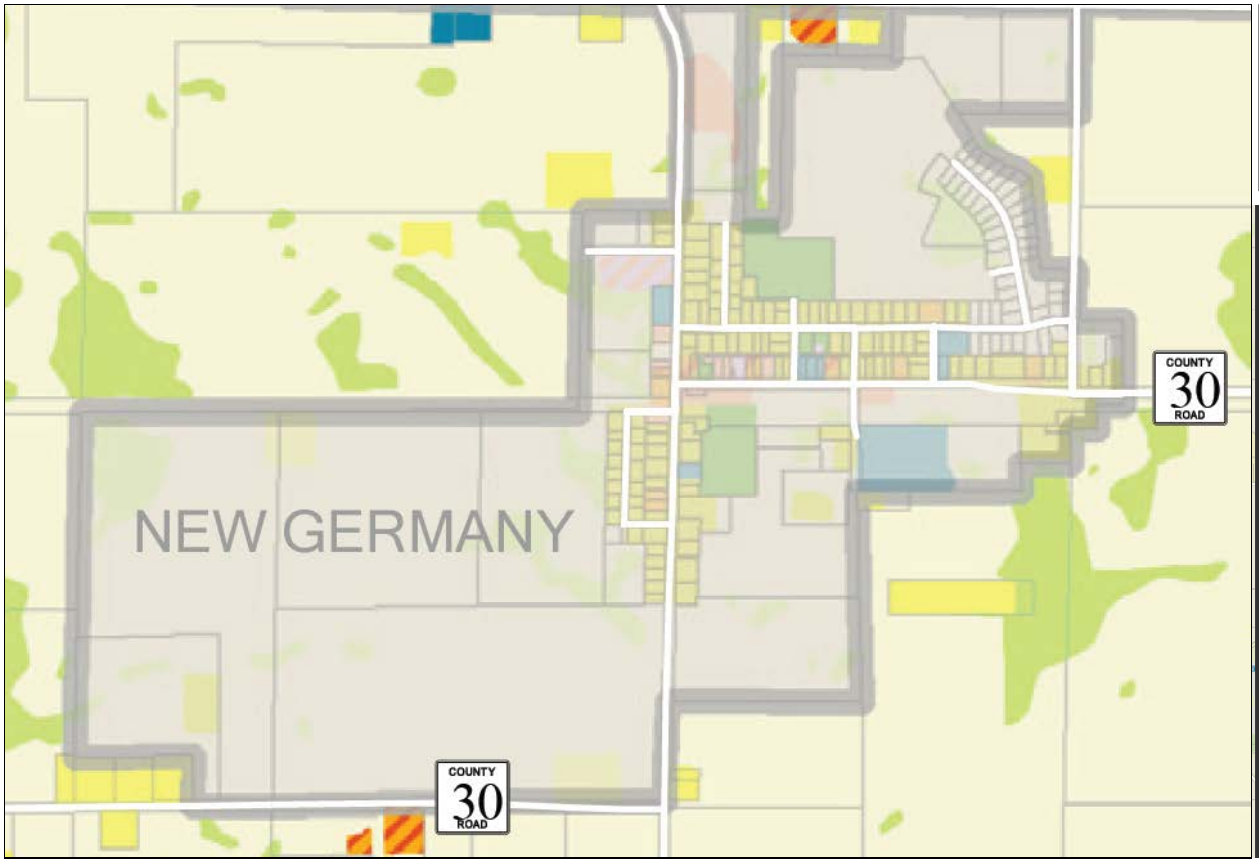

HIGHWAY 7
Hollywood Twp - OA. No. 2
Hollywood Twp - OA. No. 1
COUNTY ROAD 33
Camden Twp - OA. No. 1
STATE AVE N
STATE AVE S
BROADWAY ST E
City WWTP
Camden Twp - OA. No. 1
COUNTY ROAD 32
COUNTY ROAD 30
Figure 8
2030 Growth Management Plan
City of New Germany
2030 Development Areas
Areas Within Current Municipal Boundaries:
Low Density Residential (average 3 units per acre)
Medium Density Residential (4 to 10 units per acre)
Mixed Business/Residential
Commercial
Future Low Density Residential (assuming sewer capacity)
Industrial
Institutional (public, educational, religous)
Park
Neighborhood Park Search Area
Hollywood Twp OA No. 1:
Low Density Residential
Orderly Annexation Area Boundaries
Camden Twp. OA No. 1 and Hollywood Twp OA No. 2 Areas
Transition Area (interim agriculture at one home per 40 acres)
Agricultural (one home per 40 acres)
Institutional (public, educational, religous)
Neighborhood Park Search Area
2030 Functional Roadway Classification
Principal Arterial
Existing Co. Minor Arterial
Planned Co. Minor Arterial
Existing Future Collector
Planned Local Collector
Planned Local Road
Dakota Rail Corridor Trail
Streams
NWI Wetlands
Floodplain
N
0 275 550 1,100 1,650 2,200 Feet
Source: Carver County GIS
Resource Strategies Corporation
January, 2008

FIGURE 8



Camden Township Land Use Map

CAMDEN TOWNSHIP LAND USE (2008)

- Mixed Use Residential: 16 Acres
- Commercial: 3 Acres
- Industrial: 15 Acres
- Institutional: 5 Acres
- Park & Recreation: 256 Acres
- Rural Residential: 895 Acres
- Agricultural: 17,434 Acres
- Wetlands: 2,912 Acres
- Open Water: 469 Acres

This map was created using Carver County's Geographic Information Systems (GIS), it is a compilation of information and data from various City, County, State, and Federal offices. This map is not a surveyed or legally recorded map and is intended to be used as a reference. Carver County is not responsible for any inaccuracies contained herein.

Source: Carver County Planning and Water Management, Metropolitan Council

Produced by

Carver County
Planning and Water Management
Land & Water Services Division
Government Center - Administration Building
600 East 4th Street
Chaska, Minnesota 55318
Phone: (952)361-1820
Fax: (952)361-1828
www.co.carver.mn.us/pz

APPENDIX

Appendix I—

Assessment of Required Data Elements Used To Develop Plan

ASSESSMENT OF THE REQUIRED DATA ELEMENTS USED TO PREPARE THE PLAN

The data elements listed in the Minnesota Department of Health Scoping 1 and 2 Notice were identified by the MDH to be used in the WHP plan. The selection of data elements is based on 1) the hydrogeological setting and 2) vulnerability of the wells used by the Public Water Supplier, and 3) vulnerability of the DWSMA known at the time that each scoping meeting was held. Each data element is assessed for its impact on 1) the use of the public water supply well, 2) delineation of the WHPA, 3) the quality and quantity of water supplying the public water supply well, and 4) land and groundwater uses within the DWSMA.

Physical Environment

Precipitation information was not required because of the hydraulically confined aquifer used by the city of New Germany.

Geologic information was obtained from 1) **existing maps, reports, and studies** that are listed in the References section of the Part 1 report, and 2) the **records of wells, test borings, and well sealing records** that are on file at the MDH and stored in the Minnesota Well Index (MWI) database. Soil data was not required because of the hydraulically confined aquifer used by the city of New Germany.

Geologic information was used to determine 1) the extent and composition of the aquifer(s) used by the city well, 2) the vulnerability of the aquifer at the location of the well used by the Public Water Supplier, and 3) the vulnerability of the DWSMA. Geologic information affects the delineation of the WHPA because it is used to address the aquifer transmissivity and hydrologic boundaries delineation criteria. Second, geologic information provides insight into the pathways that recharging water takes to enter the aquifer which impact: 1) the use of the well, and 2) the quality and quantity of water that is pumped. Finally, it is the principle information that is used to assess DWSMA vulnerability, which impacts land- and groundwater-uses within the DWSMA.

Water resources information was not required because of the hydraulically confined aquifer used by the city of New Germany.

Land Use

Land use information was obtained from the maps shown in Figures relating to existing **parcel boundaries**, **political boundaries**, **public land survey coordinates**, **comprehensive land-use**, and **zoning**. Appendix III contains the map and inventory of current and historical agricultural, residential, commercial, industrial, recreational, and institutional land uses and potential contamination sources.

Parcel boundaries and public land survey coordinates were used in defining DWSMA boundaries. DWSMA boundaries impact land- and groundwater-uses because they define where the WHP plan will be implemented. They have no direct impact on 1) the use of the public water supply well(s), 2) delineation of the WHP area, and 3) the quantity and quality of the well water used by the public water supply.

The **comprehensive land use and zoning maps** affect land- and water-use within the DWSMA because they provide a basis for limiting future land uses that may be incompatible with ordinances or planning goals. As such, they may be used for denying new potential contamination sources or imposing performance standards that affect the use of existing or new public water supply wells and the quantity and quality of the well water used by the Public Water Supplier.

The information contained in Appendix III provides the basis for defining the types of potential contamination sources that may or do impact the quantity and quality of the well water used by the public water supply. The

priorities that are assigned to the WHP action steps that are specified in the plan are based on the information contained in Appendix III. As a result, these actions steps affect the future use of the public water supply well(s) and land- and groundwater-uses within the DWSMA. Groundwater use was included to meet the hydrologic boundary and water use criteria for delineating the WHPA.

Information about public utility services includes maps of 1) **transportation routes and corridors**, 2) **storm sewers**, **sanitary sewers**, the **public water supply distribution system**, 3) **gas and oil pipelines**, and 4) **public drainage systems** was not required because of the hydraulically confined aquifer used by the city of New Germany.

Record of the construction and maintenance of the public water supply wells is presented in Table 4 and their use is presented in Table 5 of the delineation and vulnerability assessment report found in Appendix II. Whether a well serves as a primary source of drinking water or as emergency standby source, determines how often it is pumped. This affects the delineation of its WHPA because pumping amount is a delineation criterion. In addition, pumping may affect the movement of contamination toward a well and the one and ten-year capture areas are used to establish priorities for managing potential contamination sources within the DWSMA. The construction and maintenance of a public water supply well affects the well vulnerability assessment and the focus of the potential contamination source inventory.

Water Quantity Information

Water Quantity Information was obtained for groundwater resources. **Water Quantity Information** was not required for surface water resources because of the hydraulically confined aquifer used by the city of New Germany.

The DNR is the principal source of water quantity information although studies and reports that are available from other state and federal agencies or from the Public Water Supplier are described in the References section of this report. Water quantity information affects the 1) delineation of the WHPA because the pumping amounts are used to calculate the daily well discharge which is a WHPA delineation criterion, 2) use of the public water supply well because a maximum annual amount for the public water supply system is specified under the DNR appropriations permit, and 3) land and water use within the DWSMA because pumping may impact whether other wells or existing land uses may cause contamination of the aquifer or contamination to move toward the public water supply well. It may indirectly affect the future quantity and quality of the water from the public water supply well.

A list of wells covered by state appropriations permits, including the amounts of water appropriated, type of use, and aquifer source were assessed as follows. The Public Water Supplier provided the information describing pumping for water supply over the previous 5 years and the projected pumping for the first five years of plan implementation (Appendix II, Delineation of the WHPA and DWSMA and Vulnerability Assessment, Table 5). The city of New Germany's well is the only high-capacity well within a reasonable distance of the DWSMA, and is the only well included in the Part 1 analysis.

There are no known well interference problems and water use conflicts within the city of New Germany DWSMA. Well interference and water use conflicts are used (if they exist) to delineate the WHPA because they document hydrologic boundaries that must be included. Also, they indicate areas where aquifer recharge is insufficient to meet pumping demands and this condition 1) limits groundwater use in the DWSMA and 2) may impact land uses such as agricultural irrigation or industry that rely on high capacity wells.

A search was conducted for **environmental bore holes, including the unique number, aquifer measured, years of record, and average monthly levels** from the observation well networks that are maintained by the DNR and the U.S. Geological Survey. This information is used to delineate the WHPA by providing information that helps to define aquifer recharge and the distribution of hydraulic head. It may have an indirect influence on water use within the DWSMA because the water level data can be used to document seasonal or long-term impacts that pumping has on the aquifer supplying the public water supply well. This information has

no impact on the quality the water supplying the public water supply well and land- and groundwater-uses within the DWSMA. There were no environmental bore holes listed.

Water Quality Information

Groundwater quality information was obtained from the Public Water Supply Program and Well Management Program at MDH, the Public Water Supplier, and from reports and studies that are listed in the references section of this report. Surface water quality information was not required because of the hydraulically confined aquifer used by the city of New Germany.

Information that summarizes **groundwater quality** is used to assess the pathways that recharge takes to the aquifer and this may impact the selection of methods that are used to delineate the WHPA and to assess well and DWSMA vulnerability. The presence of human-made contaminants is used to 1) calibrate a groundwater flow model by providing a means of checking travel time distance from the source of a contaminant to a public water supply well and 2) assess the vulnerability of the well and the DWSMA. The presence of naturally occurring contaminants is used to assess the extent that the source water aquifer is isolated from surface water recharge. The presence of either human-made or naturally occurring contaminants may influence pumping of the public water supply well because pumping may impact the rate at which contamination may be moving into the aquifer. Also, the level of contamination may require that the water be treated for potable use or that the contaminated water be blended with other water to reduce contaminant levels to drinking water standards.

The presence of human-made contaminants is used to identify potential sources of the contamination that should receive a high priority for inventory and for supporting the priority that is assigned to objectives and actions in the plan that manage these sources. This affects the focus of land and water use management practices within the DWSMA.

Water chemistry and isotopic data from wells, springs, or other groundwater sampling points and reports of groundwater tracer studies is used to determine the 1) time needed for surface water or precipitation to travel from the surface to the source water aquifer and 2) degree to which the source water aquifer if impacted by recharge from surface water features. This assessment affects the delineation of the WHPA because it helps define the degree of hydraulic confinement and whether a surface water feature comprises a hydraulic boundary that must be included. Also, this information is used to determine the sustainability of the aquifer and any surface water features that may be impacted by increased pumping within the DWSMA.

Site studies and water quality analyses of known areas of groundwater contamination, property audit results, reports of contamination spills and releases by the Minnesota Pollution Control Agency and Minnesota Department of Agriculture provide basic information that is used to determine the extent that groundwater quality may already be impaired by previous land- and groundwater-use practices. This information is used to assess the vulnerability of the well and the DWSMA, which affects 1) the scope, and direction of the inventory of potential contamination sources and 2) the resulting priorities that are assigned to objectives and actions for managing land- and groundwater-uses within the DWSMA. Also, the hydro-geologic information contained in the reports is used to refine the understanding of local groundwater conditions that affects the delineation of the WHPA. There are no known areas of contamination within the aquifer used by the city of New Germany.

Appendix II –

Delineation of WHPA and DWSMA and Vulnerability Assessments

(This information is included as a separate file)

Appendix III –

Potential Contaminant Source Inventory

- Map of Inventory
- Data Table
- Inner Wellhead Management Zone Survey (Well #2)

City of New Germany
PCSI Map

Legend

- Well
- DWSMA
- WHPA
- ERA
- Parcel

N
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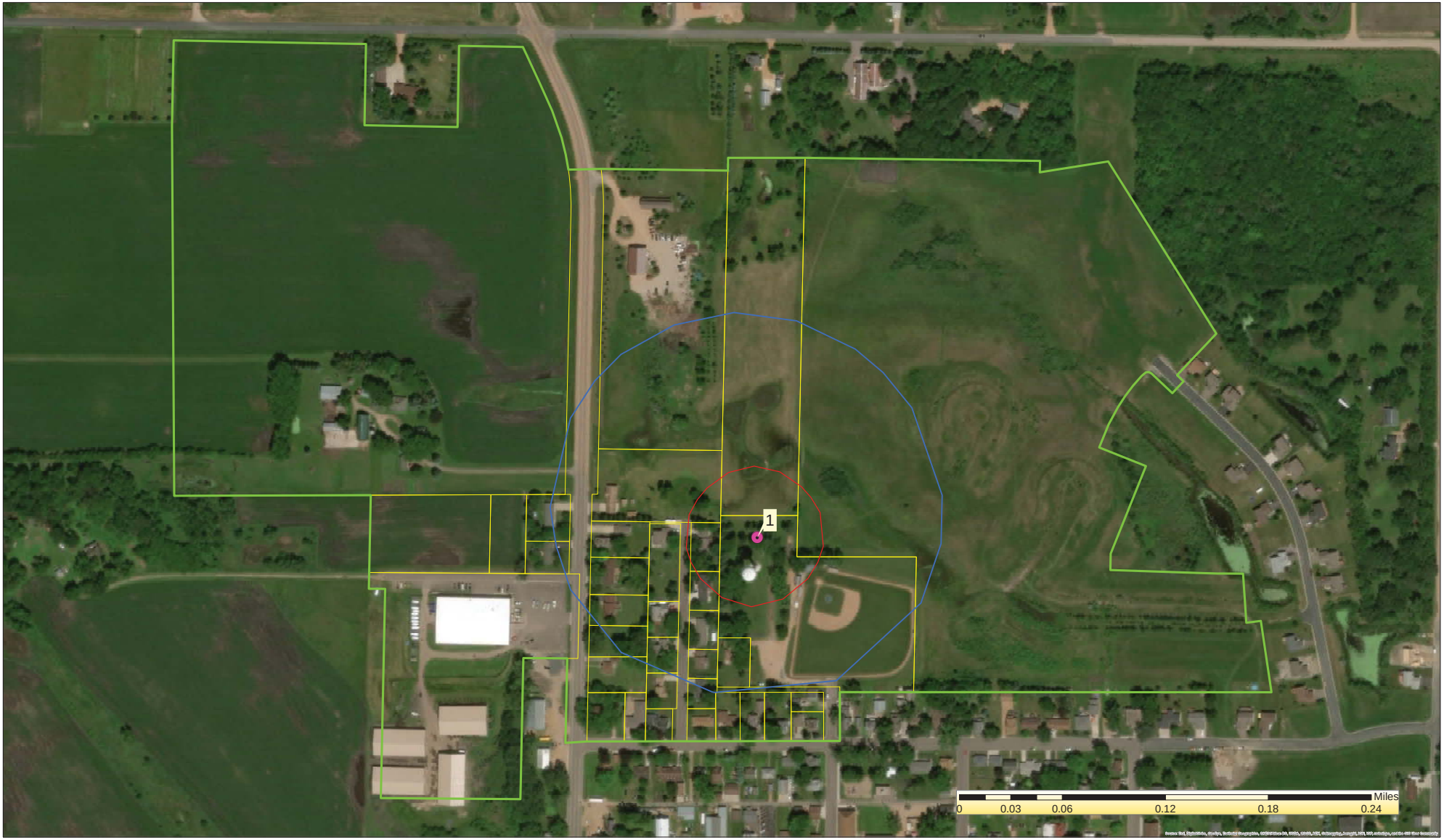


Well

PCSI_ID	PIN	FAC_NAME	ADDRESS	CITY	ZIP5_C	PCS_C	STATU	MAT_C	PROGRAM_ID	TOTAL	COMMENT
1	019550040700	New Germany Municipal Well #2	Washington Avenue N	New Germany	55367	WEL	A	<null>	748660		1 Municipal Well; 439 feet deep

Environmental Health Division
Drinking Water Protection Section
P.O. Box 64975
St. Paul, Minnesota 55164-0975

INNER WELLHEAD MANAGEMENT ZONE (IWMZ) - POTENTIAL CONTAMINANT SOURCE INVENTORY (PCSI) REPORT

PUBLIC WATER SYSTEM INFORMATION

PWS ID	1100007 **COMMUNITY**
NAME	New Germany
ADDRESS	Water Superintendent, New Germany City Hall, Attn: Water Operator, 300 Broadway Street East, New Germany, MN 55367

FACILITY (WELL) INFORMATION

NAME	Well #2
FACILITY ID	S02
UNIQUE WELL NO.	748660
COUNTY	Carver

IS THERE A WELL LOG OR ADDITIONAL CONSTRUCTION INFORMATION AVAILABLE?

☐ **YES** (Please attach a copy)
☐ **NO** ☐ **UNDETERMINED**

PWS ID / FACILITY ID	1100007 S02	**UNIQUE WELL NO.**	748660

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
Agricultural Related							
*AC1	Agricultural chemical buried piping	50	50		N		
*AC2	Agricultural chemical multiple tanks or containers for residential retail sale or use, no single tank or container exceeding, but aggregate volume exceeding 56 gal. or 100 lbs. dry weight	50	50		N		
ACP	Agricultural chemical tank or container with 25 gal. or more or 100 lbs. or more dry weight, or equipment filling or cleaning area without safeguards	150	150		N		
ACS	Agricultural chemical storage or equipment filling or cleaning area with safeguards	100	100		N		
ACR	Agricultural chemical storage or equipment filling or cleaning area with safeguards and roofed	50	50		N		
ADW	Agricultural drainage well[2] (Class V well - illegal[3])	50	50		N		
AAT	Anhydrous ammonia tank (stationary tank)	50	50		N		
AB1	Animal building, feedlot, confinement area, or kennel, 0.1 to 1.0 animal unit (stockyard)	50	20	100/40	N		
AB2	Animal building or poultry building, including a horse riding area, more than 1.0 animal unit	50	50	100	N		
ABS	Animal burial area, more than 1.0 animal unit	50	50		N		
FWP	Animal feeding or watering area within a pasture, more than 1.0 animal unit	50	50	100	N		
AF1	Animal feedlot, unroofed, 300 or more animal units (stockyard)	100	100	200	N		
AF2	Animal feedlot, more than 1.0, but less than 300 animal units (stockyard)	50	50	100	N		
AMA	Animal manure application	use discretion	use discretion		N		
REN	Animal rendering plant	50	50		N		
MS1	Manure (liquid) storage basin or lagoon, unpermitted or noncertified	300	300	600	N		
MS2	Manure (liquid) storage basin or lagoon, approved earthen liner	150	150	300	N		
MS3	Manure (liquid) storage basin or lagoon, approved concrete or composite liner	100	100	200	N		
MS4	Manure (solid) storage area, not covered with a roof	100	100	200	N		
OSC	Open storage for crops	use discretion	use discretion		N		
SSTS Related							
AA1	Absorption area of a soil dispersal system, average flow greater than 10,000 gal./day	300	300	600	N		
AA2	Absorption area of a soil dispersal system serving a facility handling infectious or pathological wastes, average flow 10,000 gal./day or less	150	150	300	N		
AA3	Absorption area of a soil dispersal system, average flow 10,000 gal./day or less	50	50	100	N		
AA4	Absorption area of a soil dispersal system serving multiple family residences or a non-residential facility and has the capacity to serve 20 or more persons per day (Class V well)[2]	50/300/150[4]	50/300/150[4]	100/600/300[4]	N		
CSP	Cesspool	75	75	150	N		
AGG	Dry well, leaching pit, seepage pit	75	75	150	N		
*FD1	Floor drain, grate, or trough connected to a buried sewer	50	50		N		
*FD2	Floor drain, grate, or trough if buried sewer is air-tested, approved materials, serving one building, or two or less single-family residences	50	20		N		
*GW1	Gray-water dispersal area	50	50	100	N		
LC1	Large capacity cesspools (Class V well - illegal)[2]	75	75	150	N		
MVW	Motor vehicle waste disposal (Class V well - illegal)[2]	illegal	illegal		N		

PWS ID / FACILITY ID	1100007 S02	UNIQUE WELL NO.	748660

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
PR1	Privy, nonportable	50	50	100	N		
PR2	Portable (privy) or toilet	50	20		N		
*SF1	Watertight sand filter; peat filter; or constructed wetland	50	50		N		
SET	Septic tank	50	50		N		
HTK	Sewage holding tank, watertight	50	50		N		
SS1	Sewage sump capacity 100 gal. or more	50	50		N		
SS2	Sewage sump capacity less than 100 gal., tested, conforming to rule	50	20		N		
*ST1	Sewage treatment device, watertight	50	50		N		
SB1	Sewer, buried, approved materials, tested, serving one building, or two or less single-family residences	50	20		N		
SB2	Sewer, buried, collector, municipal, serving a facility handling infectious or pathological wastes, open-jointed or unapproved materials	50	50		Y	175	N
*WB1	Water treatment backwash holding basin, reclaim basin, or surge tank with a direct sewer connection	50	50		N		
*WB2	Water treatment backwash holding basin, reclaim basin, or surge tank with a backflow protected sewer connection	20	20		N		
Land Application							
SPT	Land spreading area for sewage, septage, or sludge	50	50	100	N		
Solid Waste Related							
COS	Commercial compost site	50	50		N		
CD1	Construction or demolition debris disposal area	50	50	100	N		
*HW1	Household solid waste disposal area, single residence	50	50	100	N		
LF1	Landfill, permitted demolition debris, dump, or mixed municipal solid waste from multiple persons	300	300	600	N		
SVY	Scrap yard	50	50		N		
SWT	Solid waste transfer station	50	50		N		
Storm Water Related							
SD1	Storm water drain pipe, 8 inches or greater in diameter	50	20		N		
SWI	Storm water drainage well[2] (Class V well - illegal[3])	50	50		N		
SM1	Storm water pond greater than 5000 gal.	50	35		N		
Wells and Borings							
*EB1	Elevator boring, not conforming to rule	50	50		N		
*EB2	Elevator boring, conforming to rule	20	20		N		
MON	Monitoring well	record dist.	record dist.		N		
WEL	Operating well	record dist.	record dist.		N		
UUW	Unused, unsealed well or boring	50	50		N		
General							
*CR1	Cistern or reservoir, buried, nonpressurized water supply	20	20		N		
PLM	Contaminant plume	50	50		N		
*CW1	Cooling water pond, industrial	50	50	100	N		
DC1	Deicing chemicals, bulk road	50	50	100	N		
*ET1	Electrical transformer storage area, oil-filled	50	50		N		
GRV	Grave or mausoleum	50	50		N		
GP1	Gravel pocket or French drain for clear water drainage only	20	20		N		
*HS1	Hazardous substance buried piping	50	50		N		
HS2	Hazardous substance tank or container, above ground or underground, 56 gal. or more, or 100 lbs. or more dry weight, without safeguards	150	150		N		
HS3	Hazardous substance tank or container, above ground or underground, 56 gal. or more, or 100 lbs. or more dry weight with safeguards	100	100		N		
HS4	Hazardous substance multiple storage tanks or containers for residential retail sale or use, no single tank or container exceeding 56 gal. or 100 lbs., but aggregate volume exceeding	50	50		N		
HWF	Highest water or flood level	50	N/A		N		
*HG1	Horizontal ground source closed loop heat exchanger buried piping	50	50		N		
*HG2	Horizontal ground source closed loop heat exchanger buried piping and horizontal piping, approved materials and heat transfer fluid	50	10		N		
IWD	Industrial waste disposal well (Class V well)[2]	illegal[3]	illegal[3]		N		
IWS	Interceptor, including a flammable waste or sediment	50	50		N		
OH1	Ordinary high water level of a stream, river, pond, lake, reservoir, or drainage ditch (holds water six months or more)	50	35		N		
*PP1	Petroleum buried piping	50	50		N		
*PP2	Petroleum or crude oil pipeline to a refinery or distribution center	100	100		N		

PWS ID / FACILITY ID	1100007 S02	UNIQUE WELL NO.	748660

PCSI CODE	ACTUAL OR POTENTIAL CONTAMINATION SOURCE	ISOLATION DISTANCES (FEET)				LOCATION	
		Minimum Distances		Sensitive Well[1]	Within 200 Ft. Y / N / U	Dist. from Well	Est. (?)
		Community	Non-community				
PT1	Petroleum tank or container, 1100 gal. or more, without safeguards	150	150		N		
PT2	Petroleum tank or container, 1100 gal. or more, with safeguards	100	100		N		
PT3	Petroleum tank or container, buried, between 56 and 1100 gal.	50	50		N		
PT4	Petroleum tank or container, not buried, between 56 and 1100 gal.	50[5]	20		N		
PU1	Pit or unfilled space more than four feet in depth	20	20		N		
PC1	Pollutant or contaminant that may drain into the soil	50	50	100	N		
SP1	Swimming pool, in-ground	20	20		N		
*VH1	Vertical heat exchanger, horizontal piping conforming to rule	50	10		N		
*VH2	Vertical heat exchanger (vertical) piping, conforming to rule	50	35		N		
*WR1	Wastewater rapid infiltration basin, municipal or industrial	300	300	600	N		
*WA1	Wastewater spray irrigation area, municipal or industrial	150	150	300	N		
*WS1	Wastewater stabilization pond, industrial	150	150	300	N		
*WS2	Wastewater stabilization pond, municipal, 500 or more gal./acre/day of leakage	300	300	600	N		
*WS3	Wastewater stabilization pond, municipal, less than 500 gal./acre/day of leakage	150	150	300	N		
*WT1	Wastewater treatment unit tanks, vessels and components (Package plant)	100	100		N		
*WT2	Water treatment backwash disposal area	50	50	100	N		
Additional Sources (If there is more than one source listed above, please indicate here).							
Potential Contamination Sources and Codes Based on Previous Versions of this Form							
	none found within 200' of this well.						

* New potential contaminant source.

[1] A sensitive well has less than 50 feet of watertight casing, and which is not cased below a confining layer or confining materials of at least 10' in thickness.

[2] These sources, known as Class V underground injection wells, are regulated by the federal U.S. Environmental Protection Agency.

[3] These sources are classified as illegal by Minnesota Rules, Chapter 4725.

[4] Isolation distance is determined by average flow per day or if a facility handles infectious or pathological wastes.

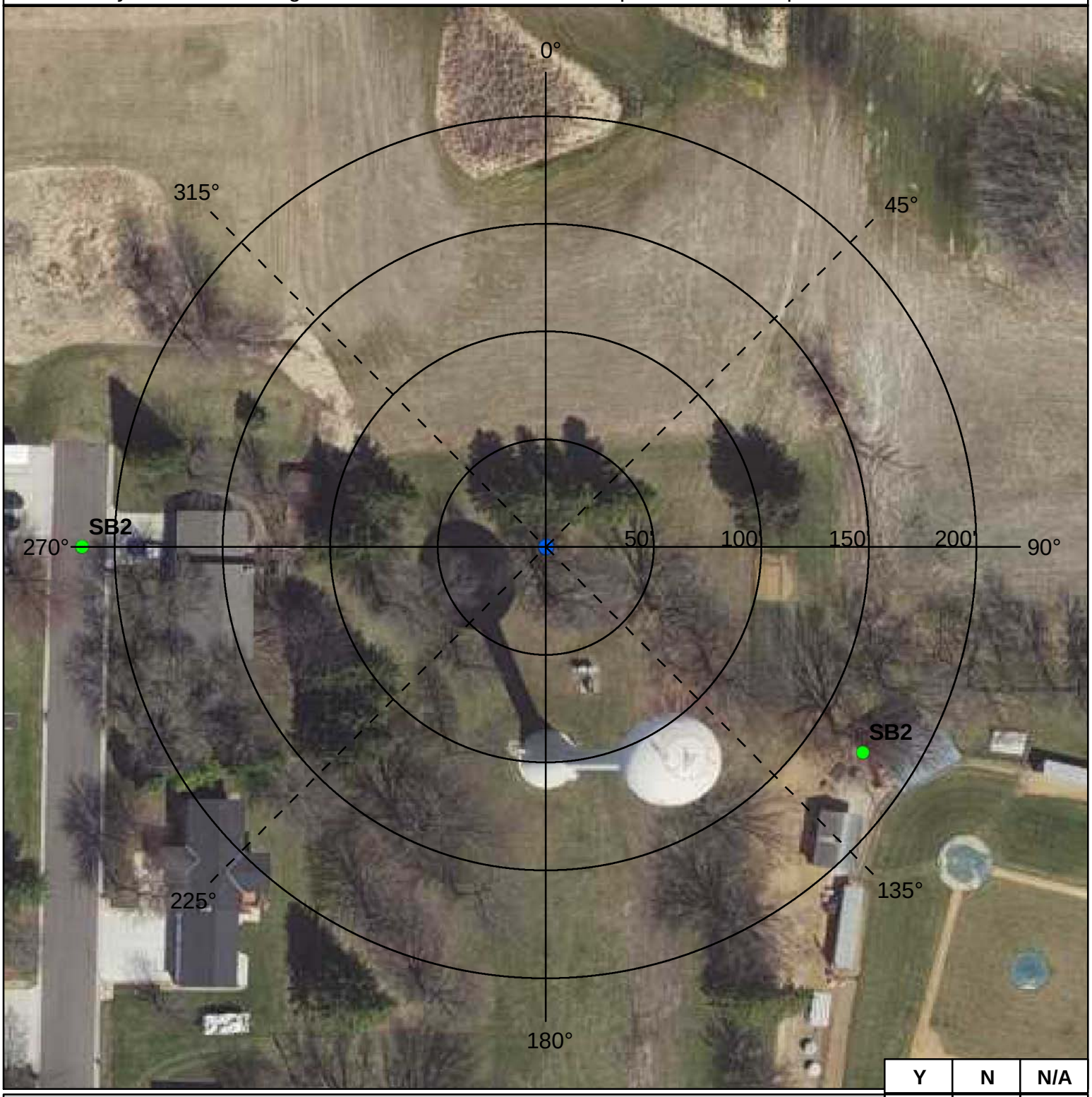
[5] A community public water-supply well must be a minimum of 50 feet from a petroleum tank or container, unless the tank or container is used for emergency pumping and is located in a room or building separate from the community well; and is of double-wall construction with leak detection between walls; or is protected with secondary containment.

This form is based on the new isolation distances in Minnesota Rules, Chapter 4725, related to wells and borings adopted August 4, 2008, and Minnesota Rules, Chapter 4720, related to wellhead protection.

PWS ID / FACILITY ID	1100007 S02	UNIQUE WELL NO.	748660

SETBACK DISTANCES	All potential contaminant sources must be noted on sketch.

Record the distance and approximate compass bearing of each potential contaminant source from the well, and identify the source using the "Source Code". Unlabeled points on the map are unsealed wells.



	Y	N	N/A
Were the isolation distances maintained for the new sources of contamination?			
Is the system monitoring existing nonconforming sources of contamination?			

Reminder Question: Were the wellhead protection measure(s) implemented?

INSPECTOR	Lynch, Amy	DATE	6 - 20 - 2016

PWS ID / FACILITY ID	1100007 S02	UNIQUE WELL NO.	748660

RECOMMENDED WELLHEAD PROTECTION (WHP) MEASURES	WHP MEASURE IMPLEMENTED? Y or N	DATE VERIFIED
Any sewer lines that are observed to be leaking, cracked, or deteriorated, should be replaced.		

COMMENTS

For further information, please contact:

Minnesota Department of Health
Drinking Water Protection Section
Source Water Protection Unit
P.O. Box 64975
St. Paul, Minnesota 55164-0975

Section Receptionist: 651-201-4700
Division TDD: 651-201-5797 or MN Relay Service @ 1-800-627-3529 and ask for 651-201-5000

Appendix IV –

Water Supply Contingency Strategy

WATER SUPPLY CONTINGENCY PLAN (4720.5280)

WATER SUPPLY CONTINGENCY PLAN

NEW GERMANY, MINNESOTA

INDEX

Annual Plan Review

Date Reviewed	*Reviewer*	*Comments*

Plan Distribution

Person	*Organization*	*Plan Location*
Twyla Menth	**City of New Germany**	**City Hall**
Lee Ortloff	**People Service Inc.**	**Water Treatment Plant**

Prepared by: _____Date Approved: _____

MINNESOTA DUTY OFFICER

BCA Operations Center

651-649-5451 **1-800-422-0798**

TDD: 1-800-627-3529 **Satellite Phone: 1-254-543-6490**

About the Duty Officer

The Minnesota Duty Officer Program provides a single answering point for local and state agencies to request state-level assistance for emergencies, serious accidents or incidents, or for reporting hazardous materials and petroleum spills. The duty officer is available 24 hours per day, seven days per week.

If there is an immediate threat to life or property, call 911 first.

When to Call the Duty Officer

Examples of incidents the duty officer can assist with include (but are not limited to):

- Natural disasters (tornado, fire, flood etc)
- Requests for National Guard
- Hazardous materials incidents
- Search and rescue assistance
- AMBER Alerts
- Requests for Civil Air Patrol
- Radiological incidents
- Aircraft accidents/incidents
- Pipeline leaks or breaks
- Substances released into the air

Agency Resources Available

State Agencies

- Department of Agriculture
- Department of Commerce
- Department of Education
- Department of Health
- Department of Human Services
- Department of Military Affairs
- Department of Natural Resources
- Department of Transportation
- Minnesota Office of Enterprise Technology
- Minnesota Pollution Control Agency
- Department of Public Safety
  - Bureau of Criminal Apprehension
  - Homeland Security and Emergency Management
  - Minnesota Joint Analysis Center
  - Minnesota State Patrol
  - Office of Pipeline Safety
  - State Fire Marshal
- Other state agencies not listed

Other Resources

- Minnesota Arson Hotline
- Local bomb squads
- Chemical assessment teams
- Emergency response teams
- Fire and rescue mutual aid
- Amateur radio (ARES/RACES)
- Minnesota voluntary organizations
- Fire chiefs assistance teams
- Search-and-rescue dogs
- Interagency Fire Center
- U.S. Air Force Search and Rescue Center

A. PURPOSE

The purpose of this Contingency Plan is to establish, provide and keep updated, certain emergency response procedures and information for the City of New Germany, MN. which may become vital in the event of a partial or total loss of public water supply services.

B. PUBLIC WATER SUPPLY CHARACTERISTICS

1. Current Supply Source

The City of New Germany ground water supply system consists of 2 wells ranging from 439' to 460' in depth, a 250,000 gallon above ground storage structure, various underground pipe sizes from 10" to 6" which holds about 180,000 gallons of water. Average per day usage is 26,100 gallons along with a Daily maximum of 74,000 gallons in 2017. Well 1 is an emergency back up well and well 2 is the primary well.

Table B-1

	Well Number _1_	**Well Number _2_**
Supply Source	Emergency Tunnel City-Wonowoc	Primary Wonowoc sandstone
Well Depth (ft.)	460	439
Well Diameter (in.)	10 inches	12 inches
Latitude of Well	44.885204	44.87174
Longitude of Well	-93.966631	-93.968163
Well Capacity (gpm)	175	250
Well Production (gpm)	125	125

2. Treatment

The water treatment plant is a 9 ft. in diameter filter with 4 pie shaped cells. The process begins with the raw water being pumped up to the top of an aeration tower and cascades down to a detention tank for chemical reaction to take place. The water then moves to pre- filter take for further pretreatment if needed and then flows through anthracite, greensand and then silica sand. The water then goes through the under drain to have further chemical treatment then a high service pumps sends it into the distribution system. Treatment objectives are Corrosion control for Lead/Copper, Disinfection. Fluoride, Iron/ Manganese removal, and Radionuclides removal. The plant is set to operate at 125 GPM and is back washed once a week.

3. Storage and Distribution

The City has one water tower that will hold 250,000 gallons but is currently ran at 150,000 gallons in the summer and 125,000 gallons in the winter. The water tower was built new in 2005 and has a recirculation pump to prevent freezing in the winter months. The distribution system had about 90% of all the piping replaced in 2012. The entire city has over 99% of the piping in the ground is PVC plastic pipe. The system currently holds about 180,000 gallons of water. Along with new valves, fire hydrants, and curb stops thought the entire system. The system has various pipe sizing ranging from 10 – 6 inches in diameter.

4. Maps/Plans

Sets of City maps and plans are in the city hall and inside the office in the water treatment plant. Maps consist of all piping, valving, fire hydrants, and curb stops within the city. All shut off valves were put into a GIS mapping system and the maps show the exact location of each shut off valve in the city. They are available to staff at any time.

C. PRIORITY OF WATER USERS DURING WATER SUPPLY EMERGENCY

The City of New Germany supplies water almost exclusively to residential users.
In addition to the residential users there are 3 bars, a cookie factory, 2 repair shops, 5 apartment complex, 1 bank, 1 post office, city hall, city shop, fire hall, water treatment plant, and 4 city parks that are connected to the water system. In the event of the need for demand reduction all user will be asked to decrease water usage. Some events that may trigger the need for water reduction include drought, natural disaster, or mechanical failure of the system components. The City Council would impose the water emergency action plan. Public notification of the water emergency would be via door to door delivery of pamphlets outlining the detail of the emergency, and placing pertinent information on the City of New Germany's website and Facebook page.

Table C-1—Water Use Priority Grouping

Priority Group and Rank	Maximum daily use (gpd)	Minimum daily use (gpd)
Residential--#1	74,000	14,000
Institutional--#2	N/A	N/A
Commercial--#3	2400	N/A
Industrial--#4	N/A	N/A
Irrigation--#5	4800	N/A
Unaccounted	2500	N/A
Wholesale	0	N/A

Triggers for implementing water supply reduction procedures:

Table C-2 lists potential disasters, there effects on New Germany water supply system, response procedures, and the availability of water resources during an emergency.

Table C-2 ---Disaster response

Disaster	System Effected	Demand Priority Effected	Response Procedure	Water Availability	Comments
Contamination of Water supply	1 or more wells Water plant Water tower	All or Partial	Isolate well Isolate water plant Isolate tower	City Demand	Well 1 would supply water with limited conservation/ May compensate with trucked in bulk water
Well and Pump Damage	1 or more	All	Isolate well	City Demand	One back-up well available to supply water system/ may compensate with trucked in bulk water
Water main break	Isolate area	All or Partial	Isolate water main leak	City Demand	Utility personnel, Outside service contractors would repair leak
Structure Damage	Wells, water plant, tower	All or Partial	Isolate problem area	None or Partial	Damage to system analyzed, corrective action taken
Equipment and material damage or loss	Wells, water plant, tower	All or Partial	Isolate problem area	City Demand	Damaged to equipment analyzed, corrective active action taken
Electric Power Outage	Wels, water plant	All	Call in line crew or local electrician	None/ Partial City Demand	Generators are on call to use for well 1 and the water plant.

D. ALTERNATIVE WATER SUPPLY OPTIONS

1. Bottled water supplies, delivery and distribution.

In the event that the water system is either unable to provide any or sufficient drinking water to its system users the city would contact Carver County and ask for assistance with the county's Risk Emergency Management Plan. Short term bottled water can be supplied by Mackenthune's Supermarket in Waconia at 952-442-2512 and/or Target in Waconia at 952-442-9333. The City of New Germany already has a mutual aid agreement for fire suppressing with the city of Mayer. In the event of a complete water system shut down the Fire departments can haul bulk water to the fire hall and place in a drop tank to supply water to the city for its residents until the system can be restored.

2. System interconnects with other water supplies.

None exists at this time.

3. Emergency or backup wells.

Well # 1 is the City's back-up/emergency well. This well is connected to the water treatment plant which can be bypassed if needed. The City of New Germany has a contract with Ziegler/Cat out of Shakopee, MN for rental of a generator if needed.

4. Emergency treatment of water system.

Emergency treatment of the water system in the event of system breakdown or bacterial contamination includes shocking the system with sodium hypochlorite.

E. INVENTORY OF AVAILABLE EMERGENCY EQUIPMENT AND MATERIALS

Table E-1 contains a list of services, equipment and supplies that are available to the City (system) to respond to a disruption in the water system. It is believed that the items contained in Table E-1 would be adequate to respond to most (if not all) water system emergencies.

Table E-1

Description	Owner	Telephone	Location	Acquisition Time
Well Repair	McCarthy Well	952-854-5333	Shakopee, MN.	24 hr.
Pump Repair	McCarthy Well	952-854-5333	Shakopee, MN.	24 hr.
Electrician	Laketown Electric	612-968-1151	Waconia, MN.	30 min
Plumber	Jerry Reopke	952-353-2153	New Germany	10 Min
Backhoe	Henning's Excavating	952-353-2119	New Germany	30 min
Chemical Feed	Hawkins Chemical	612-802-4562	St. Paul	12 hr.
Meter Repair	US Filter	800-752-8112	Eden Prairie	1.5 hr.
Generator	Ziegler/Cat	952-445-4272	Shakopee, MN	1.0 hr.
Valves	Henning's Excavating	952-353-2119	New Germany	30 min
Pipe & Fittings	Henning's Excavating	952-353-2119	New Germany	30 min

F. EMERGENCY IDENTIFICATION PROCEDURES

Table F-1 Procedural Operations

Incident	Response Procedure and Comments
Identify Disruption (Mechanical Failure or Contamination)	Identifies the nature of the water supply disruption and communicates this information to the city government, the alternate response coordinator, and members of the emergency oversight committee.
Notify Response Personnel	Notifies city staff and others who will be responding to the water supply emergency about the disruption and coordinates their efforts to correct it.
Incident Direction and Control	Identifies the actions that are needed to correct the water supply emergency and directs responders to implement corrective actions.
Internal Communication	Communicates the status of response efforts to the primary spokesperson and the emergency oversight committee as needed to keep these parties informed of progress.
Assess Incident Response on Continual Basis	Assesses the efforts to correct the water supply disruption on a continual basis so that the emergency oversight committee can take additional corrective actions and the city government and public are updated on issues and progress.
Define the Extent of a Contamination Disruption	Coordinates efforts to define the extent and level of the contamination with local, state, and federal agencies. This may continue after initial corrective actions have been implemented.
Assess the Extent of a Mechanical Disruption	Coordinates efforts to define the cause(s) of the mechanical failure and the equipment, data, and expertise that are needed to correct it. Identifies measures for reducing the likelihood that a similar mechanical failure will not occur in the future.
Identify Need for an Alternate Water Supply	Evaluates the need to obtain an alternate water supply, the time period it is needed before the water supply emergency is corrected, and the actions that are needed to achieve it.

G. NOTIFICATION PROCEDURES

1. Agency Notification

Table G-1 contains the names and telephone numbers for contacts at various local and state agencies that may be notified in the event of a public water supply system emergency. Based on the nature of the emergency and the information available, various representatives from this listing will be selected by the response coordinator to be part of *the **emergency oversight committee*** which will then meet throughout the duration of the emergency to aid in decision-making and positive outcomes.

Table G-1. Agency Emergency Contact Listing

Personnel	Name	Home Telephone	Work Telephone
Mayor/Board Chair	STEVE VANLITH	952-353-2571	952-201-9585
Council Members	SHIRLEY JAEGER	952-467-1999	952-353-2208
Council Members	TY TURNQUIS	952-353-2456	612-310-4215
Council Members	CATHY RUSCHMEIER	952-353-2472	612-240-6698
Council Members	NICK HARTWIG	952-353-1503	612-616-4691
Response Coordinator	PEOPLE SERVICE INC.	612-756-3549	507-964-2231
State Incident Duty Officer			800-422-0798
County Emergency Director	CARVER CO SHERIFF DEPT		911
Fire Chief	DAN RUSCHMEIER	952-353-2472	911
Sheriff	JIM OLSON		911
Police Chief	N/A	N/A	N/A
System Operator	LEE ORTLOFF	612-636-2434	SAME
Alt. System Operator	DALLSS ROGGEMANN	320-305-0748	SAME
Ambulance	RIDGEVIEW MEDICAL CENTER	952-442-2191	911
Hospital	RIDGEVIEW MEDICAL CENTER	952-442-2191	911
Power Company	XCEL ENERGY	1-800-895-1999	1-800-481-4700
Highway Department			
Telephone Company	FRONTIER	855-339-1715	855-339-1715
Neighboring Water System	CITY OF MAYER	952-657-1502	952-657-1502
MPCA Groundwater Division			651-296-7333
MRWA Technical Services	JEFF DALE	800-367-6792	
MDH District Engineer	SIMON MCCORMACK	507-344-2700	
MDH Sourcewater Protection	KAREN VOS	651-201-5000	

2. Critical Response Personnel

Table G-2 – Critical Response Personnel

Title	Name	Address	Telephone	Response Assignment
Response Coordinator	DAN RUCSHMEIER	471 State Avenue s, New Germany, MN 55367	612-209-5641	Coordinate actions to address emergency
Alt. Response Coordinator	STEVE VANLITH	340 Camden Avenue S, New Germany, MN 55367	952-353-2571 or 952-353-2257	Coordinate actions to address emergency
Water Operator	LEE ORTLOFF	22922 401st Ave Arlington, MN. 55307	612-636-2434	Direct or contact individuals and businesses to resolve issue(s)
Alt. Water Operator	DALLAS ROGGEMANN		320-305-0748	Direct or contact individuals and businesses to resolve issue(s)
Public Relations	STEVE VANLITH	340 Camden Avenue S, New Germany, MN 55367	952-353-2257 or 952-353-2571	Contact media to inform citizens/ businesses of emergency
Alt. Public Relations	TWYLA MENTH	300 Broadway Street E, New Germany, MN 55367	952-353-2488	Contact media to inform citizens/businesses of emergency

3. Public Information Plan

Describe community/system public information procedures, including name of responsible person, procedures, location, times, etc.

A. Public relations center

1. Public Information Center Location during Emergency:
City Hall

2. Times Available:
As Needed

B. Information checklist to be conveyed to the public and media

1. Name of water system:
New Germany Water

2. Contaminant of concern and date:

3. Source of contamination:

4. Public health hazard:

5. Steps the public can take:

6. Steps the water system is taking:

7. Other information:

a. Media Contacts

Media	Name	Telephone	Address
Newspaper	HERALD-JOURNAL	320-485-2535	WINSTED MN.
Television	ANY LOCAL	***	METRO AREA
Radio	KDUZ/KARP/KGLB	320-587-2140	HUTCHINSON MN.

H. MITIGATION AND CONSERVATION PLAN

1. MITIGATION

The Community's Water Supply Contingency Plan must include information identifying ways to reduce the vulnerability of the water supply system to disruption and to improve the Community's response capabilities.

Infrastructure maintenance/upgrades/maps. The city possesses of the water and wastewater system components. Maintenance of the systems are performed on a routine basis or as necessary, and upgrades to the system and corresponding maps are a regular part of system upkeep.

Routine efforts include:

Daily: Check tower for water level, total water pumped to the distribution system, record run times and chemical feed usages.

Weekly: Testing residuals in the potable water and backwashing of the water treatment plant.

Monthly: Total water pumped to the distribution system, total chemical feed usages and complete MDH fluoride report.

Quarterly: Required water sampling for Fluoride and Bacteria and reporting last quarter events to the Mayor and City Council.

Yearly: Fire hydrant flushing. Static water in each well, draw down level in each well, pump specific capacity for each well, and total water pumped to distribution system. Tier II reports and DNR Water Appropriations report are completed.

2. CONSERVATION

Include information describing Community efforts to reduce the amount of water used by its residents, businesses and industry

a. Water Meters – The City of New Germany is in the process of changing out every water meter in the homes and businesses connected t the water system throughout the city there are currently about 24 meters left to change out.

b. Public Education – Efforts to inform the public about water conservation are included in the City's Wellhead Protection Plan. The City maintains and distributes a monthly newsletter that includes articles and information that educates the recipients about water conservation.

c. Rate structure – The City of New Germany has adopted a uniform rate structure. A base rate of $33.12 monthly is charged and includes the first thousand gallons in addition to $13.25 per 1000 gallons after the first.