Comprehensive Plan

City of New Germany

5/30/18 DRAFT

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Chapter 1: Introduction and Goals

Purpose

The purpose of this comprehensive plan is to provide the City of New Germany with policy direction for the future growth and development of the city. This is intended to ensure that growth is managed in a way that contributes to the city's livability, small town character, environmental quality, and long term sustainability.

This plan provides an overview of existing conditions in New Germany, including historical context, existing land use, water and natural features, public facilities, transportation, population, housing, and employment trends and forecasts. It also provides goals and policies to guide anticipated future growth, and proposes an implementation plan extending to 2040.

In addition to providing direction for the city, this plan satisfies the requirements of the Metropolitan Land Planning Act: Minnesota Statutes, Section 473.859. This requires that all seven-county metropolitan area cities complete a comprehensive plan update every ten years. The purpose is to ensure that growth is coordinated with the development of regional systems and policies, as overseen by the Metropolitan Council. This plan covers all the elements required under this guidance, to the extent they are applicable to New Germany.

This plan updates and replaces the city's previously adopted comprehensive plan, which was approved in mid-2008.

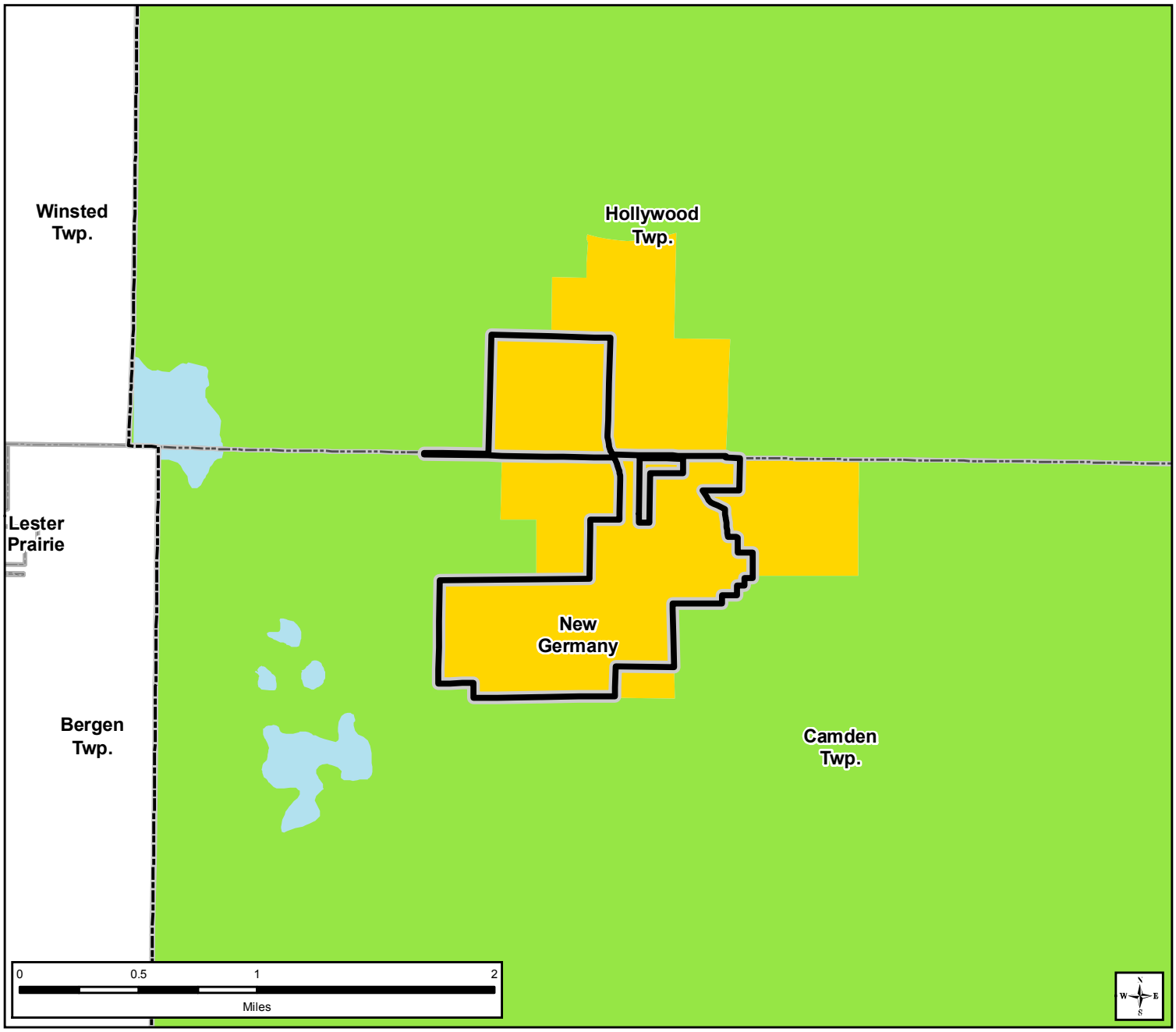
Regional Setting

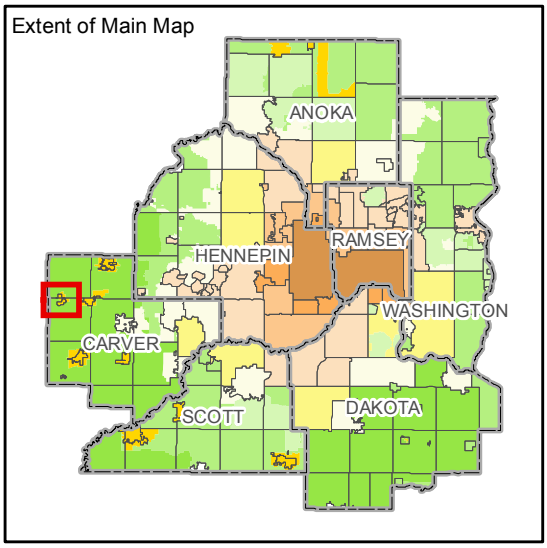
New Germany is located on one square mile in the western third of Carver County, immediately south of TH 7. It is surrounded by Camden Township except to the north where it borders Hollywood Township. Camden and Hollywood Townships are primarily farming communities.

The Metropolitan Council classifies all communities in the region based on their location and function. According to this system, New Germany is designated as a Rural Center in the metropolitan area. Rural Centers are local commercial, employment, and residential activity centers serving rural areas in the region. These small towns are surrounded by agricultural lands and serve as centers of commerce to those surrounding farm lands and the accompanying population. Rural Center communities are expected to plan for forecasted population and household growth at average densities of at least 3-5 units per acre for new development and redevelopment. In addition, Rural Center communities should strive for higher-density commercial uses and compatible higher-density residential land uses in the commercial core of the community to ensure efficient uses of existing infrastructure investments.

Community Designation

City of New Germany, Carver County





Community Designation

- Urban Center - Core City
- Urban Center
- Urban
- Suburban
- Suburban Edge
- Emerging Suburban Edge
- Rural Center
- Diversified Rural
- Rural Residential
- Agricultural
- Outside Council planning authority

- County Boundaries
- City and Township Boundaries
- Lakes and Major Rivers

Background/History of the Community

The City of New Germany officially began in 1887 with the arrival of the St. Paul, Minneapolis, and Manitoba Railway Company rail line, connecting St. Paul to Hutchinson. The tracks ran past a settlement known as New Germany about one half mile north of where the St. John's Lutheran Church in Hollywood is now located.

A railroad loading facility was built (1887) at the city's present location, and as a result this new stopping place was named for the settlement center north of town, called New Germany, since many of the residents of the community were German. The primary bulk of shipping was meat, wood, wheat, and grain. Because of the influx of businesses and people, the town incorporated into a village that same year. The area was part of three farms. The land on the north side was owned by Amand Bury, the land on the south side of the tracks was owned by Christian Wolfrom, and the land on the west and south of the railroad was owned by Joseph Paul.

As the population of the village grew, the Purity Post office, which was located three miles south of town, was moved to New Germany but retained the name Purity. Not until 1902 was the name changed. In 1897, the first creamery was built by A.W. Schweppe. As a result of the big fire of 1899 and the fires of 1900, a fire department was organized in 1901. The sewer was built in 1905, and the following year the State Bank was organized with a capital stock of $10,000. This bank was discontinued in 1925 and taken over by the First State Bank of New Germany (est. 1919).

Passenger travel by train became popular and as a result the first passenger train began in the spring of 1900. Many would travel to the Twin Cities for shopping tours or business. With the introduction of the motor vehicle, the rail passenger business began to wane until 1958 when it was discontinued altogether. In 1908, a new school district was organized and a new school was built, located one mile south of town. This school provided education until the 1960's.

At the height of WWI with the hysteria over anti-German propaganda, anything connected to the name, culture or language of Germany was met with disdain and distrust. Consequently, the village officials changed the town's name to Motordale; this name remained until 1922.

The town of New Germany was part of the Camden Township (est. 1860). In 1928, the village elected to separate from the Camden, and the following year the town was replatted and incorporated. At the time the city was incorporated, there had been a general consensus that the village did not grow in leaps and bounds. The reason stated was that there was a lack of home industry. It could also be stated that it did not attract businesses. In fact, New Germany has been known for most of its history as a bedroom community where most of the working age residents commute daily by car to outside occupations and industrial centers.

New Germany's Golden Jubilee, celebrating the town's 50th birthday, was held on June 26 and 27, 1937. No expense was spared to make this event memorable and enjoyable. Two years later the village hall was built, mostly for the purpose of serving the needs of the Fire Department. Included within the structure was a hall for social and civic meetings and gatherings. This building stands today as a center for most of the town's events including weddings and civic obligations.

The reason for the village being more than a half mile long is partly due to the fact that what is now practically the center of town, was at that time of the community's founding (1887) a slough which contained water the greater part of the year. The east and west ends of the town were high and it was on the high spots that the first business places were built, and each end of town vied for supremacy. The South Fork of the Crow River is south and east of the town, and has in the past overflowed its banks causing much damage. Early on the when houses were being built, basements in all parts of town filled with water because of the slough, and water springs were encountered in many places while digging basements.

A central water system was voted on in 1960 and completed by the spring of 1961. By 1971, the city government moved to construct the sanitary sewer system. This was followed by improvement to the streets with the development of curb and gutter, and storm sewers. In addition, in 1976 a new Fire Barn was built where the old Blacksmith shop stood.

New Germany has remained relatively steady in population, growing at a moderate rate from the 1960's onward. In more recent years, it has pursued more ambitious housing development options. To service the expected growth, city government has put in place plans a new 250,000 gallon water tower, a wastewater treatment facility, and 300 gpm well. New Germany also moved to annex some adjacent land for development. A moderate amount of growth happened. However, the Great Recession of the 2000's put a temporary halt to growth plans for the community. At present, there is an inventory of undeveloped sites within city limits, which are first priority for the next phase of development.

The City of New Germany is situated in an area of Carver County where alterations to the original water and vegetation resources occurred because of farming and settlement activities. An understanding of the existing natural environment is needed to guide new development, protect remaining significant resources and to comply with county and regional resource management requirements. In particular, much greater community and statewide value has been placed on the need to preserve water resources and prevent activities that have the potential to negatively impact these resources.

Planning Process

The New Germany comprehensive plan update process began in early 2017. In March 2017, there was a kickoff meeting with the Planning Commission. At this meeting, the overall scope of the plan was discussed, as well as priorities for the plan update.

In October 2017, a public open house was held at the City Hall. The meeting covered existing conditions across the city, forecasted growth, proposed growth plan, and related topics. The public was invited to attend to provide comments, which were incorporated in the plan.

The draft plan was reviewed at a public hearing in May 2018, and subsequently approved by City Council for distribution for interjurisdictional review later that month.

A summary of the full planning process will be included here, once it is complete.

Goals and Policies

Comprehensive plan goals and policies are statements which provide the official basis for future City actions related to growth and development. The goals identify various positions of the City in relation to desired outcomes for the community. Policies represent the how the City will proceed with achieving these goals. These goals and policies reflect input from community engagement efforts and City Council direction. Chapter 7 Implementation provides the next layer: implementation steps needed to move goals and policies from high level direction to action.

Generally speaking, the overall goals of the city include: protecting the health, safety and welfare of the public; protecting natural resources and water quality; providing adequate public services; providing appropriate housing options; and promoting economic development and employment opportunity consistent with the small town character of the city. From the perspective of accommodating growth, this means ensuring that adequate public services and infrastructure are available in a timely fashion to accommodate growth, so that it can be appropriately and sustainability incorporated into the community without overloading any systems or causing environmental damage.

Many of these goals are similar to those in the 2008 plan. This is intentional: long term goals and policies may take years to achieve, and providing consistent yet flexible direction helps to keep a community moving forward.

Growth Management

Goal #1: Encourage and manage future growth in the city, consistent with community values, small town character, and long term financial sustainability.

Policies:

- Allowing a reasonable level of new development and redevelopment in appropriate locations throughout the community.
- Provide opportunities for a range of housing types and businesses to meet existing and future needs for housing, jobs, and services.
- Support and maintain public and semi-public services in support of existing and future development, including parks, utilities, and other facilities and services.

Land Use

Goal #2: Support a balanced mix of land uses within the city that accommodates existing and future needs and enhances overall community character.

Policies:

- Direct growth to land that is suitable for development, accessible to existing and planned roadways, and compatible with existing and planned land uses.
- Ensure that transitions between different adjacent uses are managed to minimize conflicts between potentially incompatible uses.
- Support land use patterns that complement natural amenities and respect environmental constraints.
- Encourage responsible growth that preserves the rural, small town atmosphere and enhances overall community identity and existing values.

Goal #3: Manage the buildout of the community with responsible and efficient use of land and resources.

Policies:

- Encourage the phasing of growth and development staging consistent with contiguous, planned extensions of public facilities.
- Where applicable, promote orderly transition from agricultural to non-agricultural uses, consistent with city and township goals.
- Limit development to areas identified as capable of receiving utilities according to utility staging plans.
- Assist Camden and Hollywood Townships in their efforts to promote long-term agriculture in areas surrounding the city, preventing the premature demand for city services in these areas.
- Prohibit development served by private utilities unless there are agreements in place to guarantee connection to public utilities when they become available.
- Require all subdivisions to adhere to long-range plans for roads, trails, parks, and utility corridors to ensure continuity of development patterns and implementation of community priorities.
- Require all new developments to use low impact development techniques to minimize impacts on water quality and quantity, and comply with the requirements of the city's stormwater management plan.

Natural Resources

Goal #4: Protect existing natural resources to ensure continued environment health and benefits to the community.

- Protect existing environmental systems from potential negative impacts of future growth and development activities.
- Protect surface waters and wetland areas of the city to promote recreation opportunities, aesthetic qualities, natural habitat areas, and groundwater recharge.
- Preserve open space to promote the rural atmosphere of the community.
- Manage new development to protect shorelands, floodplains, wetlands and other environmentally sensitive areas in the New Germany area.
- Protect the quality and quantity of groundwater resources.
- Establish development densities and standards that will protect environmentally sensitive areas, and encourage the use of conservation design principles in the review of new development.
- Encourage development in the city to conform to the natural limitations of the topography and soil to lessen the potential for soil erosion.
- Comply with the Minnesota Wetland Conservation Act (WCA) to avoid impact on wetlands whenever possible, limit the impact on wetlands when impact is unavoidable, and require mitigation of wetlands, where affected by growth, in accordance with state law.

- Establish a buffer around each wetland, as part of the development approval process, to help protect existing wetlands and improve the effectiveness of newly constructed wetlands.
- Require new development to comply with the requirements of the city's stormwater plan, as approved by Carver County, and the Carver County Water Plan.
- Encourage agricultural operators in the city to consult with the Carver County Soil and Water Conservation District.
- Review zoning and subdivision requirements to ensure reasonable protection of environmentally sensitive areas such as wetlands and woodland protection in compliance with state and county requirements.
- Require abandoned wells to be capped and grouted, in conformance with state requirements.

Community Facilities and Services

Goal #5: Provide a range of public services and facilities to enhance community safety, livability, and quality of life.

Policies:

- Provide efficient and responsive public services to residents and businesses.
- Maintain land uses and services that support accessibility of a quality education for residents.
- Provide areas for growth in community education, religious organizations, arts, and other similar organizations.
- Explore potential joint service initiatives through continued communication and cooperation between city, township, county, school, and community organizations.
- Expand efforts for effective communication and cooperation with Camden and Hollywood Townships and western Carver County communities on area growth issues and common concerns.
- Promote effective communication with residents, business owners, educators, and volunteer organizations to maintain cooperation and participation in community affairs.
- Establish priorities for basic services to ensure that the highest levels of safety and accessibility are provided in the city.
- Maintain adequate and efficient administrative, maintenance and emergency services as the city grows.

Economic Competitiveness

Goal #6: Support the development and maintenance of a variety of businesses to provide jobs, goods and services, and tax base to the community.

Policies:

- Prohibit businesses that require public services, transportation needs, or environmental controls in excess of local capabilities.

- Develop retail uses in a clustered concept rather than “strip” or scattered fashion.
- Designate adequate areas in the city to allow for commercial and industrial expansion.
- Promote New Germany’s downtown area as a location for retail shopping opportunities, including uses that complement the existing regional trail.
- Support the development of new highway oriented business and industrial development in locations with adequate access to TH 7.
- Require all commercial and industrial uses to connect to public utility systems.
- Establish regulations for adequate lot sizes and minimum buildable areas for business uses to provide for convenient and safe access, adequate parking, site buffering and landscaping.
- Avoid incompatibilities between commercial/industrial uses and residential uses.
- Develop business sign regulations compatible with the rural character of the city.
- Evaluate various economic development programs (e.g., tax increment, CDBG) as potential sources of assistance for rehabilitation of the commercial area.

Housing

Goal #7: Support the development and maintenance of a range of housing options in the city to meet the existing and future needs of residents.

Policies:

- Encourage the development of a mix of housing that provides all income and age levels of households the opportunity to live in New Germany.
- Promote the orderly development of safe and efficient housing opportunities.
- Only allow residential development denser than one unit per 40 acres if adequate utilities are immediately available and are consistent with public utility staging plans.
- Identify appropriate locations in the community for multiple family and senior housing types.
- Encourage a variety of new housing types, styles, ownership types, and cost ranges to balance the overall housing stock.
- Protect residential neighborhoods from incompatible and offensive uses.
- Encourage the revitalization of the existing housing stock in the city as a source of affordable housing.
- Avoid adoption of regulations that create excessive obstacles to the development of affordable housing.
- Promote residential housing concepts that will maintain “small town” character of the city.

Park and Recreation

Goal #8: Provide a system of convenient active and passive recreation opportunities for residents.

Policies:

- Support the development and maintenance of facilities and programs to serve the varied recreational needs of all age groups in the city.
- Provide for adequate expansion of parks and recreation areas in proposed residential developments.
- Require dedication of developable parkland or cash in lieu of land in conjunction with the subdivision of all properties.
- Promote safe and convenient bicycle and pedestrian access to community and county recreational facilities.
- Develop a trail plan that provides interconnection of park and recreation areas and neighborhoods.
- Design and maintain parks with proper lighting, shelter, and landscaping to ensure public and property safety.
- Develop land use regulations compatible with adjacent parks, recreation areas, and natural features.
- Encourage and accept land gifts and forfeitures in areas with potential recreational development opportunities.
- Coordinate regional trail and park development potential with Carver County and adjacent communities.
- Encourage public and private activities that enhance the regional trail corridor.

Transportation

Goal #9: Maintain a safe, efficient, and convenient multimodal transportation system that accommodates all users and balances accessibility and mobility.

Policies:

- Adopt land use development standards that promote safe and efficient access to the transportation system.
- Develop land uses and access spacing guidelines compatible with the functional classification of the regional and county highway system.
- Maintain the city roadway system to provide access to local destinations and the regional roadway network.
- As needed, identify long-term transportation corridors to provide access to and within the New Germany area as development occurs.
- Coordinate transportation planning and system improvements with Carver County and the Minnesota Department of Transportation, as appropriate.

- Encourage the provision of sufficient off-street parking for all uses.
- Provide local bicycle and pedestrian connections to serve local destinations and connect to the regional trail network.
- Coordinate with the County on any future plans to expand transit service in the area.
- Accommodate freight traffic in a way that moves traffic safely and efficiently, while minimizing impacts on local land use.
- Comply with federal FAA standards regarding notifications related to airspace.

Public Utilities

Goal #10: Develop and maintain a system of public utilities to efficiently meet the level of existing and anticipated development.

Policies:

- Require that all public infrastructure systems (sanitary sewer, water, stormwater, and roadways) are designed and constructed according to applicable city, county, and state standards and specifications.
- Design public utility systems for 2040 development or beyond and establish cost effective staging of utility systems.
- Require new development to be consistent with planned extensions of public utilities and require connection to public facilities.
- Fund and maintain existing public utility systems through an ongoing maintenance and repair program.
- Require new development to pay reasonable costs for capacity, extension, and connection to public utility systems.
- Prohibit the establishment of any private wastewater treatment or water facilities in the city.
- Manage sanitary sewer installation and maintenance to minimize potential sources of inflow/infiltration in the sewer collection system.
- Continue monitoring of potential sources of inflow/infiltration to reduce inefficiencies in the wastewater treatment system.
- Enforce Ordinance #42A prohibiting unauthorized discharges to the sanitary sewer system.

Stormwater Management

Goal #11: Maintain or enhance the water quality of the New Germany area wetlands and watercourses.

Policies:

- Enhance pond design criteria and work with the County to achieve its goal of regional ponding whenever practical, including the implementation of infiltration/filtration (bioretention areas, rain gardens, etc.) areas to aid in stormwater volume reduction (as required by Carver County).

- Work with developers to incorporate low-impact development and best management practices (BMP's) that are appropriate for the given site.
- Comply with the requirements in the Stormwater Management Plan for rate control, water quality treatment, erosion and sedimentation control, infiltration/filtration measures, and evaluation of new techniques and practices.

Goal #12: Preserve, maintain and expand (where possible) stormwater storage and detention systems to control excessive runoff volumes and rates, prevent flooding, protect public health and safety, and minimize public capital expenditures.

Policies:

- Inspect and maintain ponds and other drainage facilities on a regular basis and conduct maintenance activities, as required.
- Evaluate pond operations to ensure that best management practices are implemented, to the extent practical.
- Perform ongoing maintenance of the city stormwater management system as needed.
- Cooperate with the County to improve water quality around the New Germany area.

Goal #13: Review development plans for conformance with city, county and state requirements and confirm conformance through the construction site inspection process to minimize erosion and promote sediment control.

Policies:

- Utilize the policies, requirements and standards of the Stormwater Management Plan to regulate alteration of land to prevent erosion and sedimentation.
- Require the maintenance of all erosion and sedimentation devices on a continual basis by the responsible party, as set forth in the Stormwater Management Plan, and any applicable state or federal requirement.
- Require compliance of any development with the approved stormwater pollution prevention plan for the project as approved by the City in compliance with the Stormwater Management Plan and/or by the County.

Chapter 2: Land Use

Purpose

The land use element is a major focus of the comprehensive plan. This element shows where, when, and what type of development is expected to accommodate anticipated future growth of population, households, and jobs. Growth and development patterns, in turn, determine the need for new infrastructure, parks, and other public investment in services and facilities.

In addition to this, the land use plan demonstrates how the city will fit within overall regional planning requirements and guidelines. The City of New Germany is identified as a Rural Center in *Thrive MSP 2040*, the Metropolitan Council's regional development plan. Rural Centers are local activity and commercial centers serving rural areas in the region. Rural Center communities are expected to plan for forecasted population and household growth at average densities of at least 3-5 units per acre for new development and redevelopment. In addition, these communities should strive for higher-density commercial uses and compatible higher-density residential land uses in the commercial core of the community to ensure efficient uses of existing infrastructure investments. This plan generally reflects these guidelines.

Forecasts

Future growth in the city is forecasted as part of the regional planning process, based past growth trends, ability of the city to accommodate growth, and future expectations in terms of overall growth patterns. These forecasts are used as a starting place to determine need for land to accommodate new development.

As of 2015, approximately 422 people lived in New Germany in 163 households, and there were around 57 jobs. From 2015 until 2040, it is forecasted that New Germany will see a growth of an additional 278 people, 167 households, and 33 jobs. **Table 2.1** shows estimated and forecasted growth. This growth represents a substantial increase over existing levels of population, households, and jobs. However, like many communities, overall growth expectations have been lowered since the 2030 plan, due to overall market factors.

Table 2.1 – Forecasted Population, Housing, & Employment

	2010	2015	2020	2030	2040	% Chg 15-40
Population	372	422	440	590	700	65.8%
Households	146	163	190	270	330	102.5%
Employment	46	57	70	80	90	57.9%

Source: Metropolitan Council

Table 2.2 depicts recent population trends for the City of New Germany, western Carver County communities, and Carver County. The city's population has grown since 1970, though more slowly than other communities and Carver County as a whole. Since 1970, the city has grown by 39%, while the county has grown by nearly 250%.

Carver County is rapidly becoming one of the fastest growing counties in the metropolitan area. Based upon the percentage increase in population between 2000 and 2015, it is the second fastest growing county in the metropolitan area, after Scott County. Most of the growth has occurred in the eastern communities in the county. However, the growth is moving westward as evidenced by population gains in Mayer and Watertown.

Table 2.2 - Historical Populations of Western Carver County Communities								
	1970	**1980**	**1990**	**2000**	**2010**	**2015**	**'70 –'15 % Change**	**'00 -'15 % Change**
New Germany	303	347	353	340	372	422	39%	24%
Hamburg	405	475	492	538	513	493	22%	-8%
Mayer	325	388	471	554	1,749	1,960	503%	254%
Norwood Young America	1,784	2,456	2,705	3,108	3,549	3,782	112%	22%
Watertown	1,456	1,818	2,408	3,029	4,205	4,254	192%	40%
Carver County	28,331	37,046	47,915	70,205	91,042	98,798	249%	41%

Source: Metropolitan Council

Table 2.3 shows the age of the population in 2010 in New Germany, western Carver County communities and the county. New Germany has similar population distributions and proportions as the county and similar communities. In 2010, the median age in New Germany was 35.5 compared to the countywide median age of 35.9.

Table 2.3 – Ages of Populations of Western Carver County Communities, 2010										
	Under 5	**5-9**	**10-19**	**20-24**	**25-34**	**35-54**	**55-64**	**65-74**	**75+**	**Total**
New Germany	33	30	53	10	64	111	33	26	12	372
Percent Total	*9%*	*8%*	*14%*	*3%*	*17%*	*30%*	*9%*	*7%*	*3%*	*100%*
Hamburg	34	30	70	32	77	147	54	34	35	513
Percent Total	*7%*	*6%*	*14%*	*6%*	*15%*	*29%*	*11%*	*7%*	*7%*	*100%*
Mayer	229	175	196	62	414	468	103	64	38	1,749
Percent Total	*13%*	*10%*	*11%*	*4%*	*24%*	*27%*	*6%*	*4%*	*2%*	*100%*
Norwood Young America	282	263	488	190	522	1026	371	174	233	3,549
Percent Total	*8%*	*7%*	*14%*	*5%*	*15%*	*29%*	*10%*	*5%*	*7%*	*100%*
Watertown	332	347	641	221	606	1,277	372	177	232	4,205
Percent Total	*8%*	*8%*	*15%*	*5%*	*14%*	*30%*	*9%*	*4%*	*6%*	*100%*
Carver County	6,725	7,902	14,540	3,931	10,830	30,297	9,110	4,160	3,547	91,042
Percent Total	7%	9%	16%	4%	12%	33%	10%	5%	4%	100%

Source: US Census, 2010

Table 2.4 shows a comparison of the occupations of New Germany and Carver County residents in 1990, 2000, and 2010. In 2010, the occupations of city residents were primarily in sales and office, the production and transportation industry, and construction and maintenance. This is a shift from the statistics of previous censuses which showed higher proportions of residents employed by the moving and service industries. Carver County, as a whole, had a higher percentage of employed residents working in management operations, professional services and services but a lesser percentage in the moving industries and sales/office than the city.

Table 2.4 – Occupation of Employed Population over Age 16										
	New Germany							Carver County		
	1990		2000		2010			1990	2000	2010
Occupation	No.	Percent	No.	Percent	No.	Percent		Percent	Percent	Percent
Management, business & financial operations	8	5%	17	10%	33	13%		12%	20%	22%
Professional & related services	15	10%	22	13%	27	11%		16%	20%	21%
Other services	20	13%	40	23%	21	8%		12%	11%	13%
Sales & office	37	24%	34	20%	84	33%		28%	27%	26%
Farming, fishing & forestry	2	1%	0	0%	3	1%		4%	0%	0.3%
Construction, extraction & maintenance	61	40%	21	12%	37	14%		21%	8%	8%
Production, transportation & material moving	11	7%	39	23%	52	20%		7%	13%	10%
Total	154	100%	173	100%	257	100%		100%	100%	100%

Source: 1990, 2000, 2010 Census

The travel time to places of employment is longer for New Germany workers than Carver County workers, as a whole, as shown in **Table 2.5**. In 2015, 65% of New Germany workers traveled over 30 minutes to get to their jobs compared to 40% of Carver County workers. Additionally, the number of workers who lived relatively close to their jobs (within 15 minutes) was fewer in 2015 compared to 1990 in both New Germany and the county. In 2015, the mean travel time to work for New Germany workers was 32.2 minutes while the mean for county residents was 25.6 minutes. This is logical, as New Germany is located in a predominantly rural area farther from major job centers than some other portions of the county.

Table 2.5 – Workers' Travel Times								
	New Germany				Carver County			
	1990	2000	2010	2015	1990	2000	2010	2015
0-15 minutes	22%	16%	13%	10%	29%	24%	25%	25%
15-30 minutes	28%	30%	21%	25%	33%	32%	36%	35%
30-44 minutes	31%	27%	22%	36%	20%	25%	24%	25%
45-60 minutes	15%	16%	19%	21%	8%	10%	10%	10%
60+	3%	4%	25%	8%	3%	4%	5%	5%
Worked at Home	1%	7%	*	*	7%	6%	*	*
Total	100%	100%	100%	100%	100%	100%	100%	100%
Average travel time to work	27 minutes	27.3 minutes	39.7 minutes	32.2 minutes	23 minutes	25.6 minutes	25.4 minutes	25.6 minutes

Source: US Census; American Community Survey 2011-2015; Metropolitan Council
**Data included in 0-15 minutes of travel time*

Most of New Germany workers traveled to work by motorized vehicle in 1990-2015, with the vast majority driving alone. Interestingly, **Table 2.6** shows the percentage of workers who carpooled decreased between 1990 and 2010 by a larger percentage in the city compared to the county. However, the percentage of New Germany workers that participated in carpooling still is higher than for Carver County workers as a whole.

Table 2.6 – Workers' Means of Travel to Work								
	New Germany				Carver County			
	1990	2000	2010	2015	1990	2000	2010	2015
Car, truck, van:								
drove alone	66%	72%	81%	85%	77%	82.6%	83%	82%
carpooled	28%	14%	9%	10%	12%	9%	6%	7%
Public transit	0%	0%	1%	0%	0.5%	1%	2%	2%
Walk	5%	7%	4%	0%	3.5%	2%	1%	2%
Other	0%	0%	0%	3%	0.5%	0%	1%	1%
Worked at home	1%	7%	4%	2%	6.5%	5.5%	7%	7%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Source: Metropolitan Council Tabulations of 1990, 2000, 2010 Census and 2011-2015 American Community Survey

Summary

- Moderate population, household, and employment growth trends are expected to continue into the future.
- New Germany's age distribution is similar to other western Carver County communities, creating both opportunities to share age specific resources and programs and challenges as the population ages.
- From 1990-2010, the occupations of New Germany residents have shifted from predominantly construction, extraction and maintenance towards sales/office and production/transportation. The shift in skills in New Germany's workforce creates opportunities to review businesses and

employment opportunities in the city to identify and attract businesses suited to the community's needs, skills, and interests.

- New Germany residents as a whole have longer commutes to work now than in 1990, which could signal a lack of work opportunities in the city or more attractive employment options in other cities. Additionally, a greater proportion of New Germany residents commute alone, which may increase traffic in and around New Germany.

Existing Land Use

The city's existing land use is the base for future growth and change. **Figure 2.1** shows the existing land use for the City of New Germany. **Table 2.7** summarizes acreages of land by type. Following is a summary and description of the land use categories within the city.

As of 2017, the City of New Germany covered around 651 acres. The largest of the land use categories are Agricultural and Undeveloped lands, which each account for 40% of the acreage. This large acreage of undeveloped land in city limits is a result of the decision to annex a substantial amount of land over ten years ago, in anticipation of planned development. To date, much of that development has not yet been realized. The land supply is more than enough to accommodate all planned future growth within existing city limits.

2040 Comprehensive Plan

New Germany, Minnesota

Existing Land Use (2016)

May 2018

Resource Strategies Corporation

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Yale Ave
53rd St
MINNESOTA 7
Hwy 7
Co Rd 33
33 COUNTY
Beach Ball Ln
Trophy Lake Dr
Fishermans Ct
State Ave N
62nd St
Manning St
Lincoln Ave N
Washington Ave N
Park St E
Adams Ave N
Jefferson Ave N
Black Forest Rd
Hilda Ave N
Broadway St E
1st St NW
30 COUNTY
Mound St W
Camden Ave S
Monroe St W
Adams Ave S
State Ave S
Co Rd 32
32 COUNTY
Co Rd 30
30 COUNTY
Yale Ave
33 COUNTY
Co Rd 33
Welcome Rd

Information

Wastewater Treatment Plant - East of Town

Legend

- City / Township Limits
- National Wetland Inventory
- Parcels
- Public Waters Inventory

0 1,000 Feet

Source: MetCouncil, MnDOT, Carver County, City of Cologne

Land Use Categories

- Low Density Residential
- Medium Density Residential
- Retail and Other Commercial
- Mixed Use
- Industrial and Utility
- Institutional
- Park, Recreational or Preserve
- Major Highway
- Agricultural
- Undeveloped/Vacant

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Table 2.7 – Existing Land Use Characteristics		
Land Use	**Acres**	**Percent of Total**
Agriculture	262	40%
Farmstead	4.8	1%
Industrial and Utility	1.7	0.3%
Institutional	9.5	1%
Mixed Use Residential	5.4	1%
Medium Density	2.3	0.4%
Park	28.5	4%
Retail and Other Commercial	12.8	2%
Low Density	67	9%
Undeveloped Land	257	40%
Total	**650.8**	**100%**

Guidance for residential development is organized by density levels, typically measured in terms of allowed housing units per acre. This plan has three tiers of residential density, corresponding to the city's existing zoning districts. Residential land uses in the City of New Germany are permitted in three zoning districts: low density (R-1 Single Family Residential District), medium density (R2 Multiple Family Residential District), and mixed use (residential is allowed in B - Business/Commercial District). Most of the city's housing units are in the low density areas, shown in **Table 2.8**. **Table 2.9** details the net density of these three residential density levels, taking into account a small amount of undevelopable land (primarily wetlands) within these areas.

Table 2.8 – Residential Acres by Type		
Land Use	**Acres**	**Percent of Total Residential Acres**
Low Density	67	90%
Medium Density	2.3	3%
Mixed Use	5.4	7%
Total	74	100%

Table 2.9 - Net Residential Density						
Land Use	**Single Family Number of Units**	**Multi-Family Number of Units**	**Acres Gross Residential**	**Acres Undevelopable Land (wetlands & slopes)**	**Net Residential Acres**	**Net Density Units/Acre**
Low Density Residential	147	0	67	1	66	2.2
Medium Density Residential	0	16	2	0	2	6.9
Mixed Use Residential	0	10	5	0	5	1.9
Total	147	26	74	1	73	2.4

Table 2.10 shows the number of vacant parcels in existing neighborhoods. Development of these parcels will help the city reach forecasted housing needs. As the analysis will show, the city has more than enough land within city limits to accommodate growth. As a result, a portion of this land is anticipated to remain undeveloped through 2040, and will likely continue in agricultural use.

Table 2.10 – Vacant Parcels		
Neighborhood/Location	**Zoning**	**Vacant Parcels**
Trophy Lakes	R-1	60
Black Forest	R-1	165
South of town	R-1	176
Southwest of town	R-1	172

The New Germany zoning code specifies minimum and maximum square feet for various residential development. Based on these requirements, **Table 2.11** shows the range of units per acre that can be developed under current zoning regulations. These can be used to forecast the amount of land that is expected to be needed to accommodate growth.

Table 2.11 – Residential Allowed Density Ranges		
	Units/Acres (Min)	**Units/Acres (Max)**
Low Density	3	4
Medium Density	4	10
Mixed Use	8	10

The zoning code does not have similar specifications for density of jobs for employment uses. However, the Metropolitan Council has provided estimates for the number of employees per square feet in various employment types, and for typical floor area ratios for such development. Using this information and the city's employment projections, an estimate of jobs per acre can be developed to project need for additional commercial, industrial, and institutional land. **Table 2.12** summarizes these ranges.

Table 2.12 – Employment Allowed Density		
	Jobs Per Acre (Min)	**Jobs Per Acre (Max)**
Commercial	8	33
Industrial	9	13
Institutional	6	10

Future Land Use

The future land use plan shows what land uses and intensities are expected to be in the city by the horizon year of 2040. In order to be efficient and cost effective in providing public services and utilities, the planned growth pattern is contiguous to existing development rather than leap frogging to more distant areas. This plan also anticipates reinvestment in the core areas of the city, particularly in strengthening the downtown. The future land use plan is consistent with the forecasts of population, households, and employment shown in **Table 2.1**.

Figure 2.2 shows the planned future land use for all property in New Germany. **Table 2.13** summarizes the planned land uses by the categories shown on the map. The planned future land uses shown on this map reflect previous community planning efforts as well as desired updates identified as part of the 2018 Comprehensive Plan Update process. The largest category of land in the city is still anticipated to be Agricultural (48%), but an increased portion of land in the city (nearly 40%) is expected to be Low Density Residential. The expansion of the Mixed Use designation is to provide flexibility in both commercial/retail and residential development, particularly focused on strengthening and expanding the city's downtown and central commercial district.

Compared with the 2030 plan, the future land use for the city shows a reduced footprint for development, based on scaled back forecasts. The largest change is the removal of future growth areas outside the existing city limits. There are also reductions in single family housing planned on the southern side of the city. On the other hand, the northeast area reflects the buildout of some residential development since the last plan was approved.

While the city encourages redevelopment, there are limited opportunities. The most significant is likely in the downtown area, where existing developed sites may be rehabilitated or replaced with mixed use development.

Table 2.13 – Planned Land Use Characteristics

Land Use	Acres	Percent of Total
Agriculture	314	48%
Industrial and Utility	11.2	1.7%
Institutional	21.5	2.3%
Low Density Residential	252	39%
Medium Density Residential	3.4	0.5%
Mixed Use	22	1%
Park	25	0.3%
Retail and Other Commercial	1.2	0.2%
Total	**651**	**100%**

2040 Comprehensive Plan

New Germany, Minnesota

Future Land Use

March 2018

Resource Strategies Corporation

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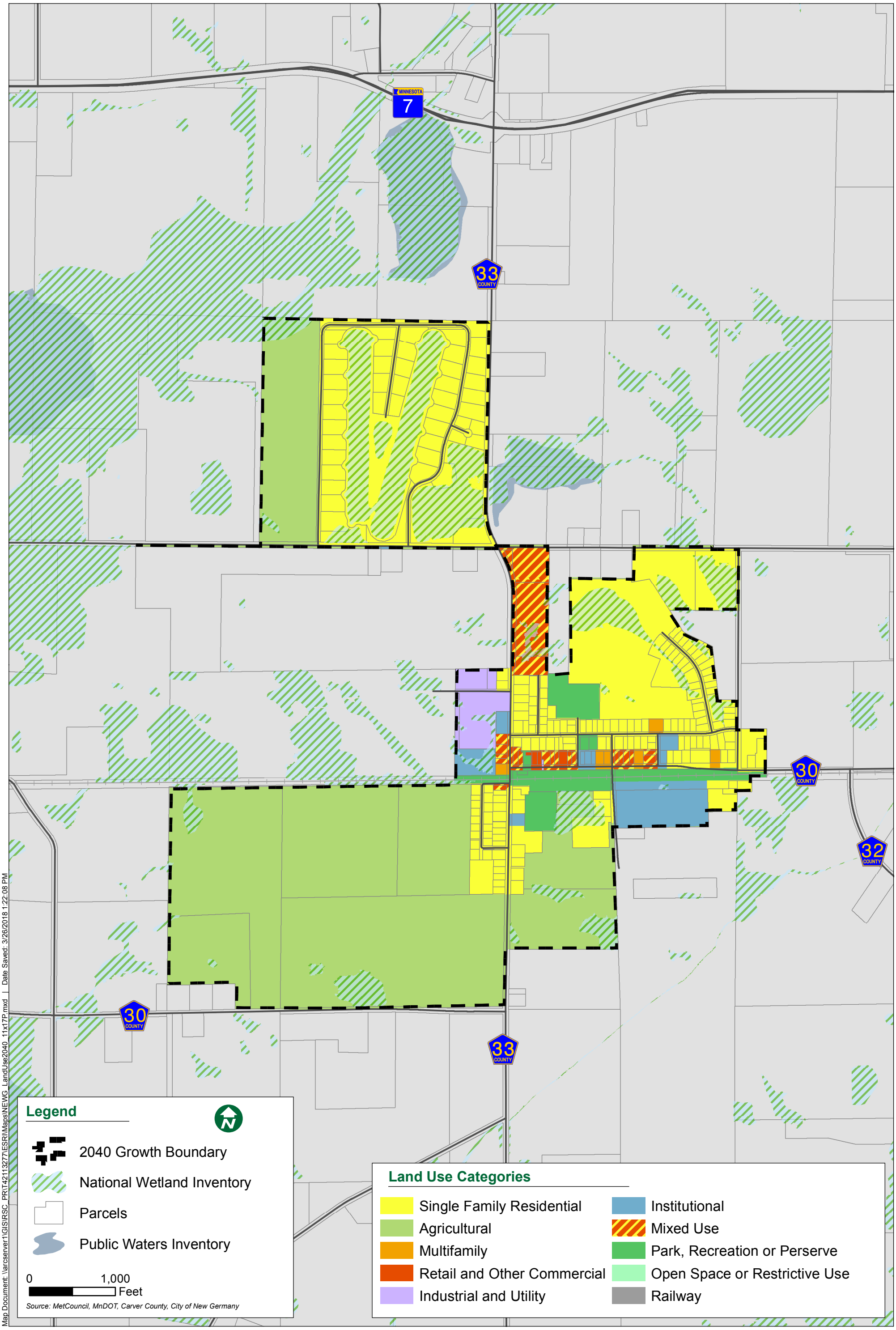

Map Document: \\arcserver1\GIS\RSC_PR\T42111327\ESRI\Maps\NEWG_LandUse2040_11x17P.mxd | Date Saved: 3/26/2018 1:22:08 PM

Table 2.14 provides further detail in terms of land availability for development. This shows what areas are developable versus non-developable at each growth stage through 2040 (non-developable land primarily being areas that are already developed, or which are set aside as undevelopable).

Table 2.14 – Guided Land Use Acres								
	2015 (Current)		2020		2030		2040	
Category	Developable	Non-Developable	Developable	Non-Developable	Developable	Non-Developable	Developable	Non-Developable
Agricultural	282	33	282	33	282	33	282	33
Low Density Residential	137	115	60	192	42	210	15	237
Medium Density Residential	0	3	0	3	0	3	0	3
Commercial	0	1	0	1	0	1	0	1
Industrial	3	8	2	9	1	11	-1	12
Institutional	7	15	6	15	6	15	6	16
Mixed Use	10	12	8	13	7	15	5	17
Park, Recreation, or Preserve	0	25	0	25	0	25	0	25
Major Road and Railway ROW	0	0	0	0	0	0	0	0
Total	439	212	359	292	337	314	307	344

The land use categories on the map are further described below.

Agriculture

The Agricultural area allows agricultural land uses, except new feedlots or feedlot expansions, at a density of one home per forty acres (1:40), the same density as designated in the Carver County Comprehensive Plan for agricultural land uses. This corresponds to the city's A - Agricultural District zoning. In the unincorporated county area, Rural Service District zoning designation applies to the Hollywood Station area located at the TH 7/County Road 33 intersection, although this is outside the planned growth area for the city. Land uses for this area are limited to the expansion of agriculture-related business, community service activities, and limited highway service activities.

A large part of the city is still under agricultural use. Most of this acreage is within the southwest quadrant of the city. Other areas of undeveloped land uses include the agricultural and vacant properties in the northeast quadrant of the city.

Low Density Residential

Most of the existing residential development in the city falls within the low density residential category, guided for 3-4 units per acre. Generally, this land use category accommodates attached and detached single family homes at an overall minimum net density of three units per acre where public sanitary sewer and water service is available. The maximum net density within this land use designation is four units per acre.

A couple areas planned for low density residential development are located in the south, northwest and northeast portions of the community. The Black Forest Estates development in the northeast can accommodate approximately 187 new single family homes, of which 18 have been built to date. The Trophy Lakes Estates IV development can accommodate 60 single family homes as currently laid out.

Since there has been no recent activity on these developments, the actual configuration may change somewhat in the future.

The City encourages a mix of housing types and ownership options to provide housing choice for all age and income groups. This designation may allow for planned developments where neighborhood densities may vary, as long as the overall development meets the minimum three dwelling unit per acre threshold needed for public utility access. Generally, the existing zoning district that is applicable to the low density land use category is R-1 Single Family District that allows a minimum 10,000 square foot lot size and the PUD Planned Unit Development District, where densities vary based on the composition of uses contained within the PUD.

Medium Density Residential

The medium density residential areas accommodate developments at net densities that range from 4-10 per acre. Up to 16 dwelling units per acre is permitted under the existing zoning ordinance (R-2 Multiple Family Residential District) with city council approval to meet life cycle and affordable housing goals. Current medium density developments include the Deutschland Apartments and several smaller apartment buildings located on the eastern half of Broadway Street. At present, there are no additional planned medium density residential areas. The intent is to accommodate medium density and multifamily uses within Mixed Use districts, providing more flexibility for property owners and developers.

Mixed Use

The Mixed Use designation applies to existing properties along County Road 30 (Broadway Street) and County Road 33 (State Street), in the downtown where apartments are located above businesses. In addition, planned mixed use areas are located in the northern portion of the city along County Road 33 (State Street). The City may permit new mixed use developments on properties where the developer demonstrates that the architectural and site design of the uses are coordinated and that the uses are compatible with each other and the neighboring properties.

Residential density for new mixed use development is 8-10 units per acre, unless approved as a planned unit development, with the density specified by the City as part of the review process. It is anticipated that 100% of areas guided for Mixed Use will be available for commercial and residential. Because of the flexibility of the Mixed Use designation to accommodate a variety of housing types and densities, it is anticipated that new multifamily housing, both rental and owner, will be primarily located in these portions of the city.

Commercial

The City has designated areas for continued business use in the downtown area. The City encourages new development and redevelopment within the downtown area to provide for revitalization and needed services to New Germany residents. It is anticipated that the Dakota Rail Regional Trail, completed in 2012 on an abandoned rail line running through downtown, has the potential to bring in visitors and customers for the downtown area.

There are limited areas for planned for new commercial development within the current boundaries. This is because of the desire to encourage business uses in the downtown and core areas of the community along County Road 33/State Avenue. Other commercial or retail uses can be accommodated in Mixed Use designated areas. Both commercial and mixed use development are allowed within the city's B – Business/Commercial District.

Industrial

A limited area for light industrial uses is located at the west end of the downtown, adjacent to municipal uses and areas planned for medium density residential development. As industrial development expands, the active areas of the planned uses should be located, when possible, away from the planned residential areas to minimize impacts. Additionally, landscaping should be provided along the common property boundaries to separate the uses. Industrial uses are allowed within the city's I – Industrial District.

Institutional

The Institutional planning area provides ongoing opportunities for government, religious, nonprofit, or other institutional facilities. The City Hall and municipal garage, fire station, the Camden Town Hall, St. Marks Church and school are located on properties designated for Public/Institutional uses. Outside of the city limits, the St. Marks cemetery and the Lutheran Church located on 62nd Street, and the city's wastewater treatment plant are designated institutional uses. Institutional uses are allowed across multiple zoning districts, depending on the specific use.

Park

Areas designated for park and recreation uses are to be used for public and private recreational, open space, and other similar uses. New park facilities should be planned as part of new residential development, however, the exact location and design will not be known until the development review process. Park and associated facilities should be easily accessible to residential neighborhoods and be located in an area where amenities exist or can be provided. Parks are allowed across multiple zoning districts.

Wetlands and Water

There is a modest amount of wetlands and open water located within the city limits. At present, these areas are contained within broader areas guided for other land uses, although they are netted out when calculating development capacity of these areas.

Major Road Right-of-Way

This category includes public vehicular or pedestrian right-of-way. There is little right-of-way in New Germany, given the distance to principal arterials and other major roadways as well as the conversion of the former rail corridor to a regional trail.

Density Calculations

Based on the above future land use plan and land use calculations, residential and commercial land use needs have been calculated to help New Germany plan for and accommodate Metropolitan Council projections for population, households, and employment. Residential calculations are detailed in **Table 2.15**, and employment calculations are detailed in **Table 2.16**.

Residential

Based on Metropolitan Council estimates for 2015, there are about 163 households in 173 housing units in New Germany. Projections estimate an additional 167 households will be added to the City by 2040. To accommodate this growth in households, about 218 housing units are anticipated to be needed by 2040.

Table 2.15 – Residential Density Ranges

Land Use	Density Range (Units/Acre)		Units Needed	Minimum Acres	Maximum Acres	Developable Acres
	Minimum	Maximum				
Low Density	3	4	193	48	64	137
Medium Density	4	10	0	0	0	0
Mixed Use	8	10	25	3	6	10
Total			218	51	71	147

The City of New Germany has more than sufficient acreage to meet projected residential need. The expansion of the Mixed Use district is intended to accommodate multifamily and higher density residential development.

Commercial

Based on Metropolitan Council estimates for 2015, there are about 57 jobs in New Germany. Projections estimate an additional 44 jobs will be added to the city by 2040. Anticipated employment distribution based on existing industries in the city are shown in **Table 2.16**.

Table 2.16 – Employment Density Ranges

Land Use	Density Range (Jobs/Acre)		Jobs Needed	Minimum Acres	Maximum Acres	Developable Acres
	Minimum	Maximum				
Commercial	8	33	9	0.3	1.1	10
Industrial	9	13	31	2.4	3.5	3
Institutional	6	10	4	0.4	0.7	7
Total			44	3.1	5.2	20

The City of New Germany has sufficient land planned for Retail/Commercial and Institutional uses to meet forecasted need. Retail/Commercial development is expected to primarily occur in Mixed Use areas. However, there is insufficient land planned for Industrial uses to meet forecasted need, assuming the minimum job density. According to these calculations, the city's shortage of Industrial land is less than one acre, meaning the city can easily accommodate anticipated industrial jobs if higher job densities are achieved. This will depend on the types of businesses expanding or starting in New Germany. Additional land is available in Mixed Use areas, but not all industrial uses may be permitted in this area.

Staged Development or Redevelopment

Rural Center communities must include a staging plan to show the sequence of growth and anticipated timing. The goal of the Staging Plan is to manage growth and guide the orderly and cost effective provision of infrastructure at a rate that is consistent with forecasted growth, at the same time responding appropriately to market conditions.

The earliest staging years are adjacent to existing development and then extend from this point in a logical sequence based on what the city believes is the most logical and efficient pattern of growth. Staging is limited to the areas within New Germany that are located within the MUSA. City services will need to be extended to accommodate planned development.

Figure 2.3 shows the staging plan for the city, divided by the horizon years: 2020, 2030, and 2040. **Table 2.17** shows how housing units and jobs are allocated in terms of stage and acres.

2040 Comprehensive Plan

New Germany, Minnesota

Future Land Use - Growth Staging

March 2018

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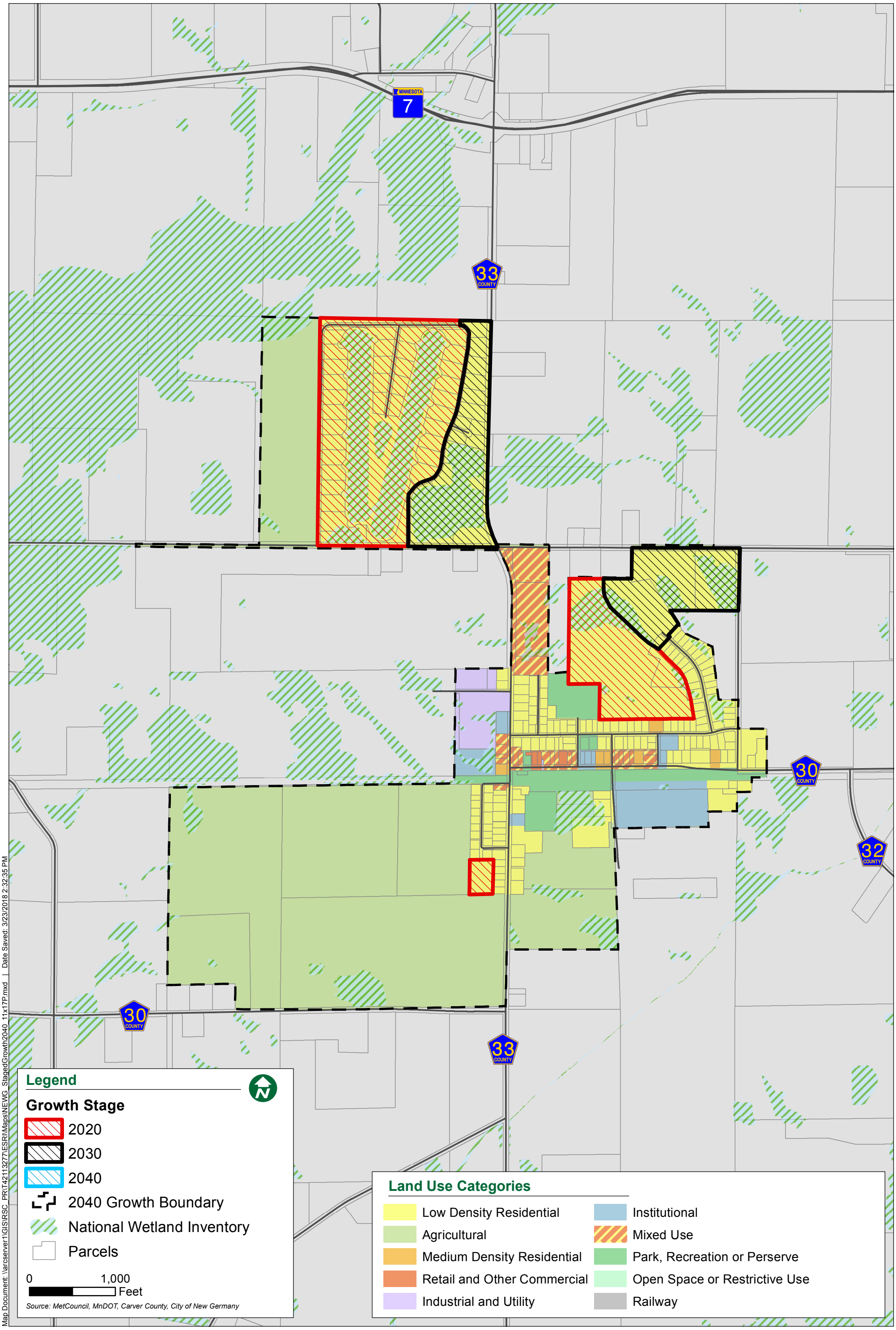

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Table 2.17 – Future Land Use Units/Jobs/Acres												
Within Urban Service Area	**Average Density Range Housing Units/Acre**		**Existing (2015)**		**2020**		**2030**		**2040**		**Total Avg. Density**	**Change 2015-2040**
Residential Land Uses	**Min**	**Max**	**Units**	**Ac**	**Units**	**Ac**	**Units**	**Ac**	**Units**	**Ac**	**Units/ Acre**	**#**
Low Density	3	4	147	66.5	64	21.4	64	21.4	64	21.4	3	64.3
Medium Density	4	10	16	2.3	0	0.0	0	0.0	0	0.0	7	0.0
Mixed Use	8	10	10	5.4	8	1.0	8	1.0	8	1.0	4	3.1
C/I Land Uses	**Estimated Employment/Acre**		**Jobs**	**Ac**	**Jobs**	**Ac**	**Jobs**	**Ac**	**Jobs**	**Ac**	**Jobs/ Acre**	
Commercial	8	33	10	12.8	3	0.4	3	0.4	3	0.4	1	1.1
Industrial	9	13	36	1.72	10	1.2	10	1.2	11	1.2	13	3.5
Public/Semi Public Land Use												
Public/Institution	6	10	5	9.5	1	0.2	1	0.2	2	0.3		0.8
Subtotal Sewered			173/51	89	73/14	25.3	73/14	25.3	73/16	25.3		76.9
Outside Urban Service Area	**Min Lot Size**	**Max Lot Size**	**Existing (2015)**		**2020**		**2030**		**2040**			**Change 2015-2040**
	Min	**Max**	**U/J**	**Ac**	**U/J**	**Ac**	**U/J**	**Ac**	**U/J**	**Ac**		
Agriculture 40+	0.025	-	0	262	0	0	0	0	0	0		0
Subtotal Unsewered			0	262	0	0	0	0	0	0		0
Vacant Land (with Sewer Access)			0	262	0	181	0	129	0	99		-147
Total				613	73/14	207	73/14	156	73/16	126		

A summary of each stage of development is provided below. The staging plan prioritizes areas that are contiguous to existing development, particularly those where there has already been site preparation work and extension of infrastructure and utilities.

2020

The first stage of development, through 2020, includes the main area of the former Trophy Lakes development site, northwest of the intersection of County Road 33 and 62nd Street. This site already has local roads constructed to serve development parcels, with access off of 62nd Street. Utilities have been extended to near the entrance of the development. Individual development sites are already graded, and ready for development. Additionally, stormwater management has already been completed with the construction of amenity lakes at the center of the site.

This stage also includes the western portion of the Black Forest development in the northeast quadrant of the city. This area has already been graded and prepared for construction of roads and development. Utilities have been extended to this area.

This stage also includes a small residential development area at the southwest corner of the developed portion of the city. This would require minimal extension of road and utilities from adjacent uses.

Commercial, industrial, and mixed use development will be accommodated through infill of existing

developed areas within the city.

Currently, there is not enough capacity in the city's existing sewage treatment facility to meet demand for this phase of development. The sanitary sewer element of this plan describes the recommended approach to constructing an expansion to the existing facility to add needed capacity.

The water supply system currently has capacity to meet demand for this phase of development.

2030

The second stage of development, through 2030, will include the eastern portion of the Black Forest development in the northeast quadrant of the city. The site is adjacent to the first developed phase. Although not yet fully graded and prepared, it would require a minimal extension of a local road, and extension of utilities from adjacent sites.

This stage will also include parcels to the east of the former Trophy Lakes development site, with access off of County Road 33. Utilities are available nearby.

Commercial, industrial, and mixed use development will be accommodated through infill of existing developed areas within the city.

If the sewage treatment facility expansion is completed in the previous phase, it is anticipated that there will be sufficient capacity to meet demand in this phase as well.

The water supply system currently has capacity to meet demand for this phase of development.

2040

This stage allocates no new areas of the city for growth, as it is anticipated that forecasted growth can be accommodated through infill development the buildout of the areas initiated in earlier years.

Commercial, industrial, and mixed use development will be accommodated through infill of existing developed areas within the city.

If the sewage treatment facility expansion is completed in the previous phase, it is anticipated that there will be sufficient capacity to meet demand in this phase as well.

The water supply system currently has capacity to meet demand for this phase of development.

Natural Resources

Natural resources are beneficial to the social, environmental, and economic vitality of a community. To ensure their quality and benefits, it is essential to plan and manage natural resources and areas as we do residential and commercial areas. New Germany residents value the natural resources in the area and prioritize their protection throughout anticipated growth.

This section describes these resources in more detail, including the implications for planning for future development. **Figure 2.4** provides an overview of these resources, with particular attention to those that impact which areas are developable.

Topography and Aquifer

The topography and soils within the New Germany area were formed from the Des Moines Lobe outwash from the Wisconsonian glacial period. The New Germany area lies within the Hamburg Moraine that extends though the western portion of Carver County. The topography is characterized by gently rolling terrain with few areas of steep slopes.

The Franconian aquifer is the main source of water in New Germany, which is also open to the Ironton-Galesville aquifer. The geologic sensitivity rating of the aquifer is classified as “moderate”, as is the case in most of Carver County. The geologic sensitivity rating is a means of determining contamination of the uppermost aquifer, and is directly proportional to the groundwater travel time. A “moderate” rating indicates that potential contamination of the uppermost aquifer may occur within “years to decades”, if proper environmental precautions are not observed.

Typically, aquifer contamination is not as much of a concern in areas that are served with public sewer and water, as opposed to areas that are dependent on private on-site sewage treatment systems and individual wells. Other activities, such as development, farming and effluent from wastewater treatment facilities may also deteriorate the aquifer, if not properly managed.

Susceptibility to contamination is based upon a combination of factors, including the ability of the soil to absorb contaminants, transform the contaminants into inert substances, dilute them to be inactive and release them into the aquifer. Typically, sandy soils aggravate aquifer contamination to a greater degree than loam or clay soils. It should be noted that high sensitivity does not indicate that water quality has or will be degraded, and low sensitivity does not guarantee that water is or will remain pristine.

2040 Comprehensive Plan

New Germany, Minnesota

Development Constraints

September 2017

Resource Strategies Corporation

BOLTON & MENK

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Highway 7
Highway 7
53rd Street
53rd Street
Highway 7
Highway 7
Vega Avenue
Highway 7
MINNESOTA 7
County Road 33
33 COUNTY
Vega Avenue
Beach Ball Lane
Trophy Lake Drive
Trophy Lake Drive
State Avenue North
62nd Street
62nd Street
62nd Street
62nd Street
62nd Street
Hilda Avenue
Manning Street
Park Street East
Broadway Street East
1st Street Northwest
66th Street
30 COUNTY
32 COUNTY
State Avenue South
Yale Avenue
County Road 30
County Road 30
30 COUNTY
County Road 33
Welcome Road
Carver County
County Road 33
74th Street
74th Street
County Road 32
Yale Avenue

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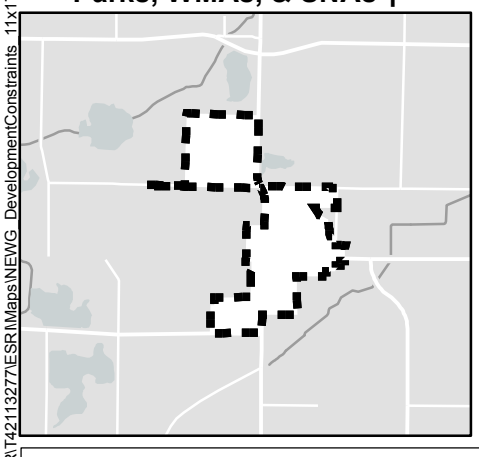
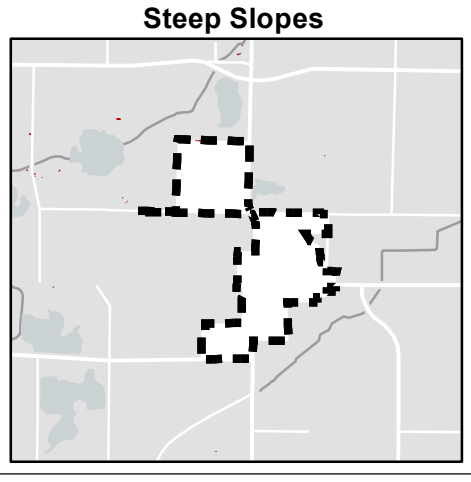
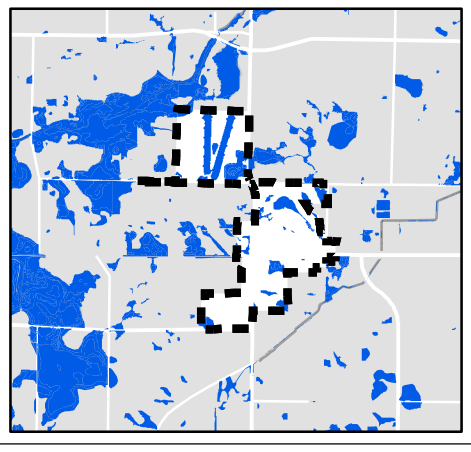
Parks, WMAs, & SNAs †



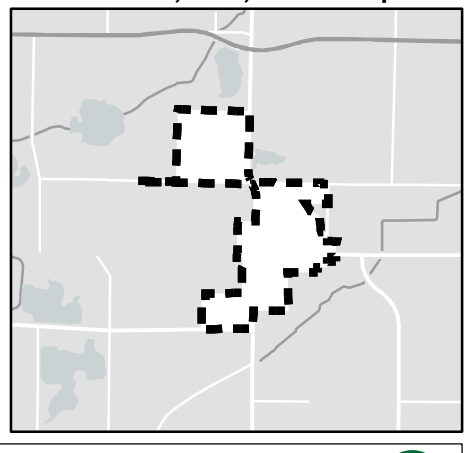
Steep Slopes



Wetlands & Waterbodies



Road, Rail, & RBTN ‡



Legend

2040 Growth Boundary

City Limits

0 500

Feet

Other Considerations

Prime Farmland

Shorelands

Undevelopable*

* Undevelopable layer is a compilation of the four categories (Parks, Steep Slopes, Wetlands & Waterbodies, and Road, Rail & Trails) shown to right.

† Wildlife Management Area & Scientific and Natural Area

‡ Regional Bike Trail Network

Source: MetCouncil, MnDOT, Carver County, City of New Germany

Soils

There are five major soil series within the city and three minor soil associations located outside of the municipal boundaries. The major soil series are described as follows:

- Cordova and Webster Series - these soils are found primarily in the agricultural land in the western part of the New Germany area. They are characteristically poorly drained on end moraines, requiring drainage and some site and construction engineering.
- LeSueur-Lester Series - these soils are found primarily in the western agricultural area, but are also scattered in the developed area of the city. They are, typically, moderately well-drained soils.
- Glencoe Series - these soils are found scattered in small areas around the city. They are very poorly-drained, lying generally in shallow depressions and drainage ways. During wet periods the water table is often found near the surface.
- Canisteo Loam - These soils are found in the northeast portion of the city. They consist of poorly-drained soils, found typically in rims of drainage ways and slight rises within wet depressions.
- Palms Series- These soils are found in small areas in the northwest corner of the city, in the undeveloped area west of Camden Street, and in the developed area in the north part of the city. They are poorly-drained peats, requiring extensive drainage, removal, and fill prior to any consideration of development.

Vegetation

Much of the pre-settlement vegetation in the New Germany area has been altered as a result of the agricultural and settlement activities. This portion of Carver County was included in the “Big Woods” of the eastern broadleaf forest. Tree species within the “Big Woods” included hardwoods such as oak, maple, basswood and hickory.

The remaining significant vegetation in the city is primarily located on residential properties and along road boulevards. Stands of hardwoods are located to the south and southeast of Lindstrom Park, east of St. Marks School, and in the northeastern area of the city.

Figure 2.5 shows the land coverage of areas in the New Germany area obtained from the DNR’s Minnesota Land Cover Classification System (MLCCS). To the northwest of the city, there are wooded and herbaceous areas associated with the stream (ditch) that connects to the South Fork of the Crow River.

2040 Comprehensive Plan
New Germany, Minnesota

Land Cover
March 2018

Resource Strategies Corporation

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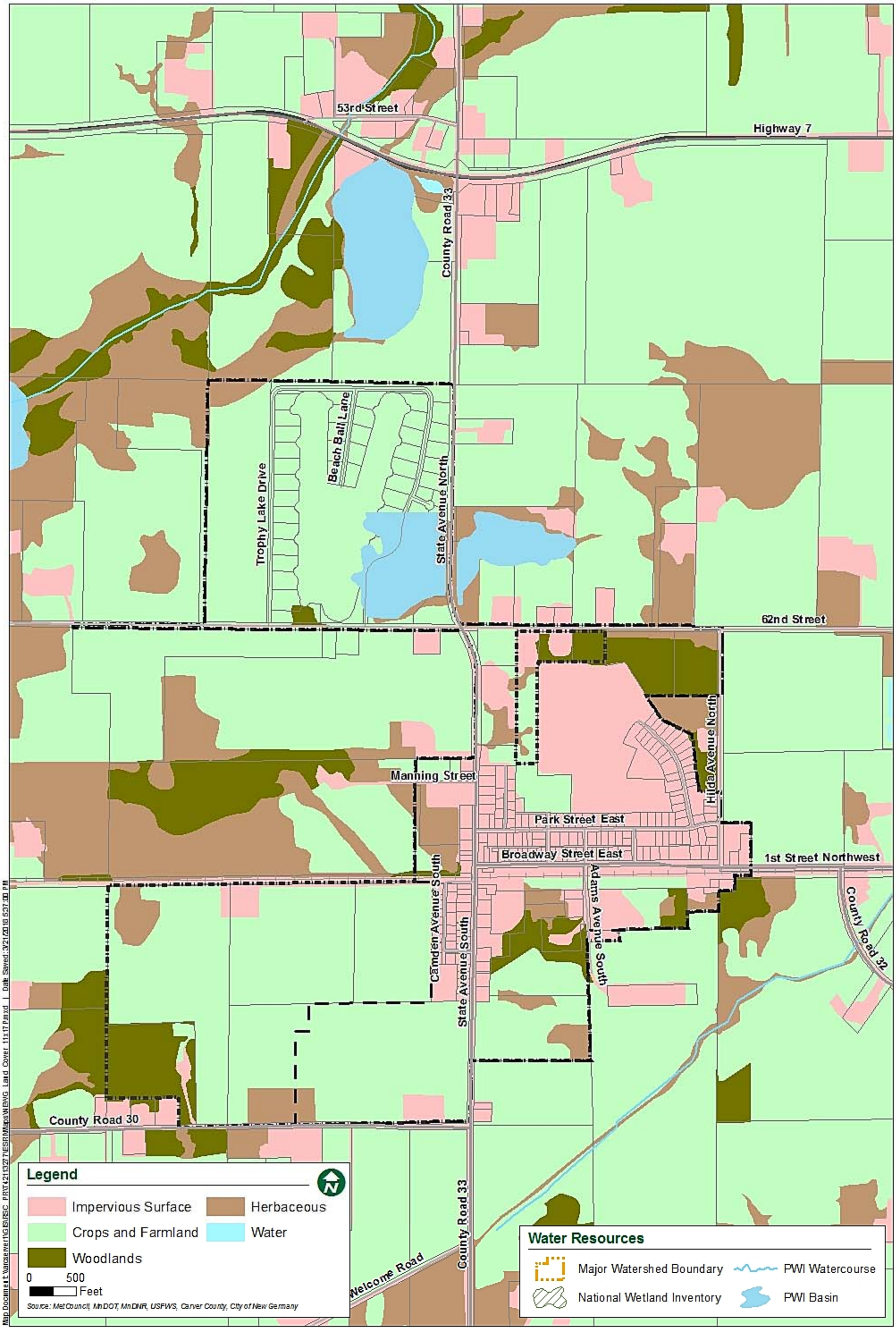

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Water Resources

The New Germany area lies within the Crow River Watershed. The area drains into the South Fork of the Crow River located to the east of the city. The South Fork extends northward through Wright County and joins the Crow River near Rockford and discharges to the Mississippi River near Rogers.

Drainage is facilitated to the river by County Ditch No. 9, as shown on Figure 4, located east of the city, which enters South Fork near Mayer. Drain tile exists along a portion of Hilda Avenue and connects to County Ditch No. 9 north of County Road 30.

The National Wetland Inventory (NWI) map indicates that there are several wetlands in the New Germany area. However, it is probable that some of these wetlands no longer remain in their natural state because of the historical agricultural activities that predate wetland conservation requirements.

There are four types of the regulated wetlands that are present in the New Germany area as shown on **Figure 2.6.** The following describes the characteristics of these wetlands:

Type 1 - Seasonally Flooded Basin or Flat

- Soil: Usually well-drained during much of the growing season
- Hydrology: Covered with water or waterlogged during variable seasonal periods
- Vegetation: Varies greatly according to season and duration of flooding from bottomland hardwoods to herbaceous plants
- Common sites: Upland depressions, bottomland hardwoods (floodplain forests)

Type 3 - Shallow Marsh

- Soil: Usually waterlogged early during growing season
- Hydrology: Often covered with 6 inches or more of water
- Vegetation: Grasses; bulrush; spikerush; and various other marsh plants, such as cattail, arrowhead, pickerelweed, and smartweed
- Common sites: May nearly fill shallow lake basins or sloughs; may border deep marshes on landward side, commonly as seep areas near irrigated lands

Type 6 - Shrub Swamp

- Soil: Usually waterlogged during growing season
- Hydrology: Often covered with as much as 6 inches of water; water table is at or near the surface
- Vegetation: Includes alder, willow, buttonbrush, dogwood, and swamp privet
- Common sites: Along sluggish streams, drainage depressions, and occasionally on floodplains

Type 7 - Wooded Swamp

- Soil: Waterlogged within a few inches of the surface during the growing season
- Hydrology: Often covered with as much as 1 foot of water; water table is at or near the surface
- Vegetation: Hardwood and coniferous swamps with tamarack, northern white cedar, black spruce, balsam fir, balsam poplar, red maple, and black ash; deciduous sites frequently support beds of duckweed and smartweed

- Common sites: Mostly in shallow ancient lake basins, old riverine oxbows, flat terrains, and along sluggish streams

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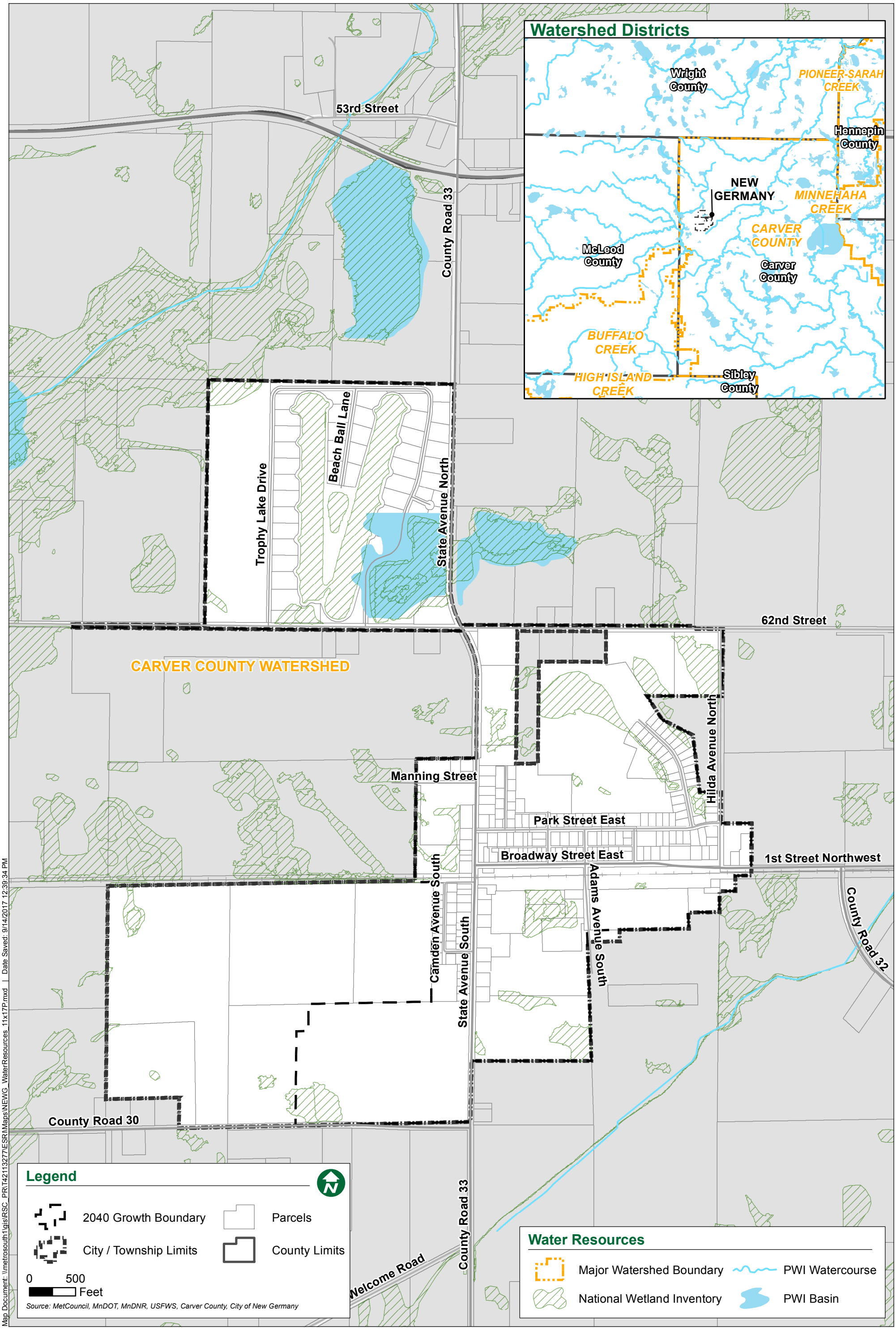

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Special Resource Protection

Agricultural Land

The state Agricultural Preserve program conveys tax benefits to properties that are maintained for agricultural production. This voluntary program requires that maximum density of residential structures in an agricultural preserve shall not exceed one unit per 40 acres. The Metropolitan Council also requires that these parcels be guided as agriculture on the future land use map. Once this status is entered into, there is a multi-year process necessary to remove it from the program.

At the time of the writing of this plan, no parcels in New Germany have this status. However, Camden and Hollywood Townships have a number of properties with this status outside the city limits.

The City of New Germany has implemented zoning restrictions to preserve land for agricultural purposes, and the city will work with both townships, Carver County, and the Metropolitan Council to ensure prime soils and farmlands are preserved as future development is considered.

Historic Resources

There are no properties or structures in New Germany that are on the National Register of Historic Places. Additionally, there are no properties that the Minnesota Historical Society has identified as eligible for national designation. The City is committed to preserving and commemorating its history, since it serves to reinforce the quality of life associated with a rural center in Carver County. The City will work with the State of Minnesota, Carver County Land and Water Services Division, and the Carver County Historical Society to identify and publicize any potential historic resources and to expand efforts to protect and preserve them.

Aggregate Resources

There are no aggregate resources in New Germany.

Community Facilities

The City of New Germany provides a full range of municipal services, at a level consistent with communities of its size and location. Municipal government services and the City Council chambers are situated within the City Hall located on Broadway Street (CSAH 30) in the center of town. The City Hall also serves as a senior citizen center and community meeting facility. The fire hall houses fire equipment and the administrative office for the volunteer fire department. The municipal garage is located on the west side of State Avenue (CSAH 33) north of Park Street East. The City contracts with the Carver County Sheriff's Department for police services.

New Germany is located within the Waconia Independent School District (ISD 110), although there are no public school buildings within the city. Children are bused to the elementary, middle and high schools located within Waconia. There is one private elementary school within the city: the St. Marks-St. Johns Elementary School located south of Broadway Street.

The Camden Township Hall also is within the city limits. It is located on the on the east side of State Street South.

Resilience

Resiliency in planning and development helps to ensure the prosperity, livability, equity, and sustainability of a community for future generations. Resilience planning focuses on all aspects of community, ensuring the economy, the environment, and social/living conditions are vibrant and upheld through adversity. To foster and support resiliency and sustainability in New Germany, the mayor and city administrator signed a resolution in June, 2016 to make New Germany a registered GreenStep City through the MPCA and League of Minnesota Cities' program. New Germany is currently a Step 2 City.

Currently, the City has completed 3 actions in the "Buildings and Lighting" Best Management Practice. New Germany has obtained 3 stars for efficient outdoor lighting by replacing street lights with LEDs. This action was completed through a partnership with Xcel Energy. The City has obtained two stars for efficient public buildings using LED for security lights on two city buildings and upgrading all exit lights to LEDs. New Germany has also achieved one star in this category by upgrading two furnaces with energy efficient units and replacing one air conditioner. All these actions increase energy savings for the municipality.

New Germany also completed 2 actions in "Land Use" Best Management Practices, earning 1 star for each action. Specifically, New Germany plans to adopt Carver County's land use plan during this comprehensive plan update to engage in sustainable land use practices and management. Then, with the adoption of both this and Carver County's comprehensive plan, the City will update its zoning code to reflect these land management guidelines. New Germany has also earned 1 star in environmental management for adopting a stormwater management ordinance that limits the width of roads, requires runoff to be retained on site, and/or an erosion and sediment control provision.

As New Germany plans for the future, it will continue to consider GreenStep City Best Management Practices as they relate to the goals and objectives of this comprehensive plan. Currently, New Germany is working towards developing a sustainable purchasing plan that meets Best Practice criteria.

Solar Energy

Accommodating and using renewable energy sources is another element of planning for resilience. The Metropolitan Land Planning Act (Minnesota Statues 473.859, Subd. 2) requires local comprehensive plans to include for the protection and development of access to direct sunlight for solar energy systems.

The City recognizes that the use of alternative energy sources is important to preserving natural resources. Currently, the structure setback and height standards within the Zoning and Subdivision Ordinances are sufficient to prevent potential interference to solar collectors from adjacent structures and vegetation. Solar collection and geo-thermal heating/cooling is permitted in all zoning districts in conjunction with permitted uses in each district.

According to the Metropolitan Council, New Germany has the following solar potential, detailed in **Table 2.18**. These calculations assume a 10% conversion efficiency and current (2016/17) solar technologies. The average home in Minnesota consumes between 9 and 10 Mwh/year (Solar Energy Industries Association; US Energy Information Administration). Using only New Germany's rooftop generation potential, between roughly 241 and 268 homes could be powered by solar energy annually, which is more than the city's current number of housing units. For most communities, the rooftop generation potential is equivalent to between 30% and 60% of the community's total electric energy consumption.

Table 2.18 – Solar Resource Calculations

Gross Potential (Mwh/yr)	Rooftop Potential (Mwh/yr)	Gross Generation Potential (Mwh/yr^2)	Rooftop Generation Potential (Mwh/yr^2)
2,324,233	24,116	232,423	2,411

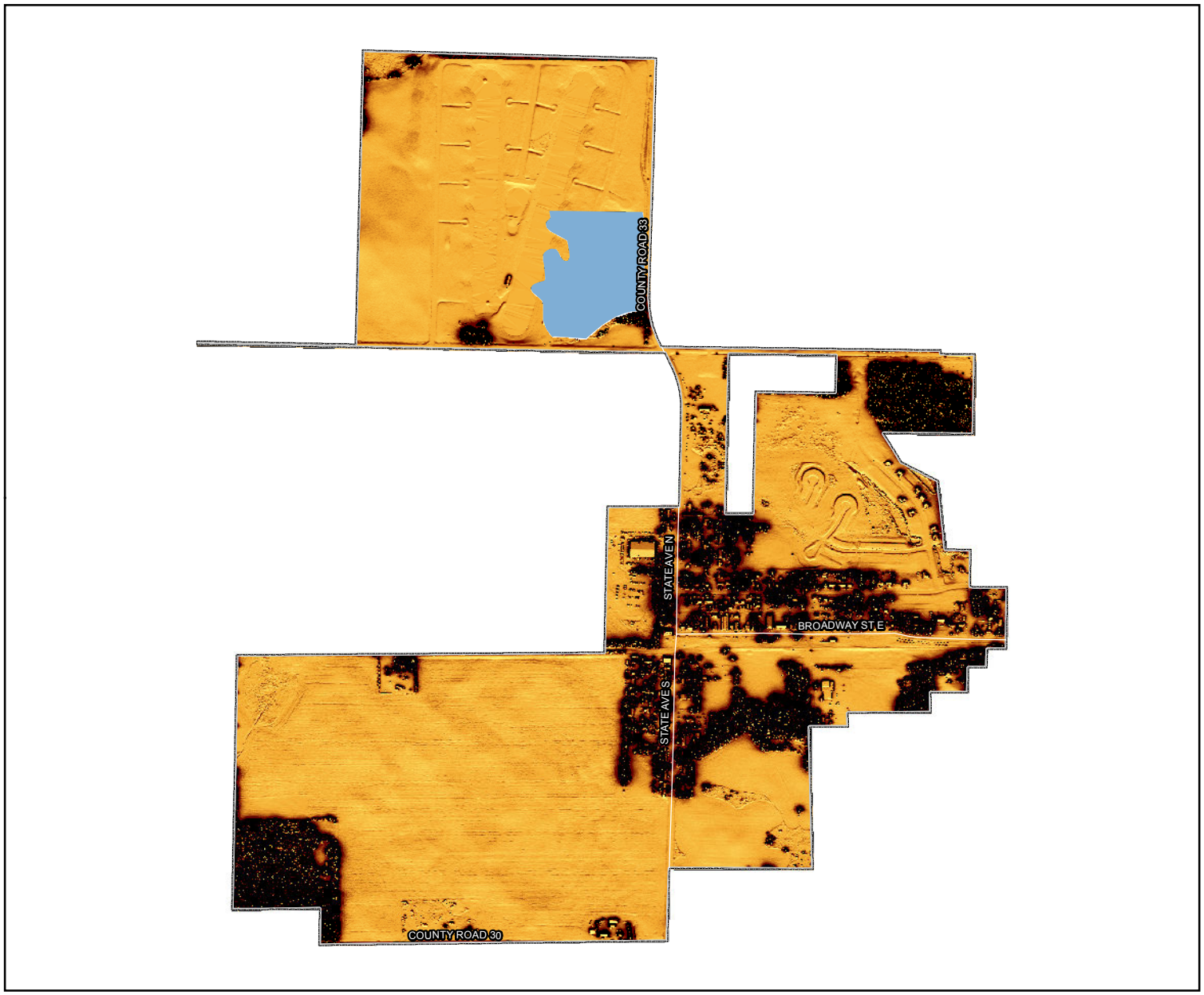
Source: Metropolitan Council

Figure 2.7 shows solar potential across the city. As expected, the areas with highest potential are open fields without structures or trees.

The City of New Germany's goal relative to solar resource development is meeting state standards regarding access to direct sunlight for solar energy systems. Its policy is to maintain zoning and subdivision standards which satisfy this requirement.

Gross Solar Potential

City of New Germany, Carver County



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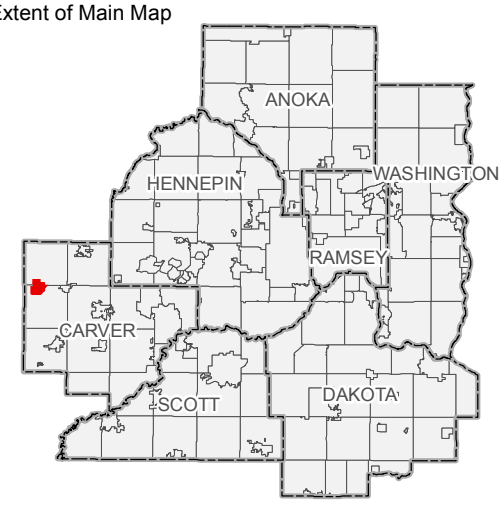
Extent of Main Map



Gross Solar Potential
(Watt-hours per Year)

High : 1278424

Low : 900002

Solar Potential under 900,000 watt-hours per year

County Boundaries

City and Township Boundaries

Wetlands and Open Water Features

Source: University of Minnesota U-Spatial Statewide Solar Raster.

Economic Competiveness

Pursuing economic competitiveness involves a range of strategies to strengthen the existing economy and business mix, and planning for future employment growth. Carver County Community Development Agency (CDA) offers the following services and programs to promote community and economic development throughout the county, including in New Germany.

The City of New Germany supports the use of these programs and other tools and strategies to support development and redevelopment within the community.

Open to Business

The Carver County CDA has partnered with the Metropolitan Consortium of Community Developers (MCCD) to bring the Open to Business program to Carver County. The Open to Business program provides one on one business counseling to current and prospective entrepreneurs. Open to Business consultants work with entrepreneurs to develop a strong business plan, to identify challenges and opportunities, and to tailor solutions. The service is available free of charge to all county residents, and to any business located in Carver County.

In addition to consulting, Open to Business program can link entrepreneurs to financing for a variety of business purposes, including equipment financing, inventory, cash flow/working capital needs and start-up costs. Open to Business has capital available to make loans directly to small businesses, and can assist entrepreneurs in creating an attractive loan package to apply to banks and other lending institutions.

Community Growth Partnership Initiative

The Community Growth Partner Initiatives Grant Program was created and funded by the Carver County CDA in January of 2016, transitioning away from its old Business Loan Fund program. The goals of the program are to increase the tax base and improve the quality of life in Carver County through three specific strategies: affordable housing development, job creation, and redevelopment.

Chapter 3: Housing

Purpose

This chapter provides an overview of existing housing conditions in New Germany. It also includes a plan to accommodate affordable housing as required through the Metropolitan Council and a supporting implementation program for housing in general.

Existing Housing

As of 2015, New Germany contained 173 housing units, 85% of which are single family and 15% are multifamily. Most homes are owner occupied (74%). Nearly all homes in New Germany affordable to incomes below 80% AMI (97%). However, about 32% of households in New Germany experience cost-burden – meaning they are spending more than 30% of their monthly income on housing costs. This gap between affordable units and cost burdened households can indicate that there are not enough units affordable to households with lower incomes. These and other housing conditions are outlined in **Tables 3.1 and 3.2**.

Table 3.1 – Housing Conditions

Housing Units	**Number of Units**	**Percent of Total**
Total Housing Units	173	100%
– Owner Occupied	128	74%
– Rental	45	26%
Single Family Homes	147	85%
Multi-family Homes	26	15%
Publicly Subsidized		
– Senior Housing	0	0%
– Housing for People with Disabilities	0	0%
– All Other Publicly Subsidized Units	8	5%
Affordable Housing		
Housing Units affordable to households with incomes at or below 30% Area Median Income (AMI)	10	6%
Housing Units affordable to households with incomes between 31 and 50% Area Median Income (AMI)	109	63%
Housing Units affordable to households with incomes between 51 and 80% Area Median Income (AMI)	49	28%

Source: Metropolitan Council

Table 3.2 - Households Experiencing Cost Burden	
Existing households experiencing housing cost burden with incomes below 30% AMI	19
Existing households experiencing housing cost burden with incomes between 31 and 50% AMI	23
Existing households experiencing housing cost burden with incomes between 51 and 80% AMI	14

Source: Metropolitan Council

Table 3.3 shows household characteristics in the city with comparisons to the county over the last three census periods and an estimate for 2015. The number of households (people living in one housing unit) and families (people living in one household and related to the householder) increased in the city and the county between 1990 and 2015. However, the percentage increase is substantially lower in New Germany than the county. As the numbers of households and families have grown, the average household size has decreased in the county, drawing closer to city proportions, which have remained fairly constant over the past 25 years.

Table 3.3 - Households and Families				
	1990	**2000**	**2010**	**2015**
New Germany				
Number of Households	138	143	146	163
Percent Increase		4%	2%	12%
Number of Families	92	95	99	98
Percent Increase		3%	4%	-1%
Carver County				
Number of Households	16,601	24,356	32,891	35,510
Percent Increase		47%	35%	8%
Number of Families	12,864	18,774	24,378	25,966
Percent Increase		46%	30%	7%

Source: 2010 U.S. Census and Metropolitan Council

New Germany has a smaller number of persons per household and persons per family than other western Carver County communities and the countywide average, as shown in **Table 3.4**. The number of persons per household and family decreased in New Germany, the cities, and the county between 1990 and 2000 but have deviated throughout the 2000s. New Germany, Mayer, and Norwood Young America have seen increases in persons per household while other communities and the county have continued to decrease average persons per household. Similar decreases between 1990 and 2000 and select increases since then can be seen in the average number of persons per family.

Table 3.4 - Historical Populations of Carver County Communities								
	Persons per Household				Persons per Family			
	1990	2000	2010	2015	1990	2000	2010	2015
New Germany	2.56	2.42	2.55	2.56	3.17	2.98	3.09	3.03
Hamburg	2.67	2.61	2.55	2.50	3.19	2.99	3.09	2.8
Mayer	2.84	2.78	2.96	3.04	3.39	3.26	3.30	3.37
Norwood Young America	2.78	2.65	2.55	2.61	3.31	3.19	3.05	3.16
Watertown	2.74	2.71	2.65	2.63	3.28	3.22	3.22	3.15
Carver County	2.84	2.84	2.74	2.75	3.26	3.26	3.22	3.21

Source: Decennial U.S. Census, 1990, 2000, 2010; Metropolitan Council Community Profiles/Estimates

Housing type and tenure for the city is shown in **Table 3.5**. The primary housing type in the city is single family homes, with the second highest being apartments in three to four unit buildings. In New Germany, over 80% of housing units were owned in 2010 rather than renter occupied.

Table 3.5 – Housing Tenure and Type, 2015							
	Single Family	Attached	Two Units	Three-Four Units	5+ Units	Mobile Homes	Total
Owner Occupied	119	0	0	2	0	0	121
Renter Occupied	13	0	6	5	21	0	45
Total	132	0	6	7	21	0	166

Source: 2011-2015 American Community Survey

About 67 percent of the residences in New Germany were built before 1970 as shown in **Table 3.6**. The majority of homes in New Germany were built before 1950. Only Hamburg has a similarly high percentage (55%) of older residences of the western Carver County communities built before 1970. As a whole, over half of the new residences in Carver County have been built since 1970 with the vast majority constructed after 1990. Most of these new housing units have been constructed in the eastern communities of Chaska, Victoria, and Waconia.

Table 3.6 - Age of Housing in Carver County Communities									
	Pre 1950	1950-59	1960-69	1970-79	1980-89	1990-99	2000-09	Post 2010	Total
New Germany									
Number	72	18	23	28	9	6	10	1	167
Percent	43%	11%	14%	17%	5%	4%	6%	1%	100%
Hamburg	35%	7%	13%	16%	13%	8%	7%	0%	100%
Mayer	10%	2%	6%	4%	3%	8%	64%	4%	100%
Norwood Young America	20%	3%	10%	26%	5%	9%	24%	3%	100%
Watertown	11%	8%	2%	14%	15%	19%	29%	2%	100%
Carver County	11%	4%	5%	12%	14%	24%	28%	3%	100%

Source: 2011-2015 American Community Survey

Table 3.7 depicts the reported owner occupied housing value in 2015. Nearly 90 percent of the homes in New Germany were valued less than $200,000. The city has a higher percentage of lower cost homes and rental rates than the rest of the western Carver County communities. Also, the median value in New Germany in 2015 was the lowest compared to similar western communities and the countywide average.

Table 3.7 - Housing Values in Western Carver County Communities							
	Less than $100,000	$100,00 - $199,999	$200,00 - $299,999	$300,00 - $499,999	Over $500,000	Total	Median Value
New Germany	23%	66%	8%	2.5%	0%	100%	$130,500
Hamburg	24%	63%	13%	1%	0%	100%	$138,400
Mayer	3%	60%	33%	5%	0%	100%	$188,900
Norwood Young America	13%	62%	22%	4%	0%	100%	$163,500
Watertown	28%	43%	26%	3%	0%	100%	$162,700
Carver County	8%	24%	28%	28%	13%	100%	$267,000

Source: 2011-2015 American Community Survey

The median household income of New Germany residents in 2013 was $64,131 compared to the median household income of $80,049 for Carver County. So while housing costs in New Germany are lower than average, this is somewhat offset by the lower incomes of resident households. **Table 3.8** shows median household incomes, sale values, and rental rates in New Germany and the county.

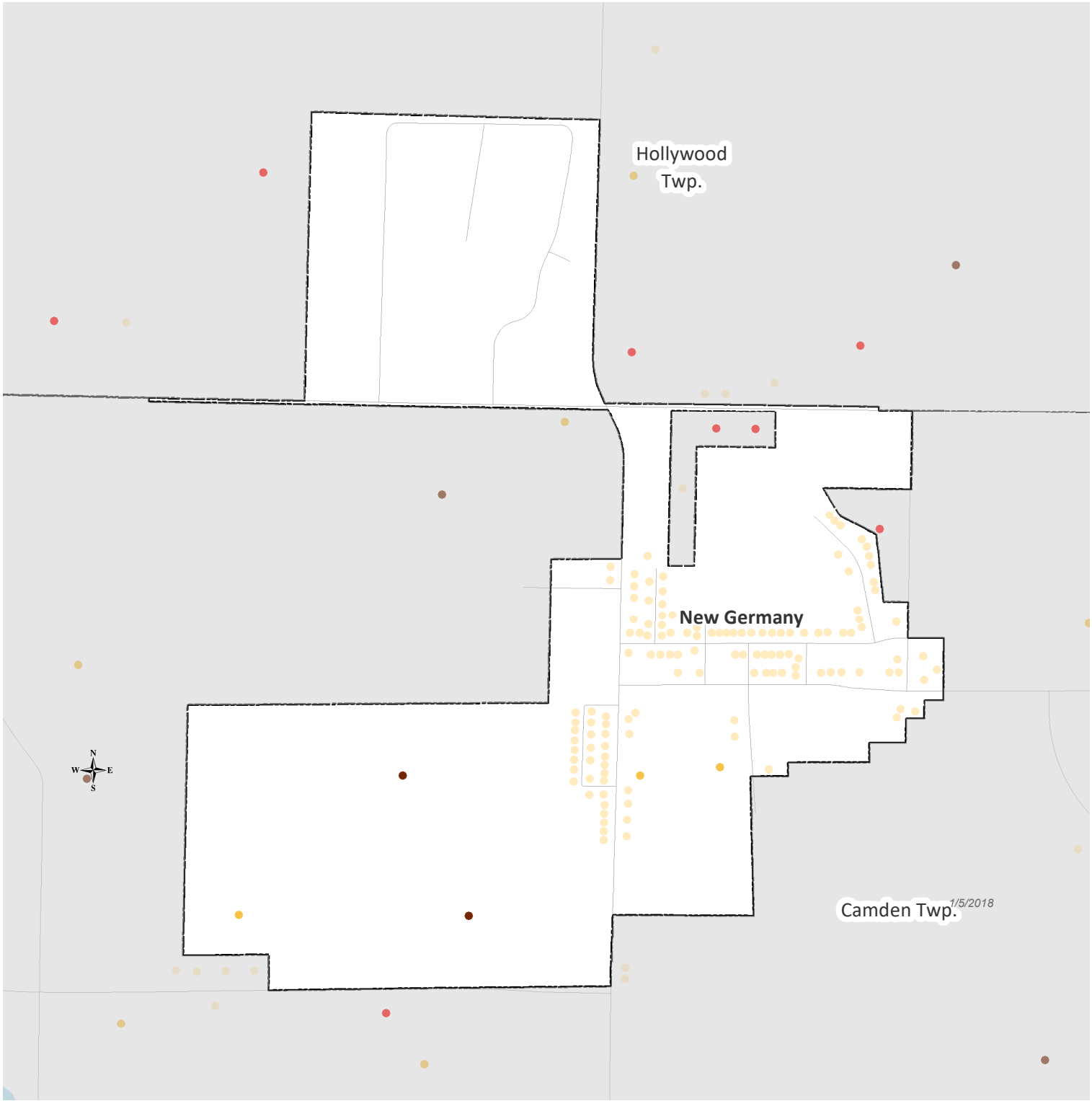
Table 3.8 - 2013 Income, Resale Values, and Rental Rates		
	New Germany	**Carver County**
Median Household Income	$64,131	$80,049
Average resale price of existing single family home	$142,450	$270,000
Average sales price of new construction single family home	$220,000	$310,804
Average Monthly Rental Rate		
- One-bedroom unit	$540	$763
- Two-bedroom units	$650	$973
Affordable/Subsidized rental Units	8	680

Source: Maxfield Research, Inc.

Figure 3.1 shows the location of owner occupied units in the city, by value. The vast majority are valued at less than $238,000.

Owner-Occupied Housing by Estimated Market Value

New Germany



County Boundaries

City and Township Boundaries

Streets

Lakes and Rivers

Owner-Occupied Housing
Estimated Market Value, 2016

- $243,500 or Less
- $243,501 to $350,000
- $350,001 to $450,000
- Over $450,000

1 in = 0.24 miles

N
W
E
S

Source: MetroGIS Regional Parcel Dataset, 2016 estimated market values for taxes payable in 2017.

Note: Estimated Market Value includes only homesteaded units with a building on the parcel.

Projected Housing Needs

The 2014 *Housing Needs Assessment for Carver County*, conducted by Maxfield Research, projects a housing demand of 450 units in New Germany from 2014 to 2040. It is notable that this is significantly higher than the Metropolitan Council forecast. Although the Metropolitan Council forecasts are being used in this plan, insights from the housing needs assessment are also being incorporated.

Of these units, it is projected that 60 units will be rental and 390 will be owner occupancy. For rental units, it is anticipated all units will be general occupancy rentals. Most of New Germany's rental units are over 50 years old and will likely need renovations or replacement in the coming years, especially since there has been no multifamily housing development in New Germany in recent years.

For owner occupancy units, 25 of the 390 units are projected to be senior ownership options. There is not current demand for senior housing in New Germany, but demand will likely increase as the city's population ages. Approved and planned lots in the city should accommodate most single and multi-family housing demand through at least 2030.

Maxfield's assessment also projects New Germany, in combination with other Western Carver County communities (Cologne, Hamburg, Mayer, and Norwood Young America), will account roughly 10% to 15% of Carver County's new housing development between 2020 and 2030. The majority of housing demand in New Germany is anticipated to be from residents seeking affordable single-family homes. Affordable rental demand is anticipated to increase after 2025.

Housing Market Study

The *Carver County Affordable Housing Update*, completed by Community Partners Research, Inc. in July 2017, looked into the housing market and stock within New Germany. The study found that the housing market in New Germany will be largely driven by anticipated household growth, which will demand a commensurate level of new housing unit creation. New Germany also has a notable amount of empty lots due to the fall in the housing market during the Great Recession, that will likely lead to an above normal level of development in the coming years for the city. The city is also planning on a waiver of outstanding assessments for the Trophy Lake subdivision, and reduced sewer and water connection fees for new houses to stimulate growth. The study looked at growth in a five year period, and assumed a projected growth of 3 to 5 households per year, which would require an increase of 3 to 5 housing units over the five year period. The study then assumed a tenure split of 20% renters and 80% owners, meaning the city would need to grow by 3 to 5 total rental units and 12 to 20 total owner units to meet growth-generated demand.

Home Ownership Recommendations

New Germany has seen an above-average level of growth and development in 2016 and 2017 as a result of the availability of deeply discounted lots that exist due to the housing market crash in the early 2010s. Two subdivisions, Black Forest and Trophy Lakes, are likely to be purchased and developed fully, and this will likely create enough housing to meet demand till 2021. The challenge that the city will likely face is creating a supply at market prices. The Black Forest subdivision will likely create affordable ownership units. The Trophy Lake subdivision was designed to be a specialized community, and the values of the homes built there will likely be above market rate or developed into seasonal homes. It is possible that homes being built in the short term will meet the goal of affordable single family housing for those between 50 and 80% AMI. To meet this goal for those at less than 30% AMI would likely require the construction of a small-scale subsidized rental project.

Rental Housing Recommendations

The rental market in New Germany is underserved, yet the city likely does not have the required elements to support much of a larger rental market. New Germany could be what is considered a "bedroom" community for a while. These communities generally have limited amenities, as they serve as people's homes, but generally residents of these cities are actively engaged in other cities economies as well as having very little access for transportation to basic services. This has made it so that New Germany is a city with relatively few services and amenities, and is therefore not an ideal location for rental or affordable housing. Still, the study recommends that New Germany plan to develop at least 3 to 5 units of rental housing in the next five years and notes that duplexes or four-plexes are the most likely form of rental housing to be supported in the city.

Senior-Designated Market Share

While the population in New Germany is older than the rest of the county, the extremely limited nature of the city's rental market, there is realistically very little opportunity for housing units that are designed for a specific market. Instead, development should be built as accessible to seniors, but ultimately designed for general occupancy.

Affordable Housing Allocation

The Affordable Housing Allocation reflects the region's forecasted population that will need affordable housing. According to the Metropolitan Council's affordable housing allocation, New Germany's share of affordable housing need through the year 2040 is 21 units, noted in **Table 3.9**. AMI refers to Area Median Income, which is used as a regional standard for what units are considered affordable.

Table 3.9 – Affordable Housing Allocation	
At or below 30% AMI	9
From 31% to 50% AMI	0
From 51% to 80% AMI	12
Total Number	**21**

Source: Metropolitan Council.

The 2014 Housing Needs Assessment from Maxfield Research anticipates a need for 60 affordable rental units from 2014 to 2040, which is higher than the Metropolitan Council's affordable housing allocation. Of these 60 units, it is projected that 45 units will be shallow subsidy (50-80% median income) and 15 will be deep subsidy (50% median income).

Presently, the City of New Germany guides sufficient land to meet demand for these units. The Mixed Use district, which is guided in this plan for a minimum of 8 units per acre, can meet all the demand. This may require an update to the zoning ordinance to ensure zoning standards are consistent.

The City is committed to working with the Carver County Community Development Agency, Minnesota Housing Finance Agency and other organizations to maintain housing affordability in the community and to accommodate additional new affordable units. The implementation plan section of this chapter covers a range of programs available to assist with developing and maintaining affordable housing.

Affordable Housing Study

The study performed by Community Partners Research, Inc. estimates that the city would be required to

create one to two rental units in the next five years to serve demand. The allocation between these units would ideally be one that serves households under 30% AMI and one that is affordable to those that are between 50 and 80% AMI. The development of some of these units will likely be difficult.

For units that are to housing those between 50 and 80%, New Germany may have already meet the new demand with the construction of the lots in the Black Forest subdivision. The potential that achieving any level of production within the most affordable price ranges (below 50%) of median income is very unlikely. The City should attempt to encourage construction in a moderate price range, serving households up to 80% AMI

In addition to this, the City of New Germany is a city with few series and amenities and has no reliable public transportation to basic services, and therefore is not a preferred location for low income housing

Housing Implementation Plan

The City of New Germany is committed to encouraging the availability of affordable housing as a long term community value. Today, many of the existing homes in New Germany are considered affordable for a family of four whose annual adjusted income is at or below 80 percent of the area median income.

The City will continue to participate and work with programs offered by the Carver County Community Development Agency (CDA) and the Minnesota Housing Finance Agency. Additionally, the City will continue to maintain the existing Zoning Ordinance standards that allow densities that are consistent with affordable housing objectives.

In recent years, New Germany and its residents have benefitted from the Carver County CDA's programs in the following ways:

- Four homebuyer counselees from 2008 to 2016
- 35 foreclosure prevention counselees from 2008 to 2016

Table 3.10 provides a range of local options for housing implementation, based on some general housing goals for the community. **Table 3.11** provides information on the Carver County programs that can be used to further housing goals.

Table 3.10 – Housing Implementation

Housing Goal/Need	Implementation Opportunity	Policy	Fiscal	Programs
Affordable Housing (up to 80% AMI)	Mixed use and R2 zoning, PUDs	Site Assembly; Zoning Ordinance	Section 8 Rental Assistance; Tax Abatement; TIF; Rental Assistance/ Voucher Programs	Landlord Education for Inclusive Housing Policies; Community Land Trust; Affordable Mortgage Products/MCPP (Minnesota Cities Participation Program); CDA Rental Housing

Preserving existing rental housing stock	Existing rental units/parcels	Zoning Ordinance	Rental Rehabilitation Grants and Loans; 4d Tax Program	Landlord Education for Inclusive Housing Policies
Supporting Young/First-time Homeowners	Citywide		Single Family Rehabilitation Grants and Loans	Homebuyer Education (Pre and Post Purchase); Community Land Trust
Maintaining Homeownership	Citywide		Single Family Rehabilitation Grants and Loans	Foreclosure Prevention Counseling; Community Land Trust
Senior Housing	R2 zoning, PUDs	Expedited Pre-application Process; Site Assembly; Zoning Ordinance	Tax Abatement; TIF	
Assisting and Placing Homeless Individuals or Families	Citywide		Deposit Fund	Rental and Homeless Displacement Counseling; Coordinated Entry
Increasing the Livability of the City	Citywide			Livable Communities Demonstration Account

Table 3.11 – Carver County Community Development Agency Services

Tools	Purpose	Policy
Community Land Trust (CLT)	Provide affordable housing to households below 80% AMI	CLT homes are sold to homebuyers below the market value and remain permanently affordable through a 99-year renewable ground lease.
Affordable Mortgage Products/MCPP (Minnesota Cities Participation Program)	Provide mortgages to those on a median income limit with low interest rates	Affordable mortgages are available to Carver County residents through participating lenders in the Start Up and Step Up Loan programs. Borrowers must meet median income limits and interest rates are kept low by funding mortgages through a bonding allocation. First time homebuyers who are income qualified may also access down payment closing cost assistance. This service is accessed through the Homebuyer Services program.
Homebuyer Education and Pre-Purchase Counseling	Provide educational workshops to better inform prospective homeowners.	An eight hour in person workshop or an online interactive tool are available from the CDA to provide advice and guidance to prospective homebuyers through professionals that covers topics such as budgeting, credit scores, and home maintenance.

Homeowner Counseling	Provide post-purchase counseling to homeowners about issues relating to their homes.	The CDA provides counseling to homeowners that may be considering options when faced with refinancing a mortgage or facing foreclosure due to missing mortgage payments. The program operates either in person or via phone.
CDA Rental Housing	Provide affordable and/or subsidized housing across the county.	The CDA operates 610 units of affordable and/or subsidized housing across the county, 297 senior housing units and 313 workforce housing units. 33% of the units are subsidized through federal programs that require income limits.
Rental Assistance/ Vouchers	Provide affordable housing	The CDA provides access to a variety of housing assistance programs such as: Shelter Plus Care, Bridges/Bridges RTC/Bridges EHLIF, Housing Trust Fund, HTF Re-entry. Residents find housing in the private market and pay rent based on income, and the CDA makes up the difference. These are exclusively for households between 30-50% AMI, depending on the program. Some programs also help secure housing for those with serious and persistent mental illness.
Rental and Homeless Displacement Counseling	Provide counselors to work with clients to address particular needs to secure housing.	The CDA is a HUD approved rental and homeless counseling agency. Counselors provide budget and financial analysis to ensure affordability, refer low-to-moderate income households to appropriate sources, and well as other counseling services.
Coordinated Entry	Provide assistance for single adults and families that are homeless and connect them with housing options	The CDA acts as a conduit to the Coordinated Entry System, which is HUD mandated to connect the homeless with housing program resources. The Coordinated Entry system is required to be used with all programs through the CDA.
Deposit Fund	Provide assistance in the form of funding for homeless individuals or families for housing	When homeless individuals or families have found stabile housing but lack the funds needed to lease-up, this fund can be used to bridge the gap in the security deposit. The deposit is a no interest loan, and payments are structured so the previously homeless family can afford the payments.

County Housing Goals

The Carver County Community Development Authority (CDA) has indicated through its partnership with the Fair Housing Implementation Council (FHIC) that the following goals are goals that should be considered by municipalities throughout Carver County:

- 5G. Develop and deliver a fair housing education and training program for elected officials and municipal staff focused on concepts such as disparate impact and the impact of public infrastructure investments on fair housing choice
- 6D. Consider development incentives such as density bonuses and expedited permitting processes or fee waivers for voluntary inclusion of affordable units or mandatory set asides in cases where local government funding or approvals are provided, should be adopted across all jurisdictions to encourage or require mixed-income, affordable units.

Chapter 4: Parks and Trails

Purpose

The purpose of this chapter is to provide an overview of existing and planned parks and trails serving New Germany.

Parks are an important asset for a community, providing space for recreation, leisure, community gatherings, and preservation of natural resources. They also increase overall community livability, and may increase property values for nearby uses.

Trails likewise provide recreation and leisure options. They can connect parks and other community destinations. Longer trails, such as the Dakota Rail Regional Trail, can attract people from out of town who may bring activity and revenue to area businesses. Additionally, trails may serve a transportation function (further detailed in Chapter 5 Transportation).

Figure 4.1 shows existing and planned parks and trails in New Germany.

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Highway 7
County Road 33
Trophy Lake Dr
Vega Ave
Upland Ave
Yancy Ave
62nd St
Hilda Ave N
NEW GERMANY BALL PARK
Park St E
WATER TOWER PARK
Broadway St E
State Ave N
66th St
1st St NW
LINDSTROM PARK
State Ave S
McLeod County
Carver County
Yale Ave
nty Road 30

Legend

City Limits
2040 Growth Boundary
County Boundary

0 1,250 Feet

Source: Met. Council, New Germany, Carver County, MnDOT

Non-Motorized Facilities & Points of Interest

Bikeway
Other Trail
Sidewalk
Local Park
Regional Park

Figure 4.1

Regional Parks and Trails

Dakota Rail Regional Trail runs through New Germany, running parallel to Broadway Street East/County Road 30. This trail connects Lake Minnetonka to Lester Prairie, and is paved up to the Carver/McLeod County line. The trail follows an old railroad alignment, with the most recent segment through New Germany completed as of 2013. It links New Germany to the cities of Mayer and St. Bonifacius.

The trail is managed by the Three Rivers Park District. Biking and hiking are allowed along the trail, and dogs are allowed if kept on leashes. Trail access and parking are located via a trailhead near the intersection of County Road 30 (Broadway Street East) and City Road 33 (State Avenue South). There is a modest amount of linear open space along the trail corridor, although with no active uses except the trail itself.

All planned projects with the Dakota Rail Regional Trail were completed by 2013, and any future connections to other planned regional trails are not expected to be located in or near New Germany.

At present, there are no regional parks in New Germany. The closest one to the city is Baylor Regional Park, located approximately six miles south of New Germany on Eagle Lake, near Norwood Young America. That 201-acre regional park features camping sites, picnic areas, showers, swimming beach, beach house, reservable picnic shelters, ball field, tennis courts, sand volleyball court, horseshoe pits, trails, a community room, the Eagle Lake Observatory, and an 18 hole disc golf course. Park hours are from 6:00 AM to 10:00 PM.

There are no state or federal recreational lands within New Germany.

Local Parks and Trails

There currently are four local parks in New Germany, that provide a variety of recreational and leisure opportunities. Two parks have baseball/softball diamonds and one park has a playground. **Table 4.1** shows park amenities by location. Lindstrom Park, the city's largest park, is adjacent to the Dakota Rail Regional Trail trailhead, providing additional recreational options.

Table 4.1 – Park Amenities By Location

Amenities	Baseball Park	Tower Park	Lindstrom Park	Gazebo Park
Picnic Area/Shelter			X	
Playground		X		
Horseshoe Pits			X	
Concession Stand and Bathrooms			X	
Grandstand/Gazebo	X			X
Sport Courts	Baseball/ Softball	Basketball	Baseball/Softball, Tennis, Volleyball	

In addition to these city parks and amenities, St. Mark's-St. John's Lutheran School has a baseball diamond and playground facilities.

Planned Improvements

At present, there are no specific plans for park improvements, besides ongoing maintenance and upgrades to existing facilities and equipment through the City's standard budgeting process. If the County was to pursue any future improvements to the regional trail system and its amenities, the City would cooperate with any plans and implementation.

As residential neighborhoods are built out, it is anticipated that additional public parkland may be dedicated and trails constructed to accommodate growth in the population. At the time of development review, the City will consider and guide the developer's proposal to ensure the new park is complementary to the existing parks and trails system, and expands recreational opportunities for residents.

Chapter 5: Transportation

Introduction

Overview

The City of New Germany is a growing community located in western Carver County (see **Figure 5.1**). New Germany has been identified by the Metropolitan Council as a Rural Center. Rural Centers are local commercial, employment, and residential activity centers serving rural areas in the region. It is expected this area will see growth in population and jobs by 2040. Accommodating this growth will involve a number of improvements and expansions to the existing transportation network in and around the city. The timing of many of these improvements will be coordinated with future development plans.

The primary purpose of this chapter is provide guidance to city staff and elected officials regarding the implementation of effective, integrated transportation facilities and programs through the 2040 planning timeframe. This chapter is consistent with regional requirements for transportation as captured in the Metropolitan Council's 2040 Local Planning Handbook.

This chapter is organized into the following sections:

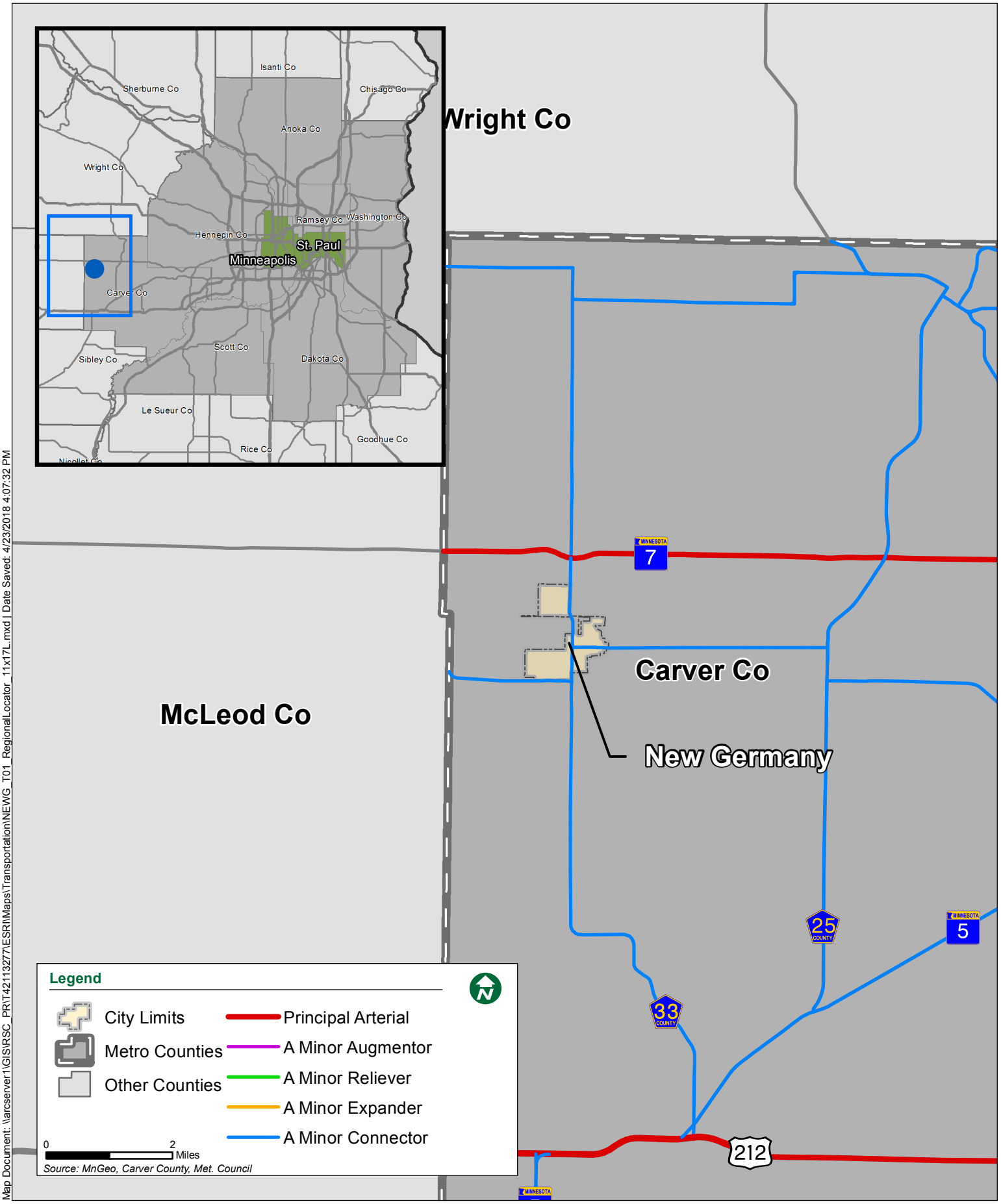
- Roadway Existing Conditions
- Summary of Relevant Transportation Studies
- Roadway System Plan
- Non-Motorized Existing Conditions and System Plan
- Transit Existing Conditions and System Plan
- Freight Plan
- Aviation Plan
- Implementation Plan

2040 Comprehensive Plan

New Germany, MN

Regional Location Map

April 2018



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Existing Roadway Conditions

Existing Traffic Volumes and Crash Data

The most basic characteristic of a given roadway is the volume of traffic that it carries. Existing traffic volumes on roadways within New Germany are presented on **Figure 5.2.** This is the most current MnDOT data available for traffic volumes on these roads.

The most recent crash data for roadways also are summarized on **Figure 5.2**. It can be seen that the highest volumes of crashes are at:

- CSAH 33 and 62nd Street
- Broadway Street East and Adams Avenue
- Broadway Street East and CSAH 32 (outside city limits)
- MN Highway 7 and CSAH 33 (outside city limits)

Jurisdictional Classification

Roadways are classified on the basis of which level of government owns and has jurisdiction over them. In the case of New Germany, roadways are under the jurisdiction of MnDOT, Carver County, or the City of New Germany. **Figure 5.3** depicts the existing roadway jurisdictional classification system in New Germany.

Functional Classification

The functional classification system is a roadway network that distributes traffic from neighborhood streets to collector roadways, then to minor arterials, and ultimately the Metropolitan Highway System. Roads are placed into categories based on the degree to which they provide **access** to adjacent land uses and lower level roadways versus providing higher-speed **mobility** for "through" traffic. Functional classification is a cornerstone of transportation planning. Within this approach, roads are located and designed to perform their designated function.

The current roadway functional classification map for New Germany as identified by the Metropolitan Council is presented on **Figure 5.4.** The roadway system presently consists of four roadway functional classifications:

- Principal arterial
- "A" minor arterial
- Major collector
- Local street

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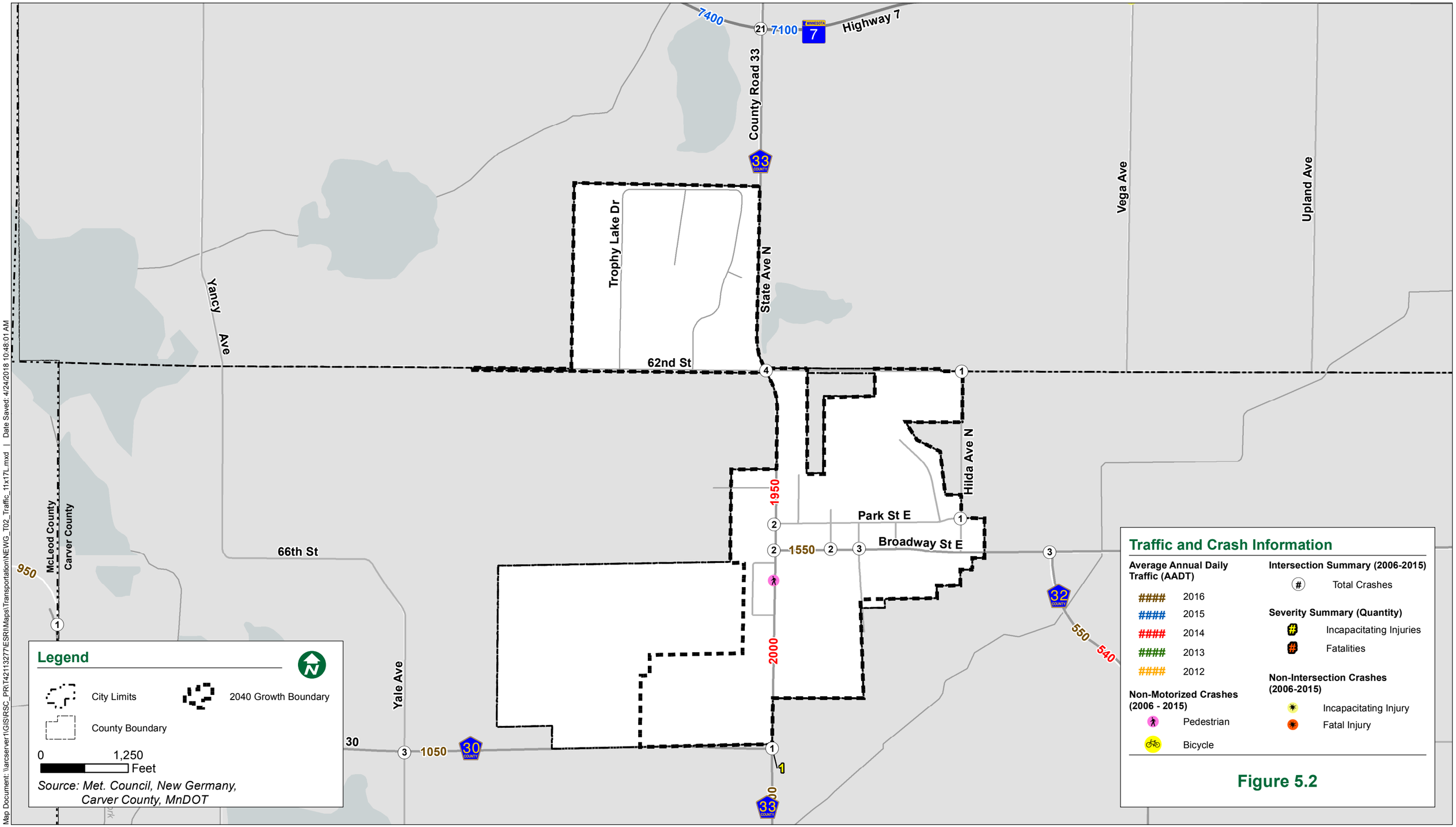

Figure 5.2

Existing Roadway Jurisdiction

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Highway 7
7
County Road 33
33
Trophy Lake Dr
62nd St
Vega Ave
Upland Ave
Yancy Ave
Hilda Ave N
Park St E
State Ave N
Broadway St E
1st St NW
30
Adams Ave S
32
State Ave S
66th St
McLeod County
Carver County
Yale Ave
nty Road 30
30
33

Legend

City Limits
2040 Growth Boundary
County Boundary

0 1,250
Feet

Source: Met. Council, New Germany, Carver County, MnDOT

Jurisdictional Classifications

- MnDOT
- Carver County
- Township Road
- Municipal Street
- Private Road

Figure 5.3

Existing Roadway Functional Class

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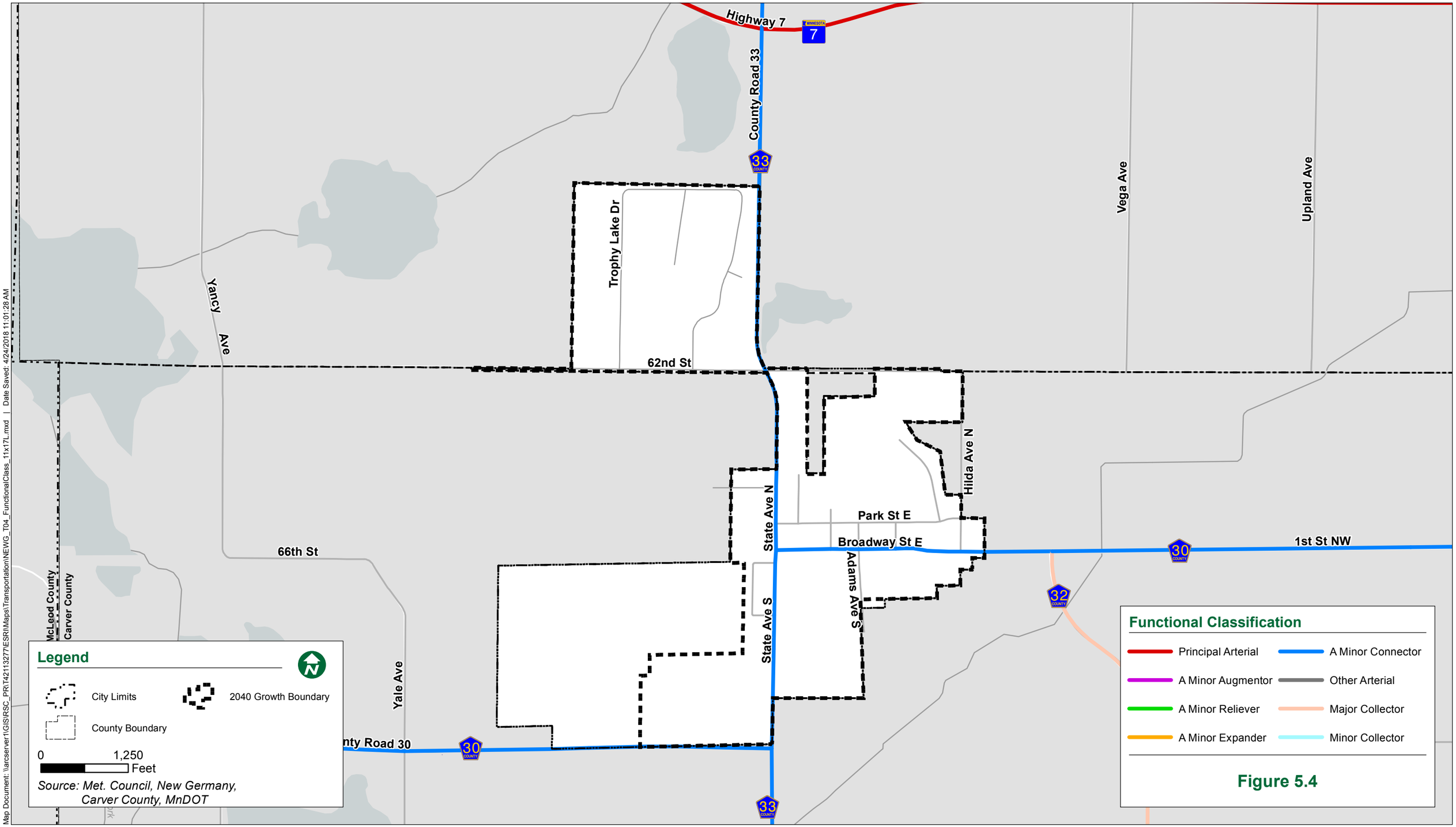


Figure 5.4

For arterial roadways, the Metropolitan Council has designation authority. Local agencies may request that their roadways become arterials (or are downgraded from arterial to collector), but such designations or re-designations must be approved by the Metropolitan Council. The agency which has jurisdiction over a given roadway (e.g. Carver County or the City of New Germany) has the authority to designate collector status. Each functional class located in New Germany is described below.

Principal Arterials

Principal arterials are the highest roadway classification and make up the Metropolitan Highway System. The primary function of these roadways is to provide mobility for regional trips, and they do not provide a land access function. They are intended to interconnect regional business concentrations in the metropolitan area, including the central business districts of Minneapolis and St. Paul. These roads also connect the Twin Cities with important locations outside the metropolitan area. Principal arterials are generally constructed as limited access freeways, but may also be multiple-lane divided highways.

The closest principal arterial to New Germany is MN Highway 7, located north of the city limits. There currently are none within the city's existing or planned boundary.

"A" Minor Arterials

These roads connect important locations within the City of New Germany with access points of the metropolitan highway system and with important locations outside the city. These arterials are also intended to carry short to medium trips that would otherwise use principal arterials. While "A" minor arterial roadways provide more access than principal arterials, their primary function is still to provide mobility rather than access to lower level roadways or adjacent land uses.

Metropolitan Council has defined four sub-categories of "A" minor arterials: reliever, expander, connector, and augmentor. These sub-categories are primarily used by the Metropolitan Council to allocate federal funding for roadway improvements. The different types do not have separate, specific design characteristics or requirements. However, they have somewhat different functions in the roadway network, and are typically found in certain areas within the region.

- **Relievers** provide supplementary capacity for congested parallel principal arterials. They are typically found in urban and suburban communities.
- **Augmentors** supplement the principal arterial system in more densely developed or redeveloping areas. They are typically found in urban communities.
- **Expanders** supplement the principal arterial system in less densely developed or redeveloping areas. They are typically found in urban and suburban communities.
- **Connectors** provide safe, direct connections between rural centers and to principal arterials in rural areas without adding continuous general purpose lane capacity. They are typically found in rural communities.

As shown on **Figure 5.4**, the "A" minor roads in New Germany are connectors, providing access to other "A" minor arterials and principal arterials for a rural center. The "A" minor arterial roadways in New Germany are identified in **Table 5.1**.

Table 5.1 – "A" Minor Arterial Roadways			
Roadway	**From**	**To**	**Number of Travel Lanes (Total)**
CSAH 30	Yale Avenue	CSAH 32	2
CSAH 33	MN Highway 7	CSAH 30	2

Major and Minor Collectors

Collector roadways provide a balance of the mobility and land-use access functions discussed above. They generally serve trips that are entirely within the city and connect neighborhoods and smaller commercial areas to the arterial network. Minor collectors generally are shorter in length, with lower volumes and lower speeds than major collectors. Current collector roadways are identified in **Table 5.2**, below**.**

Table 5.2 – Major and Minor Collector Roadways			
Roadway	**From**	**To**	**Number of Travel Lanes (Total)**
Major Collectors			
CR 32 (outside city limits)	CSAH 30	CSAH 135	2

Problem Issues and Locations

The planning process involved discussions with city staff, city leadership, and community stakeholders regarding transportation problems and their locations.

At present, there are few major concerns within the City of New Germany. Traffic on city roadways is relatively low volume, and there are few serious accidents. While there had been past discussion at the local and county level about creating a north-south bypass route for CSAH 33 to relieve pressure from increased traffic due to growth, the scaling back of existing and forecasted growth has led to lack of support for this alternative. In fact, there is an interest in maintaining as much traffic as possible on the existing CSAH 33 alignment to support New Germany's downtown business district located along the corridor.

The shift to including fewer new roads in the long range plan is a county-wide trend. Carver County has significantly scaled back the planned road network improvements shown in the 2030 plan, with the exception of eastern portions of the county experiencing high levels of growth and increasing congestion. This reflects scaled-back expectations of growth post-recession, as well as fiscally responsible planning for what is achievable given existing and potential funding sources. While a recent sales tax increase at the county level will fund transportation improvements, projects in the western portion of the county will predominantly be for maintenance and safety rather than capacity expansions.

There have been a few crashes along CSAH 33, including one involving a pedestrian, but not on a scale that indicates a major problem. It is recommended that the City and County continue to monitor crashes along that corridor, particularly as the relatively new Dakota Regional Rail Trail may lead to an increase in bicycle and pedestrian activity in the vicinity.

Some stakeholders did indicate that they had concerns about the intersection of CSAH 33 and Trunk Highway 7, which is located north of New Germany, outside the city limits and the limits of planned growth. Concerns were raised about the intersection's location along a curved section of Highway 7 and other issues that contributed to problems with sight lines for people turning at that intersection. This concern is supported by crash data which show 21 incidents there over a five-year period, a far greater number than any other intersection in New Germany. While this intersection would be outside of the city's jurisdiction (being outside the city limits and on county and state roads), the City would support safety improvements at that location to mitigate the concerns raised.

Summary of Relevant Transportation Studies

A summary of transportation studies relevant to the City of New Germany's roadway system is provided below.

Carver County Roadway Safety Plan (2013)

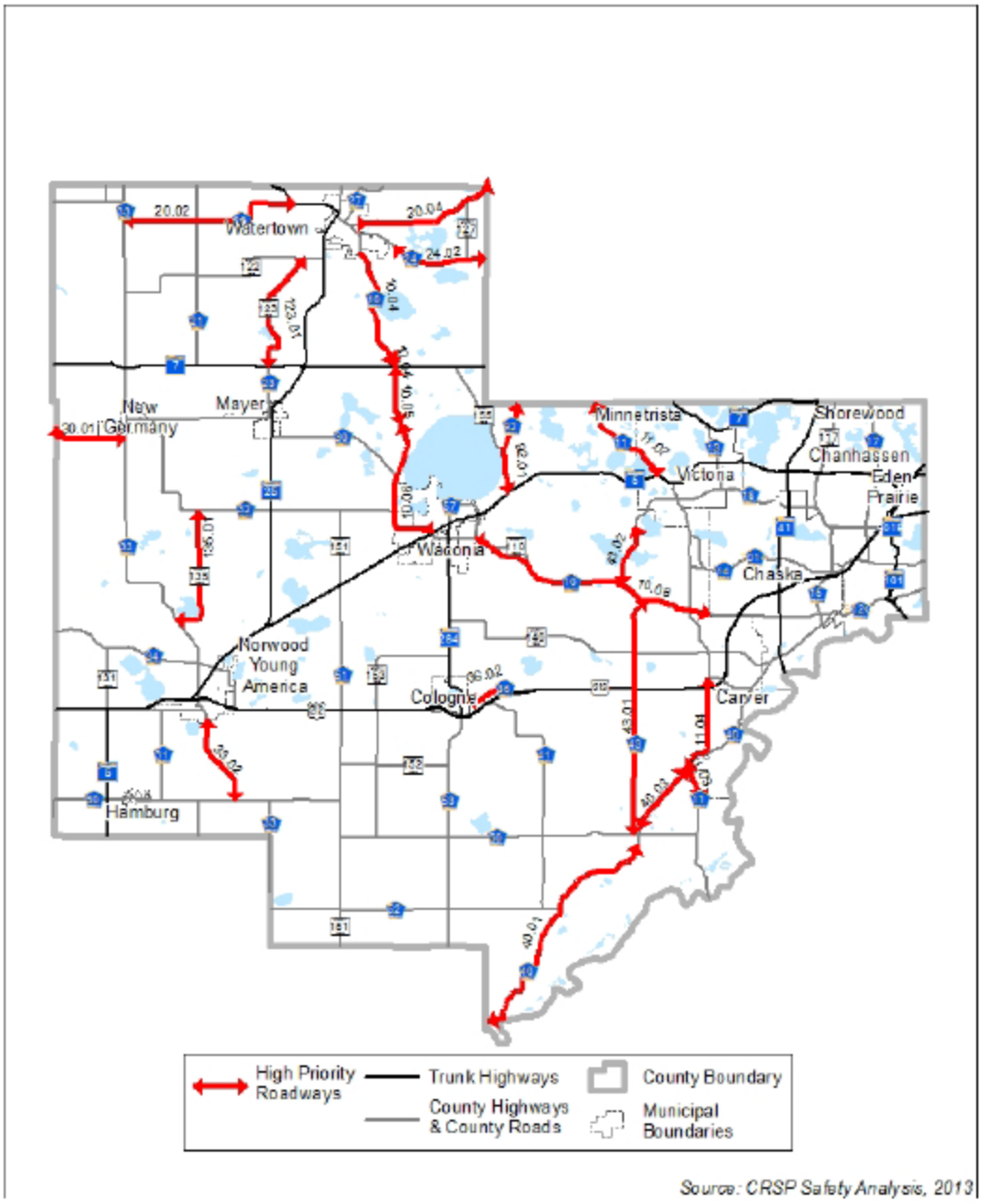
The *Carver County Roadway Safety Plan* was commissioned by MnDOT as part of a statewide highway safety planning process. This study covers the entire Carver County roadway system, and aimed to reduce the number of fatal and serious injury crashes on county highway systems. The study analyzed safety data and recommended a number of improvements. The expectation of the plan was that it would be periodically updated to reflect additional safety needs.

The study identified CSAH 30 between CSAH 33 and New Germany city limits (on the southwest side of the city) as a priority corridor for safety improvements. To address safety issues, the study recommended some lane reconfigurations and other adjustments. These recommendations were addressed in part through a 2013 reconstruction of a portion of CSAH 30 and related improvements.

The study also identified the intersection of CSAH 33 and TH 7 as the County's top priority for safety improvements. The study recommended consideration of a range of options that might be used to address concerns, including a roundabout, directional median, dynamic warning sign, upgraded lighting, and other upgraded signage and marking. A mainline dynamic warning sign was installed by MnDOT in 2013, which indicates to traffic on CSAH 33 when there is approaching traffic on TH 7. However, additional improvements to this intersection may be merited to further address safety issues.

Another priority intersection identified near New Germany is CSAH 30 and CSAH 32. Safety improvements to this intersection and the nearby roadway are being addressed through an upcoming reconstruction project of CSAH 30 between New Germany and Mayer.

Illustrations on the following pages show the location of priority intersections and corridors throughout the county.



Source: CRSP Safety Analysis, 2013

Figure 4-10
Rural Segment Projects

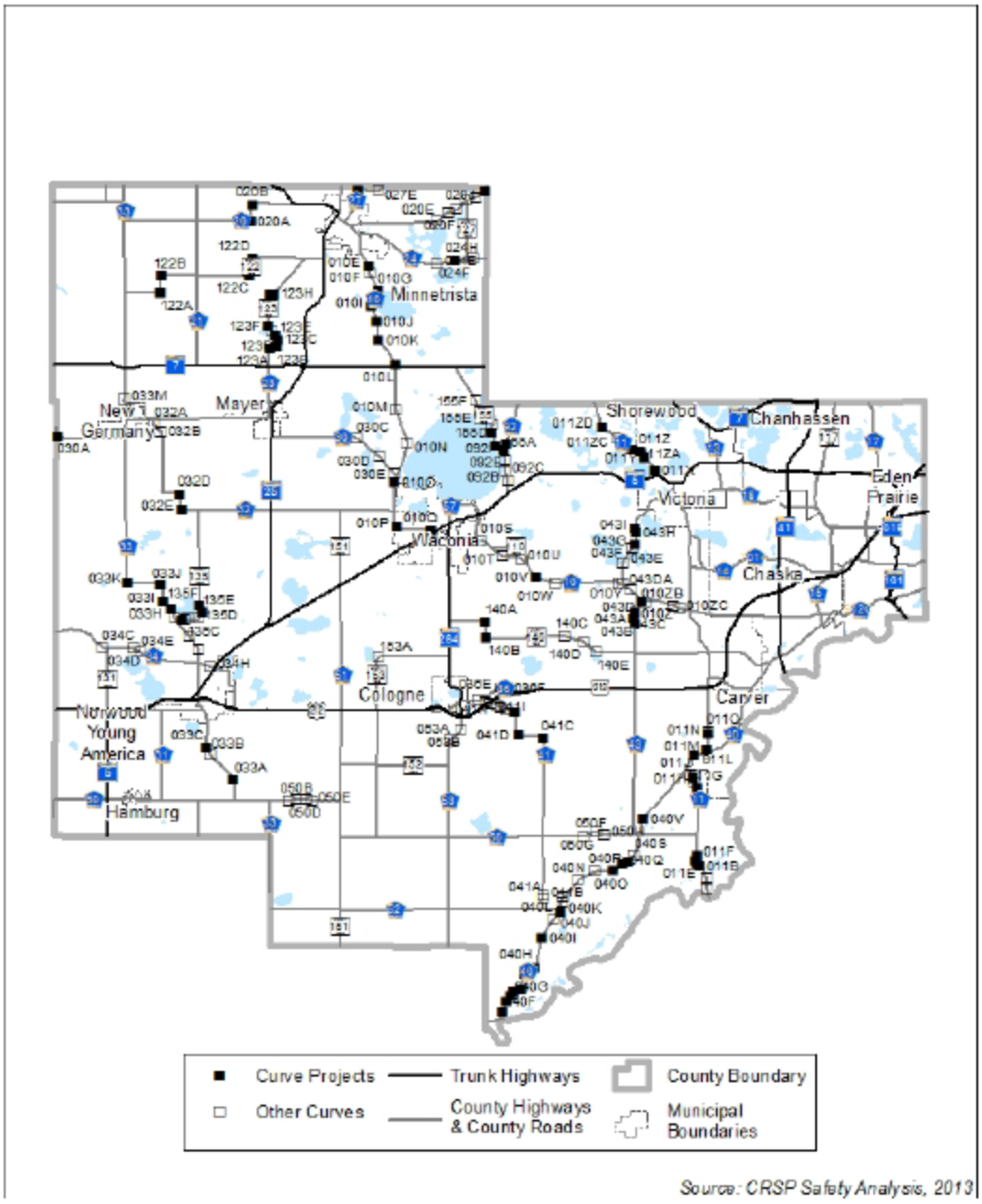
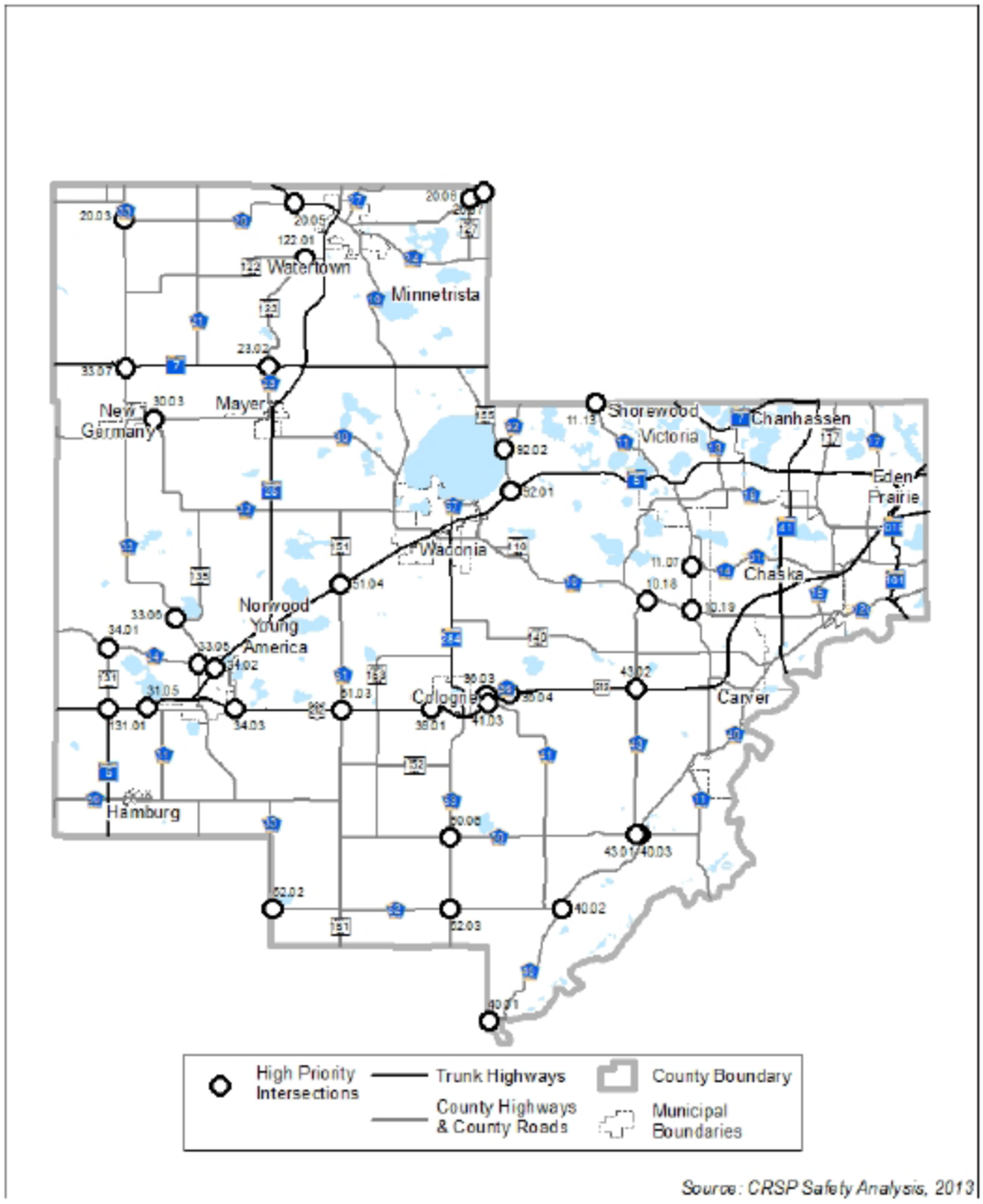


Figure 4-11
Rural Curve Projects



Source: CRSP Safety Analysis, 2013

Figure 4-12
Rural Intersection Projects

Draft 2040 Carver County Comprehensive Plan – Transportation Section (2018)

The Transportation section of the Carver County 2040 Comprehensive Plan is intended to meet regional guidelines and promote a wide range of modern, responsive, safe, and cost-effective transportation resources to support the county's rural and urban economies and growing population. This section outlines plans for county transportation facilities including principal and minor arterial highways; transit facilities; pedestrian and bicycle facilities; aviation facilities; and county freight related systems. The following provides a summary of relevant information from the Transportation Section of the Draft 2040 Carver County Comprehensive Plan:

- *Principal and Minor Arterial Highways:*
    - The Comprehensive Plan contains the Carver County 2040 Roadway Systems Plan (RSP) which identifies the following 20-year Highway Rehabilitation Plan projects:
        - CSAH 30 along the city's southern border (2029-2033). This is a County Road Transportation Tax Project (Priority C).
    - The 20-year Highway Resurfacing Plan (2018-2037) in the RSP identifies the following projects:
        - CSAH 33 bordering and north of city limits (2018 -2023)
        - CSAH 30 within city limits, east for County Road 33 (2029 -2033)
        - CSAH 33 within city limits (2029 -2033)
    - CSAH 33 within New Germany's city limits is identified as a potential jurisdictional transfer from Carver County to the City. This is dependent on a future bypass of downtown New Germany via a new county road. This bypass and jurisdictional transfer are not anticipated to occur within the 2040 planning timeframe.
    - CSAH 33 within New Germany's city limits is identified as a potential functional class re-designation from minor arterial to major collector. This is dependent on a future bypass of downtown New Germany via a new county road. This is not anticipated to occur within the 2040 planning timeframe.

Roadway System Plan

Future Roadway Network

At present, there are no plans to expand the overall major roadway network serving the New Germany area by 2040. The exception may be local roads added primarily to provide access to development sites, though these are unlikely to significantly change traffic circulation patterns in the area.

As such, the future roadway network for 2040 looks largely the same as it does today. There are no anticipated road widenings which would add lanes, so the number of existing lanes (two lanes on all roads in New Germany, with the exception of periodic turn lanes) will remain the same.

Improvements to the roadway network therefore will focus almost entirely on routine maintenance to existing facilities, and safety improvements – such as those outlined in the County's safety plan.

If at some point in the future there is significant growth that triggers the need for roadways beyond local roads providing access to developments, this will likely merit a comprehensive plan amendment, as well as traffic impact analyses to determine the overall impact to the community.

There are no planned improvements to the principal arterials in the New Germany area shown in the Current Revenue section of the TPP.

Forecasting Future Traffic

As part of the support for regional, county, and local transportation planning, the Metropolitan Council has developed and maintained a regional travel demand model. This model forecasts 2040 traffic volumes on major roadways throughout the Twin Cities region, based on expected population and job growth, observed travel behavior, and other factors. Since the model is mainly designed to work at the regional level, Carver County has done additional work to refine the analysis and results to provide more locally relevant forecasts for the county and its cities. The model information included in this plan is derived from the Carver County modified version of the regional model.

Forecasts of population, households, and employment are incorporated in to the model at the level of Transportation Analysis Zones (TAZs). The TAZs for the City of New Germany, as defined Carver County model, are presented on **Figure 5.5**. These are different than the Metropolitan Council's TAZ, namely due to the fact that Carver County has split some of the larger TAZs in the regional model to improve their ability to forecast traffic at a smaller scale, particularly in rural areas where TAZs tend to be large. Where possible, they were also designed to align with city limits.

The anticipated land use patterns discussed in Chapter 2 of this Comprehensive Plan were assumed for the 2040 transportation projections. The 2040 land use map for New Germany is presented in **Figure 2.3** in that chapter. The TAZ socioeconomic data projected for 2040 conditions are presented in **Table 5.3**, indicating both the applicable Metropolitan Council and Carver County TAZs.

The socioeconomic data in **Table 5.3** were allocated through the Carver County travel demand model. As a result of how the model was created and calibrated (including splitting up some of the larger TAZs in the regional model to provide more accurate results at the local level), the socioeconomic data totals for the TAZs are slightly different than the community forecasts. However, the differences are minor enough that they do not significantly impact the overall travel model results.

Table 5.3 – 2040 New Germany TAZ Data – County Model							
Metropolitan Council TAZ	**Carver County TAZ**	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
300	**128**	2014	283	109	2	7	9
		2020	275	119	0	10	10
		2030	293	130	3	9	12
		2040	287	128	3	11	14
303	**130**	2014	49	16	0	6	6
		2020	52	17	0	8	8
		2030	53	19	2	8	11
		2040	55	19	0	0	0
301	**132**	2014	0	0	0	0	0
		2020	17	9	0	0	0
		2030	48	25	0	0	0
		2040	83	43	0	0	0
301	**133**	2014	83	34	0	20	20
		2020	99	42	10	24	34
		2030	150	70	10	24	34
		2040	206	98	10	24	34
2014 Totals			415	159	2	33	35
2040 Totals			631	288	13	35	48
2014-2040 Change			216	129	11	2	13

Source: Metropolitan Council and Carver County

Transportation Analysis Zones

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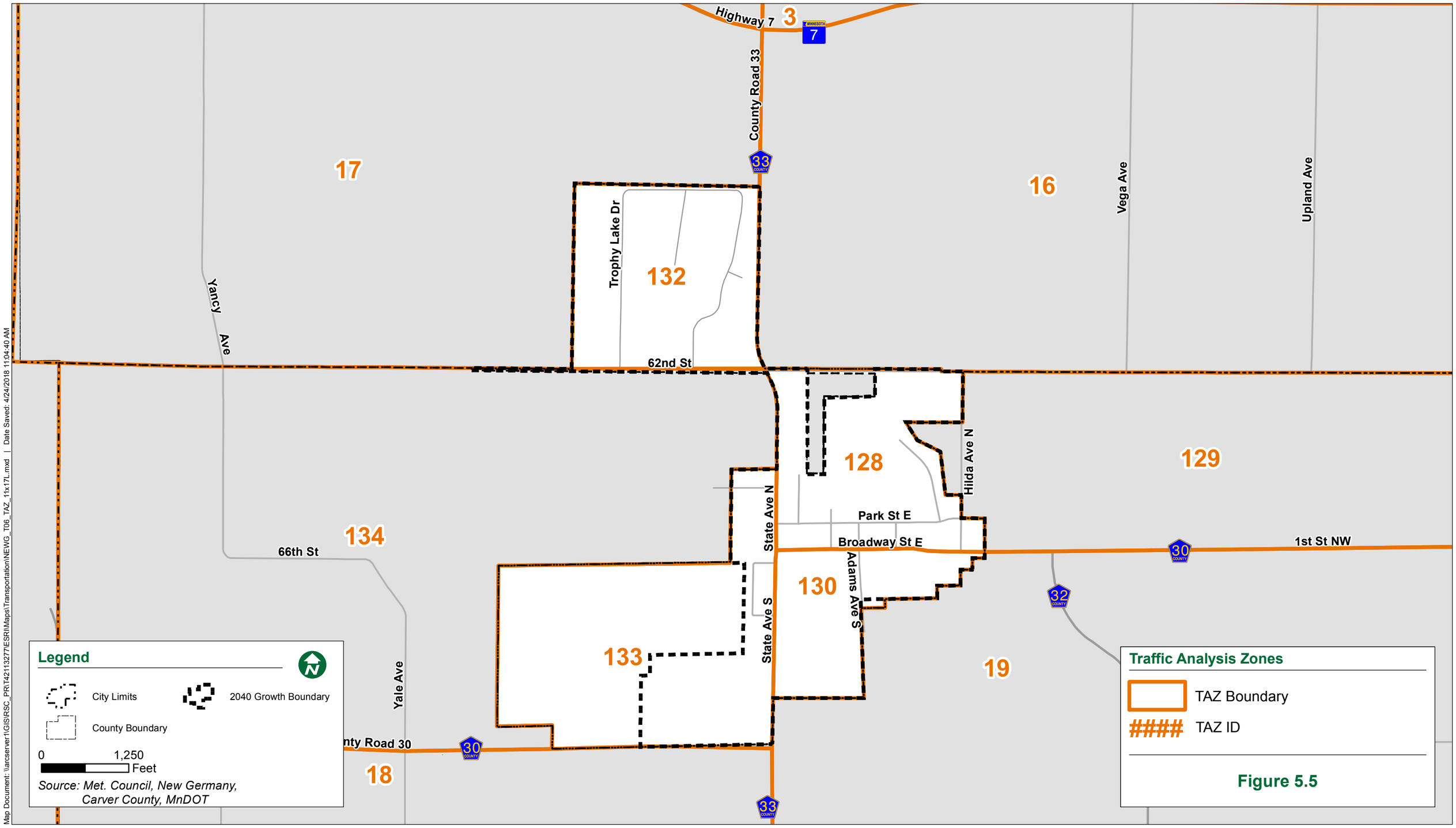

Figure 5.5

2040 Traffic Projections

Traffic projections for the year 2040 are from the Carver County transportation model. They were made based on modifications to the regional Metropolitan Council model. Factors considered in developing the model included:

- Historic trend analysis for volumes
- Assessment of anticipated local and regional development patterns and associated TAZ information
- Discussion and coordination with local, county, and regional staff regarding future plans and the update the regional travel demand model
- Review of other studies and plans for consistency

The 2040 traffic projections are presented on **Figure 5.6**. Comparing this with existing volumes on **Figure 5.2**, it is apparent that these new volumes represent a moderate increase over existing levels.

2040 Projected Traffic Volume Data

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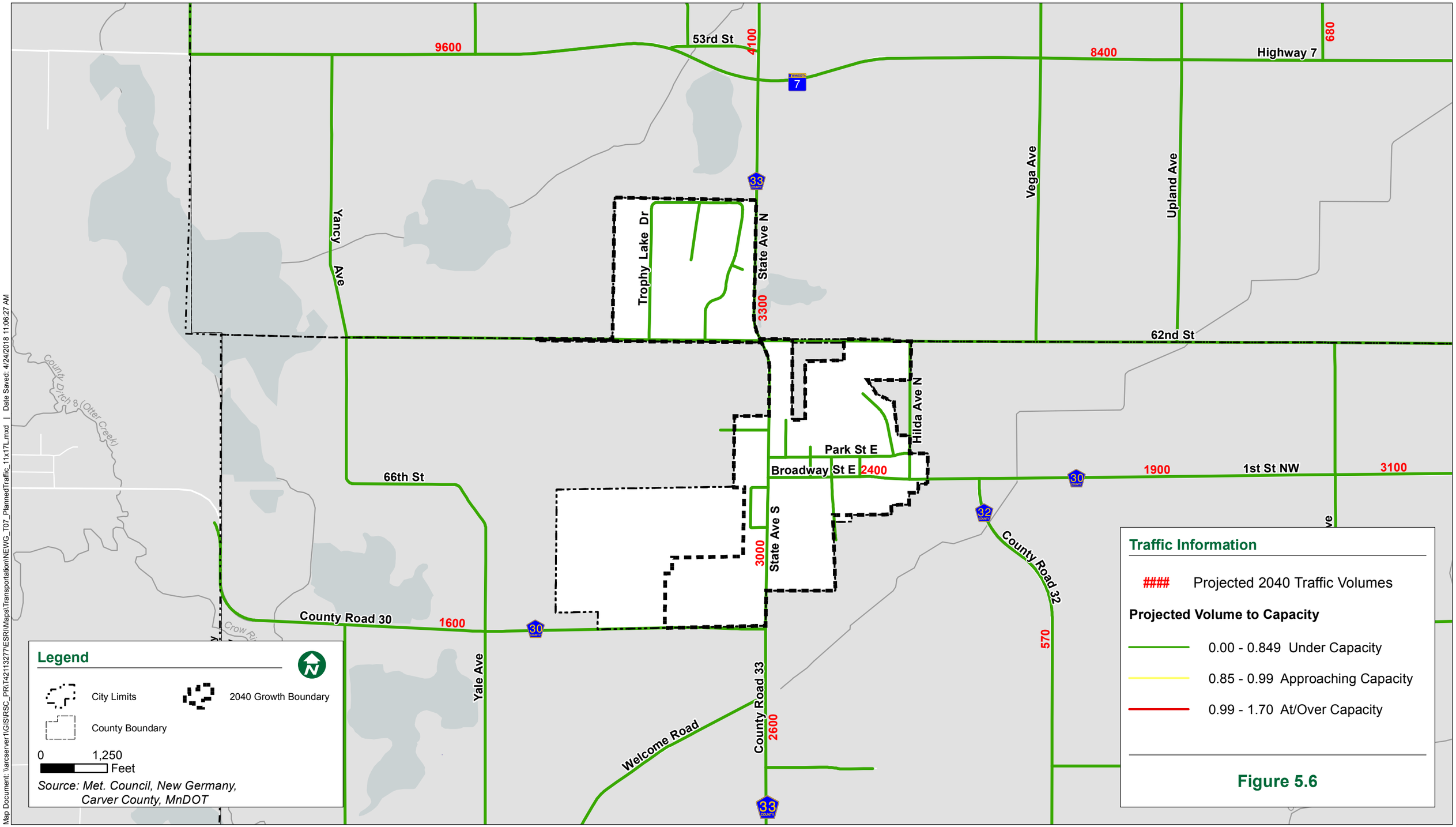

Figure 5.6

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Future Capacity Deficiencies

All roads are designed to handle a defined level of traffic volume. Once the road begins to approach or exceed capacity, traffic movements become more difficult and there may be congestion. It is at that point when it is determined whether there needs to be a capacity increase in the transportation system – through the addition of new travel lanes, new roads, intersection or interchange redesign, or other capacity-increasing improvements.

A planning-level analysis was performed to identify roadway segments where capacity problems are anticipated to occur by 2040. Based on the projected 2040 traffic volumes and the assumed 2040 roadway network, an analysis of anticipated future congestion conditions was performed. This analysis used the volume-to-capacity method. The volumes were taken from the 2040 projections discussed under the previous heading. The capacity is based on typical capacity levels for different types and configurations of roadways as summarized in **Table 5.4**.

Table 5.4 – Typical Traffic Capacity by Roadway Type/Configuration

Roadway Design	Planning Level Daily Capacity
Local	
Gravel Roadway	Up to 500
Local and Minor Collector 2-Lane	Up to 1,000
Collector and Arterial	
Urban 2-Lane	7,500 – 12,000
Urban 3-Lane or 2-Lane Divided	12,000 – 18,000
Urban 4-Lane Undivided	Up to 20,000
Urban 4-Lane Divided	28,000 to 40,000
4-Lane Freeway	Up to 70,000

Figure 5.6 shows the results of this capacity analysis. As is apparent from reviewing the map, all of the roads within New Germany are forecasted to still be below capacity in 2040. While there is definitely growth in traffic – from both local and regional sources – the volumes are still well below what the roads were designed to handle.

Recommended Roadway System Improvements and Studies

Roadway Segments

Based on the capacity analysis above and other supporting information, no capacity increasing projects are recommended for the major (collector and above) roadway network in New Germany within the planning period. The current network is anticipated to continue to have excess capacity to manage forecasted traffic.

Some additional local roads may be needed to provide access to development sites in New Germany. In particular, several local road extensions will be needed to serve properties in the Black Forest development, and in a developable area at the southwest corner of the city. The timing of construction and exact configuration of these local roads will be development-driven – with the developer playing a role constructing the streets in accordance with established city standards.

This recommendation is based on existing assumptions about growth and development in New Germany

and the surrounding area. If there is a large scale change to growth assumptions within the planning horizon, there should be a reassessment to determine if additional capacity, connectivity, or other roadway improvements are needed. Any major new development project should also conduct a traffic impact analysis to determine what improvements (major or minor) are needed to accommodate the project's impact on the transportation system.

Intersections

It is beyond the scope of this 2040 transportation plan to perform intersection analyses with detailed recommendations. However, based on information gathered as part of this planning process, including previous studies, it is recommended that the City work with the County and MnDOT to continue to assess safety issues at the CSAH 33/TH 7 intersection, to determine if additional improvements are needed to address safety concerns there. As this has been identified as a high priority in the County's 2013 plan, the limited improvements made to date may not be sufficient to address safety issues.

Future Functional Classification

Re-designations of roadways involving the A-minor arterial functional classification (e.g. from collector to arterial, from arterial to collector, or changing designations within arterial) is under the authority of the Metropolitan Council. For collector roadways, the functional class designation is under the authority of the agency which owns the given road.

At present, the City of New Germany does not anticipate needing any changes to the functional classifications as shown on **Figure 5.4**. There are some discussions in the County 2040 plan of a CSAH 33 bypass of downtown that could result in a change in functional class. However, this is not anticipated to happen within the 2040 planning horizon considered in this plan.

Future Jurisdictional Classification

Jurisdictional changes are made when it is determined that a road is better maintained by another jurisdiction. Roads are sometimes turned back to local communities, and hence removed from a county or regional system. Likewise, local roads at times become county or regional routes, often in the context of new development which changes the function and usage of the roadway within the network.

CSAH 33 through New Germany could potentially transfer from Carver County to the City. There is no timeframe for this potential transfer, but it is not anticipated to occur within the 2040 planning timeframe.

Access Management

Access management refers to balancing the need for connections to local land uses (access) with the need for network-level movement (mobility) on the overall roadway system. Arterials generally have limited access in the form of driveways and low volume side streets because their role in the network is to support relatively long, high speed traffic movements. Collectors allow a greater degree of access given their combined mobility/access function, and local streets have relatively few limits on access. Appropriate access control preserves the capacity on arterial and collector streets, and improves safety by separating local turning movements from higher-speed "through" traffic. Moreover, it concentrates higher volume traffic linkages at intersections controlled with traffic signals, roundabouts, or other measures.

MnDOT and Carver County Roadways in New Germany are identified on **Figure 5.3**. For MnDOT roadways, MnDOT access management guidelines apply. Similarly, for county roadways, Carver County's

access management guidelines apply. MnDOT and Carver County guidelines are included in **Appendix A**.

The City of New Germany Subdivision Ordinance provides basic guidelines for access management regarding the placement of access points along roads developed through a subdivision design process. According to the ordinance, subdivision road access spacing is as follows:

- No less than 500' onto local roads.
- No less than ¼ mile onto local collector roads.
- As required by the County or MnDOT requirements on minor arterial or other arterial roads.

The ordinance also requires that all developable properties have at least minimum frontage along a public roadway, unless certain defined circumstances apply. The following standards apply to lots that obtain access from a minor arterial or collector roadway:

- A maximum of one access per lot shall be permitted.
- The driveway shall have a turn-around area to prevent backing onto the roadway.
- An access permit shall be required from the County or MnDOT, as appropriate.

For double frontage or corner lots, access shall be obtained from the lower functional class roadway as defined in the Comprehensive Plan.

Commercial/industrial accesses shall also meet the following standards:

- The City Engineer shall determine the minimum spacing between accesses, or between an access and a public road. If lot frontage is inadequate to meet this requirement, access via a shared entrance or cross-access easement with adjacent property shall be required.
- Turn lanes shall be provided as required by the City Engineer to improve safety.

Geometric Design Standards

The city's subdivision ordinance also provides requirements for the design of new roadways. These recommendations are summarized below in **Table 5.5** and accompanying narrative. For the full standards, see the subdivision ordinance.

Table 5.5 – City of New Germany Roadway Design Standards

Type of Road	Right of Way Width	Pavement Width
Local Street	50'-66,' as determined by the City	34'
Collector Street	80' or as required by the County or State	40' or as required by the County or State
Minor Arterial Road	80' or as required by the County or State	52' or as required by the County or State

The ordinance also covers the circumstances and parameters for the development of cul de sacs.

There are provisions to allow for either more limited right of way (where there are certain constraints) or to require the dedication of additional right of way (where there is anticipated future demand for capacity improvements).

In general, roadway design shall comply with the following:

- Road jogs with centerline offsets of less than 150' shall not be allowed.
- When connecting road lines deflect from each other at any one point by more than 10 degrees, they shall be connected by a curve with a radius of not less than 100'.
- Centerline gradients shall be at least 1/2 percent and but no greater than seven percent.
- Different connecting street gradients shall be connected with vertical curves. Minimum length, in feet, of these curves shall be 20 times the algebraic difference in the percent of grade of the two adjacent slopes.
- The angle formed by intersecting streets shall not be less than 60 degrees, with ninety degree intersections preferred.
- Intersections of more than four corners shall be prohibited.
- Roadways of street intersections shall be rounded by a radius of not less than 20'.

Future Right-of-Way Preservation

Due to a lack of major capacity increasing roadway projects, this plan does not recommend any future right of way preservation in New Germany.

Right of way will be needed for local access roads to serve future development, but the process for dedicating the right of way will be regulated and determined through the city's subdivision ordinance design standards, as summarized above.

Bicycling and Walking

A well-developed bicycle and pedestrian network provides a way for people of all ages and abilities to travel in a way that is safe, comfortable, accessible, and active. It connects people to community destinations, improves bicycle and pedestrian safety, increases multimodal opportunities, encourages active living, and provides a community amenity.

In rural centers such as New Germany, there may be less need for dedicated pedestrian and bicycle facilities on local roadways, compared to other community types. As traffic volumes are often very low, shared facilities may sometimes be sufficient. However, they still may be important when connecting key community destinations such as parks and schools, or providing safe access on roadways with higher volumes or speeds. Additionally, they may provide a community amenity and an option for active transportation for residents.

Pedestrian Facilities

Pedestrian travel provides an alternative to driving for short distance trips, and safe connections between other modes and final destinations for longer ones. It also can serve as an amenity for residents and visitors who are looking for safe and active means of recreation, and for businesses districts looking for street life. Dedicated pedestrian facilities also help prevent fatalities resulting from pedestrians mixing with vehicle traffic.

The current sidewalk system serving New Germany is depicted on **Figure 5.7**. Currently, the City allocates park dedication fees as needed for sidewalk construction in subdivision applications with more

than one lot, but there are no requirements for trail and sidewalk construction.

Bicycle Facilities

Bicycle facilities provide additional opportunities for non-motorized connectivity and travel. Bicycle trips can be longer than pedestrian trips, which opens up possibilities of both replacing auto trips and connecting to a regional network. As traffic volumes grow, having an alternative means of travel can ease pressure on roads with limited capacity. Additionally, bicycle tourism has become increasingly popular in many communities, as a low-impact way to enjoy area attractions and support local businesses.

They can also be developed as a system that is similar to road functional class – with different facility types for different travel needs. Major categories of bicycle facilities which are either existing or potential options in New Germany include:

- **Off-street trails** – These trails link destinations and communities and may have a range of supporting amenities, including signage, parking, seating, and wayfinding. They may be located along major roadways, or in their own dedicated right-of-way (such as an abandoned rail corridor, as is the case with the Dakota Rail Trail). They are frequently located along higher volume and speed corridors where on-street bicycling would be less safe. Regional trails are developed and maintained at the county or regional level, and provide connections over longer distances and between cities. Local trails are maintained at the city level, and typically provide connectivity between local destinations and regional systems.
- **On-street bike lanes** – On-street bicycle facilities are typically developed by the county or municipality when funding or right-of-way constraints preclude off-street facilities – or where traffic volumes do not justify the additional investment. They can provide important local connections to the off-street system and local destinations.

Dakota Rail Regional Trail runs through New Germany, running parallel to Broadway Street East/County Road 30. This trail connects Lake Minnetonka to Lester Prairie and is paved up to the Carver/McLeod County line. The western portion of the regional trail is not part of the Regional Bicycle Transportation Network (RBTN) designated by the Metropolitan Council. However, eastern portions near Lake Waconia and Lake Minnetonka are aligned with Tier 2 RBTN development and planning. While these improvements and alignments will not take place in New Germany, they will help connect New Germany to the regional bicycle network.

Existing and planned bicycle facilities are depicted on **Figure 5.7**.

Existing and Planned Non-Motorized Facilities

April 2018

Resource Strategies Corporation

BOLTON & MENK
Real People. Real Solutions.

Highway 7
County Road 33
Trophy Lake Dr
Vega Ave
Upland Ave
Yancy Ave
62nd St
Hilda Ave N
NEW GERMANY BALL PARK
Park St E
WATER TOWER PARK
Broadway St E
State Ave N
66th St
1st St NW
LINDSTROM PARK
State Ave S
McLeod County
Carver County
Yale Ave
nty Road 30

Legend

- City Limits
- 2040 Growth Boundary
- County Boundary

0 1,250 Feet

Source: Met. Council, New Germany, Carver County, MnDOT

Non-Motorized Facilities & Points of Interest

- Bikeway
- Other Trail
- Sidewalk
- Local Park
- Regional Park

Figure 5.7

Facility Improvements

There are currently no planned new bicycle or pedestrian facilities in New Germany. Generally speaking, there is less need for dedicated facilities on low volume roadways, such as many of those in New Germany. In such circumstances, accommodations can be made for pedestrians and bicyclists to share the roadway with vehicles.

Potential improvements to the existing network may include:

- Routine maintenance to existing pavement and pavement markings
- Improvements to pedestrian and bicycle roadway crossings to enhance safety, including lighting, signalization, signage, or other improvements
- Development of pedestrian and bicycle connections through developments or to community destinations, where the existing roadway network does not provide access
- Other improvements, as determined by the City Engineer

The City of New Germany will work with any new development that wishes to incorporate sidewalks or bicycle trails to ensure they are in compliance with city standards. The City will also work with the County on any planned improvements to county roads or the regional trail.

Transit

Transit Market Area

The Metropolitan Council has defined Transit Market Areas based on the following primary factors:

- Density of population and jobs
- Interconnectedness of the local street system
- Number of autos owned by residents

In general, areas with high density of population and jobs, highly interconnected local streets, and relatively low auto ownership rates will have the greatest demand for transit services and facilities. Transit Market Areas are a tool used to guide transit planning decisions. They help ensure that the types and levels of transit service provided, in particular fixed-route bus service, match the anticipated demand for a given community or area.

Based on this analysis, the Metropolitan Council categorizes the City of New Germany as Transit Market Area V. As identified in Appendix G of the Metropolitan Council's 2040 Transportation Policy Plan (TPP), the characteristics of this category area are as follows:

> *Transit Market Area V has very low population and employment densities and tends to be primarily Rural communities and Agricultural uses. General public dial-a-ride service may be appropriate here, but due to the very low-intensity land uses these areas are not well-suited for fixed-route transit service. Transit Market Index Range (TMI) is less than 32.0.*

Also from Appendix G of the 2040 TPP (Table G-2), the typical transit service within this Market Area consists of the lowest potential ridership, and is not well-suited for fixed route service. Primary emphasis is on general dial-a-ride service.

Current and Planned Service Facilities

Fixed Route Service

Due to its rural location, New Germany does not have any existing or planned regular route transit services. There are transit services available in Chaska, Chanhassen, and Eden Prairie, including park and ride facilities that could accommodate travelers from New Germany who wish to access metropolitan commuter bus routes.

Dial-a-Ride Service

New Germany is serviced by Transit Link, the dial-a-ride service provided through the Metropolitan Council at the county level. Transit Link provides metro-wide transit connections and access to qualifying rides, such as last mile service, connections between transit stations, or to and from an area not serviced by regular bus routes. Any member of the public may reserve a qualifying ride. Upon reservation, each trip is assessed to ensure it does not overlap with regular route bus services. Starting and ending destinations must be more than ¼ mile from regular route transit in winter months (November – March) and more than ½ mile from regular route transit in summer months (April- October). Transit Link Service does not operate on Thanksgiving Day, Christmas Day, and New Year's Day.

Transit Link fares are determined by distance traveled. Trips less than 10 miles are $2.25 one way, trips between 10 and 20 miles are $4.50 one way, and trips more than $20 miles are $6.75 one way. ADA-certified riders pay a maximum of $4.50 one way regardless of distance traveled. This fare includes transfer to a regular service route except for the Northstar Line or peak hour services.

Transit Link service offered jointly through Carver and Scott Counties, called SmartLink Transit, serves all cities and townships in Carver and Scott Counties. Service is available Monday-Friday from 6:00am – 7:00pm. Transfers between Transfer Link and regular service routes take place at one of the following transit hubs: Chanhassen Transit Station, Southwest Village, East Creek Station, Marschall Road Transit Station, Eagle Creek Park & Ride (Secondary), and Southbridge Crossing Park & Ride (Secondary Rush). The following stations in Dakota County are also available for transfer service: Burnsville Shopping Center, Burnsville Transit Station.

Metro Mobility is also available to qualified individuals with disabilities on an on-call basis throughout the seven-county metropolitan area.

Recommendations

Presently, there are no plans to extend fixed route transit service to the City of New Germany within the 2040 planning horizon.

The City will work with the County, Transit Link, and other stakeholders to ensure that the provision of dial-a-ride services is sufficient to meet the needs of area residents who need such as service, such as seniors and persons with disabilities.

Aviation

The Metropolitan Council states that each community has a responsibility to identify policies and ordinances that protect regional airspace from obstructions, including meeting any Federal Aviation Administration (FAA) notification requirements. The Transportation Policy Plan provides some guidance and resources to inform the development of ordinances and regulations. As appropriate, city ordinances to satisfy FAA requirements should be created.

There are no existing or planned airports located within or near New Germany, and no metropolitan airports pose any potential impacts on the city. As such, there are no airspace restrictions affecting development in the city. The City will notify the Metropolitan Airports Commission and MnDOT if any new structures are proposed in excess of 200 feet above ground level.

New Germany's zoning ordinance (Chapter 9, Section 2) prohibits telecommunication towers more than 150 feet in height without specific findings. Guidance to an applicant for a tower exceeding 200 feet should include notification requirements for the FAA. The City will evaluate whether additional amendments to the code are needed to satisfy requirements.

Freight

Freight travels through New Germany on trucks and semi-trailers on main arterial roads. **Figure 5.8** shows the major roadways in and near New Germany that handle freight traffic. On TH 7, the nearest arterial, there are approximately 600 heavy commercial vehicles per day out of above 7,000 vehicles total – or around 8%. TH 7 is a Tier 3 corridor in the *Regional Truck Freight Corridor Study* (2017), providing connectivity to Tier 1 and 2 corridors.

There are no active train tracks in New Germany. There was one since-abandoned rail line that used to run through the city that has been converted to the Dakota Rail Regional Trail.

There are several freight generators within the City of New Germany. Several industries are located

along CSAH 30 and CSAH 33, with access to these designated truck routes. Planned freight generating growth will be located similarly.

At present, no significant issues have been identified in New Germany related to weight-restricted roads or bridges, bridges with insufficient height or width clearances, locations with unprotected road crossings of active rail lines, or intersections with inadequate turning radii.

The City will continue to work with the County and MnDOT to ensure that freight traffic is safety and efficiently accommodated on major roadways, while minimizing any negative impacts on local traffic and land uses.

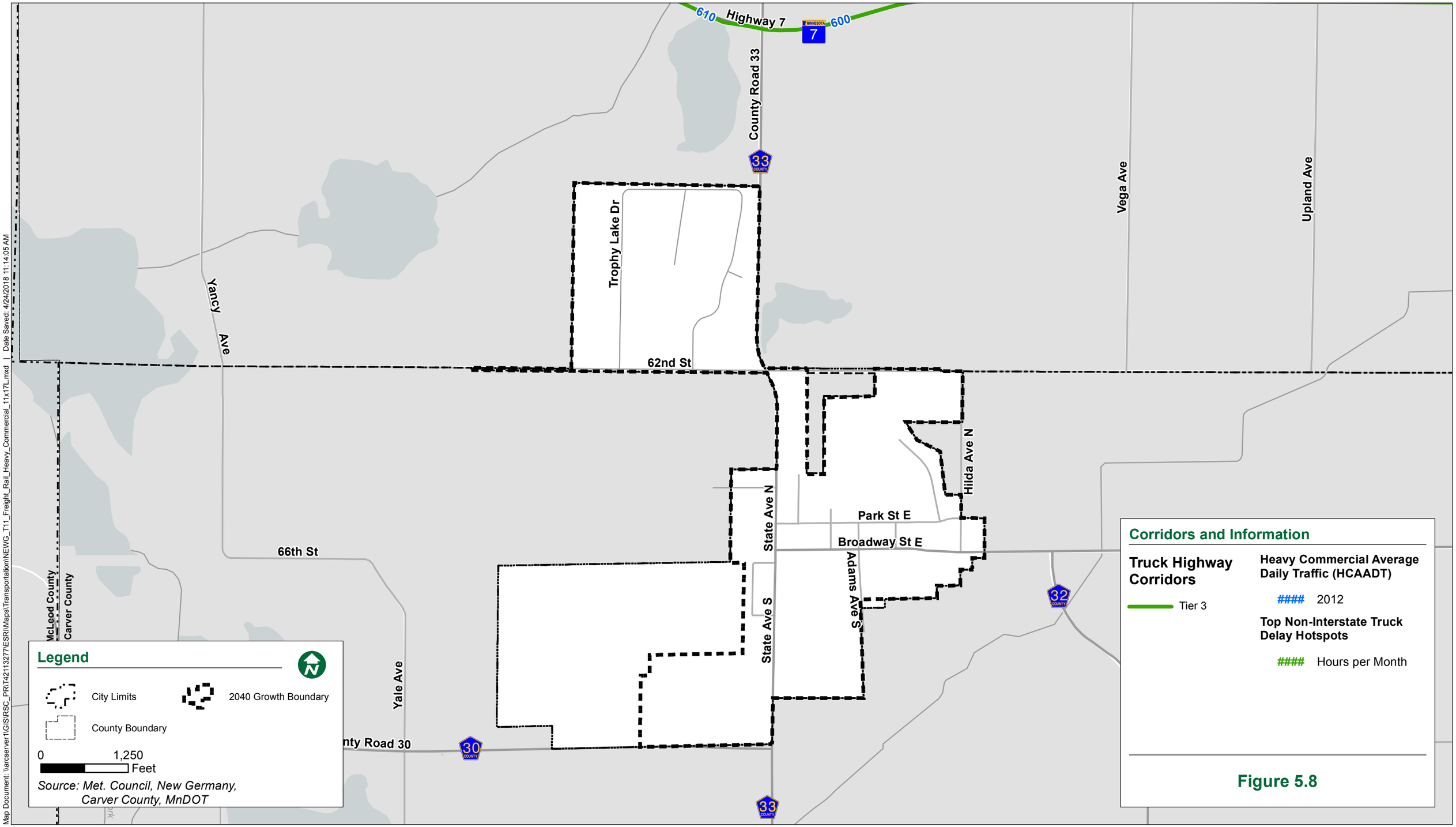

Figure 5.8

Chapter 6: Water Resources

Wastewater

Overview and Background

Growth of population and jobs in a community can present challenges to protecting ground and surface water resources while ensuring the needs of residents and businesses are adequately met. One of the key elements in addressing this challenge is the planning, construction, and maintenance of adequate wastewater collection systems. A Wastewater and Comprehensive Sewer Plan is a useful tool for defining the strategies the City will use to accomplish planning, construction, and maintenance of the wastewater system. Under the state Metropolitan Planning Act, local governments are required to submit a Wastewater and Comprehensive Sewer Plan element as part of their overall Comprehensive Plan.

The previous Comprehensive Plan update was completed in 2007 and formally approved and adopted in 2008. Since this update, the City has completed an extension north to serve the Trophy Lakes development and a major infrastructure replacement project. The infrastructure replacement project was completed in an effort to reduce inflow, infiltration and replace failing infrastructure.

Existing System

The existing wastewater collection and treatment system is shown on **Figure 6.1**. The City is not connected to the Metropolitan Council system, and they own and operate their own treatment facility. The existing wastewater treatment system includes 8”, 12”, & 15” diameter gravity sanitary sewer lines, a single lift station located on Hilda Avenue North, a 10” diameter force main, and a two-cell stabilization pond system with an outfall to Carver County Ditch No. 9, which flows to the South Fork Crow River. The Hilda Avenue lift station was installed in 2004 and is a duplex station with 740 gallons per minute capacity for each pump. The treatment facility is designed to treat an average wet weather design flow of 52,000 gallons per day based upon a 180 day storage capacity. The existing wastewater treatment plant is currently nearing capacity, and further development cannot occur until the treatment capacity of the plant is expanded.

2040 Comprehensive Plan Map

City of New Germany, Minnesota

Existing 2040 Sanitary Sewer Plan

April 2018

BOLTON & MENK

62ND STREET

BLACK FOREST ROAD

LIFT STATION & METER MH

STABILIZATION PONDS

MANNING STREET

STATE AVENUE

LINCOLN AVENUE

PARK AVENUE

WASHINGTON AVENUE

JEFFERSON AVENUE

HILDA AVENUE

BROADWAY STREET

MOUND STREET

CAMDEN AVENUE

ADAMS AVENUE

MONROE STREET

STATE AVENUE

LEGEND

- CITY LIMITS
- SECTION LINE
- LOTLINES
- RIGHT OF WAY
- 8" SANITARY SEWER
- 12" SANITARY SEWER
- 15" SANITARY SEWER
- SANITARY FORCEMAIN
- SANITARY PONDS

N

HORZ. SCALE 0 250 500 FEET

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Subsurface Sewage Treatment Systems (SSTS)

There are no subsurface sewage treatment systems located within the current city sewer district. The City prohibits the construction of these systems within their jurisdiction and requires connection of all residences and businesses within proximity to the sewer system. All homes and businesses within proximity of the sewer system are connected. However, there are three farmsteads located in the southwest portion of the city that are served by private individual sewage treatment systems.

Inflow and Infiltration (I/I)

Historically, significant Inflow and Infiltration (I/I) has been present in the city's sanitary sewer system. The I/I has reduced the capacity of the city's sanitary sewer mains as well as the wastewater treatment facility. The excess flow in the system has caused sewer backups in homes and has required the City to utilize bypass pumping during large rain events. At the request of the Minnesota Pollution Control Agency (MPCA), the City has adopted an inflow/infiltration investigation and elimination program to reduce the amount of I/I that enters the sewer system to improve the performance of the system.

The City has made numerous efforts to locate the sources of I/I including the adoption of ordinances prohibiting the discharge of storm water, ground water, roof runoff, sump pumps, etc. to the sanitary sewer system. The ordinance provisions allow the City to enter the homes for inspection purposes, prescribe correction efforts and impose a surcharge for noncompliance. The City has inspected properties since the ordinances were adopted by the City Council. The City then works with any property owners found to have a non-conforming sump pump discharge to assist them with correcting their system and coming into compliance.

In 2012, the City, in conjunction with USDA Rural Development, completed a major infrastructure rehabilitation project that replaced all of the old clay sanitary sewer pipes within the city. Along with the replacement of the sewer mains, each service was televised and reviewed for possible tile connections. Each connection that was found was flagged and later disconnected. Several major sources of I/I were found and corrected as part of the project. Each year since the completion of the project, an Inflow and Infiltration Investigation and Reduction Plan has been created and submitted to the MPCA.

Population, Household, and Employment Forecasts

The municipally owned sanitary sewer system provides service to all residents and businesses in the City. According the Metropolitan Council population, household, and employment forecasts, the City of New Germany will have the following sewer demands, as detailed in **Table 6.1**.

Table 6.1 – Forecasted Population, Housing, & Employment

	2010	2015	2020	2030	2040
Population	372	422	440	590	700
Households	146	163	190	270	330
Employment	46	57	70	80	90

Source: Metropolitan Council

Actual and Projected Wastewater Flow

Table 6.2 shows actual and projected flows for the City's wastewater system, in millions of gallons per day (MGD).

Table 6.2 – Actual and Projected Treatment Plant MGD Flows			
2015	**2020**	**2030**	**2040**
0.042	0.044	0.060	0.070

The existing wastewater gravity conveyance system is set up to accommodate all of the staged growth through 2040. Adequate trunk mains are in place to accommodate future expansion into the Agricultural areas within the 2040 growth boundary. The existing lift station will also accommodate all of the forecasted 2040 growth. Assuming staged growth, only one service area is needed, and no additional permanent lift stations are required for the build-out of the city to the 2040 staged boundary.

The wastewater treatment facility has a current permitted flow of 0.052 MGD and therefore does not have the capacity for the projected growth.

Wastewater Treatment Plant Upgrade

The proposed 2040 sanitary sewer plan is shown on **Figure 6.2**.

The MN Pollution Control Agency (MPCA) has issued a draft of the City's new National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) permit for the City's wastewater treatment facility, and the implications of new limits are under review. A finalized permit has not been issued at the time of this writing. The limits in the draft permit for CBOD5 and TSS remain the same; however, there are new limits for phosphorous. The phosphorous limits included a yearly limit of 143.7 kilograms per year and a concentration limit of 2.0 mg/l June through September.

The permit also includes language about a long term waste load allocation (WLA). The 2.0 mg/L, June through September, WQBEL is based on the long-term average WLA of 0.95 mg/L. The long-term average WLA of 0.95 mg/L is based on achieving eutrophication standards in the South Fork Crow River Watershed. If it is found that the long-term average WLA of 0.95 mg/L is not achieved with the assigned 2.0 mg/L monthly average effluent limit, the effluent limit may be adjusted down to ensure that the long-term average WLA is achieved.

The City has submitted a compliance schedule to the MPCA outlining how the new discharge limits will be met over time. The wastewater treatment facility has a capacity of 0.052 mgd and is currently sized to accommodate near term growth. However, the facility cannot accommodate the overall growth projections of the city, and it may be difficult for the City to meet the June through September concentration limits for phosphorous if a discharge is required during this time period.

In the near term, minor facility improvements and pond dredging are planned to improve biological removal efficiency and reinstate original pond capacity. A facility expansion will be necessary to accommodate additional development growth and as such, planning for the next phase of development must include expansion of this facility. Existing land is available at the wastewater treatment facility site to complete an expansion of the existing ponds. A pond expansion project to increase capacity is the preferred next step to add capacity for growth. The feasibility and effectiveness of a pond expansion must be evaluated prior the next development expansion.

Over the next several years, as part of the proposed NPDES permit compliance schedule, a review and

evaluation of options to meet discharge limits and capacity demand will be conducted. It is assumed that this plant expansion project would be financed through the Public Facilities Authority, and the debt would be repaid primarily through user rates and possibly Point Source Implementation Grant proceeds.

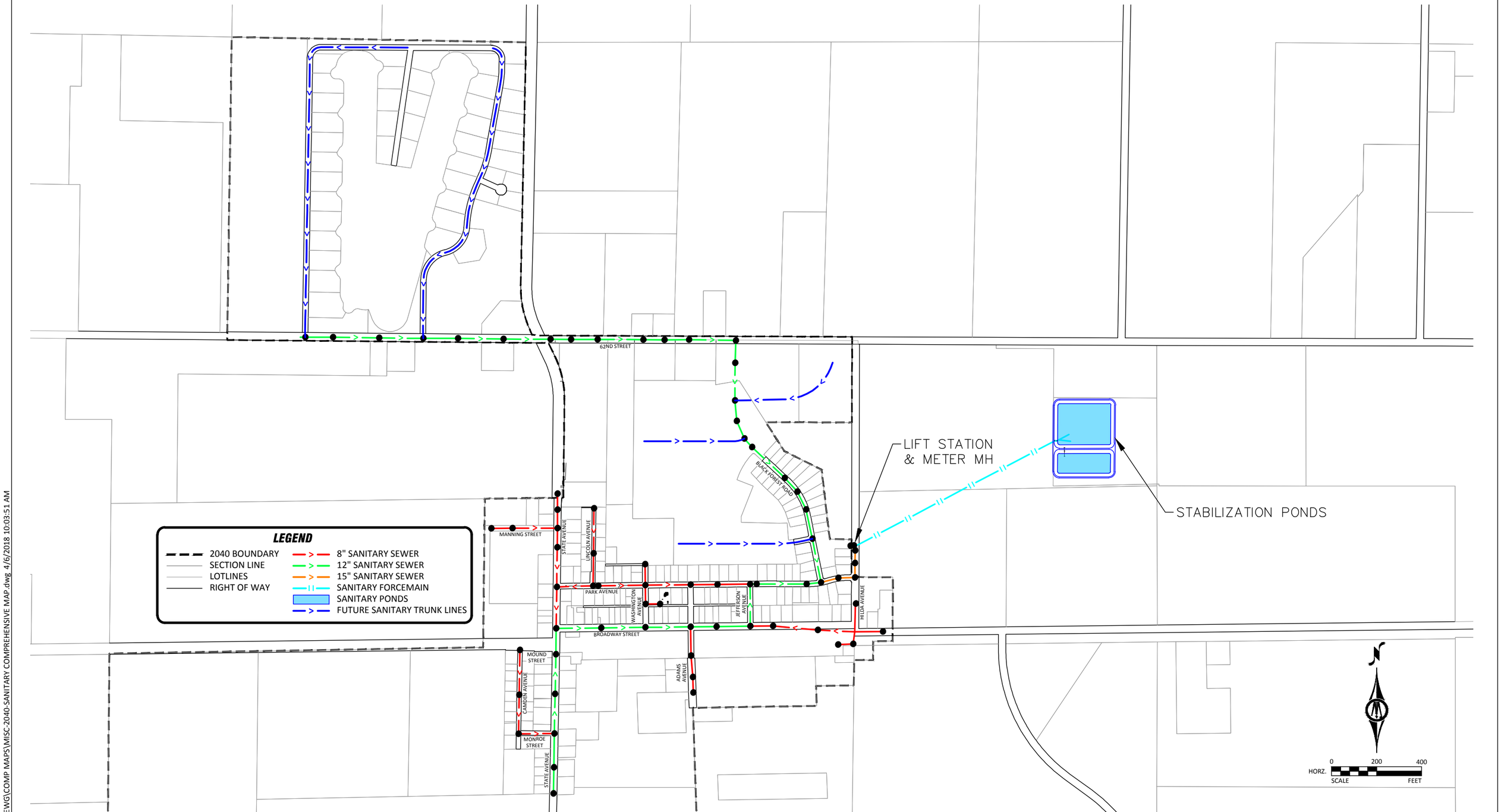
2040 Comprehensive Plan Map

City of New Germany, Minnesota

2040 Sanitary Sewer Plan

April 2018

BOLTON & MENK



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Local Surface Water Management Plan

The full City of New Germany Surface Water Management Plan is included in **Appendix B**. Below is a summary of the plan's purpose and format, excerpted from its executive summary.

Purpose

This Surface Water Management Plan (SWMP) meets the requirements of Minnesota Statute 103B.235 and Minnesota Rule 8410. Minnesota Statute 103B.201 states that the purposes of the water management programs are to:

1. Protect, preserve, and use natural surface and groundwater storage and retention systems;
2. Minimize public capital expenditures needed to correct flooding and water quality problems;
3. Identify and plan for means to effectively protect and improve surface and groundwater quality;
1. Establish more uniform local policies and official controls for surface and groundwater management;
4. Prevent erosion of soil into surface water systems;
5. Promote groundwater recharge;
6. Protect and enhance fish and wildlife habitat and water recreational facilities; and
7. Secure the other benefits associated with the proper management of surface and groundwater.

This SWMP complies with Carver County Code – Section 153 – Water Resource Management Rules and the Carver County Watershed Management Organization Comprehensive Water Resources Management Plan (CWRMP).

General Plan Description

The City of New Germany's Surface Water Management Plan has been developed as a guide for the New Germany City Council in its future decision making for related matters. The plan thoughtfully considers surface water management, identifies water resource management and the City's partners therein, includes an inventory of land and water resources, raises major issues, goals, and policy objectives, begins to develop an assessment and implementation plan, and charts administrative procedures to enact the plan.

The Surface Water Management Plan, as adopted by the City of New Germany, is intended to provide context for the future decisions the City will face. It is not intended to be an absolute document – but rather a dynamic and flexible tool which considers the ever changing pressures related to Surface Water Management. The plan will address mandated requirements as defined by other local, state, and federal agencies. The City will consider these mandates carefully to ensure that its implementation is in the best interest of the broader community.

Many of the action items within the Plan require additional study – including an in-depth investigation into alternative strategies, methods, and processes. This additional study will be completed when it is determined to be most efficient and effective by the City.

The standards outlined in this plan do not supersede those put forth by the Carver County Watershed Management Organization (CCWMO) or other Local, State, or Federal agencies. If a discrepancy exists between regulations contained in this plan and other agencies, the more restrictive requirement shall govern.

This plan is divided into eight sections as follows:

1. **Section 1.0. Executive Summary** provides background information and summarizes the plan contents.
2. **Section 2.0. Surface Water Management Plan Purpose** outlines the purpose of this plan.
3. **Section 3.0. Water Resources Management Responsibilities and Related Agreements** identifies resource management authority and any water resources related agreements existing between New Germany and nearby cities, state, or county.
4. **Section 4.0. Land and Water Resources Inventory** presents information about the topography, geology, groundwater, soils, land use, public utilities, surface waters, hydrologic system and data, as well as the existing drainage system.
5. **Section 5.0. Major Issues, Goals, and Policies** outlines New Germany's major issues, goals and policies, as well as implementation strategies, pertaining to water resources management.
6. **Section 6.0. Water Resources Assessment and Implementation Plan** presents information about existing water resources along with current and potential issues. This section provides solutions in the form of proposed restorations or stormwater treatment improvements, provides a general opinion of probable costs, discusses funding mechanisms, identifies project partners, provides prioritization and a potential schedule for surface water management capital improvement projects, and discusses educational opportunities.
7. **Section 7.0. Administration** describes potential methods of ensuring that this plan is maintained and identifies a procedure to keep the modeled data current as various developments occur. This section also includes an evaluation of the implementation of this plan.
8. **Section 8.0. Appendices** provide a general location for attachments, relative documentation and initial modeled system data sheets.

Water Supply Plan

The City of New Germany Water Supply Plan is being completed separately, in accordance with Minnesota Department of Natural Resources requirements. It will be included here when complete. The plan will demonstrate the availability of water to support forecasted growth, consistent with the rest of this plan.

Chapter 7: Implementation

Overview

The implementation of this comprehensive plan will happen in multiple ways. As this plan provides overall guidance for the growth and development of the City, many official actions taken by the City can implement the plan – including determinations about proposed developments, enforcement of City ordinances, and decisions regarding funding and completing public projects.

The City of New Germany has directed its Planning Commission to review and make recommendations to the City Council on the Comprehensive Plan, zoning ordinances, requests for variances, ordinance amendments, and special use permits. The policy and action adopted by the City Council will guide day-to-day activities toward overarching community goals. A Capital Improvements Plan, adopted on an annual basis, will guide capital expenditures to meet growth needs and community goals.

While this chapter does not cover all the actions needed to implement the comprehensive plan, it does cover some of the major strategies and approaches for doing so.

Official Controls

The City's official controls are a key element of the implementation of Comprehensive Plan. Under state statute, the City is required to ensure that there is consistency between these official controls and this plan. The City will evaluate land use controls and consider amendments to eliminate inconsistencies with the Comprehensive Plan, conform to State and Federal regulations, and support the overarching community goals identified through this plan update.

The City has an adopted Zoning Map shown on **Figure 7.1** and a Zoning Ordinance and Subdivision Ordinance to implement the Comprehensive Plan. These controls are used to make determinations about the type, location, scale, intensity, and aesthetics of development located in the community. **Table 7.1** shows the zoning districts in the City with each respective primary use and minimum lot size/intensity of use. The Business/Commercial District is actually a mixed use district, which also allows residential in addition to commercial uses.

Table 7.1 – City of New Germany Zoning Districts

District	Primary Use	Minimum Lot Area/Intensity
R-1	Single Family Residential	10,000 square feet
R-2	Multiple Family Residential	16 dwelling units/acre maximum
A	Agricultural	2 acres
B	Business/Commercial	Not applicable
I	Industrial	30,000 square feet
P	Parks/Open Space	Not applicable

In addition to the above, the City has adopted a Planned Unit Development subdivision process that allows variations of the dimensional requirements of the Zoning and Subdivision Ordinances for projects that meet other community goals and objectives.

The Zoning and Subdivision Ordinances will allow the City to implement a number of the objectives in this plan, including the following:

1. An overall density of residential development that exceeds three dwelling units per acre.
2. Connection of all new development to municipal sanitary sewer and water systems.
3. Platting of property that allows for the dedication of right of way for public roadway and trail connections and improvements.
4. Compliance of all new development with stormwater management and erosion control requirements, including wetland buffer areas of the City Stormwater Management Plan and the Carver County Water Management requirements.
5. Protecting access for solar collectors and other renewable resource systems from potential interference by adjacent structures and vegetation. City decisions regarding development will be made to enhance the possible future development and use of solar energy and other renewable resource systems. Provisions within the City's official controls establish the regulatory basis for this protection including, but not be limited to minimum structure separation and height restrictions.

As part of the planning process, the City will evaluate its land use controls and consider amendments to the existing Zoning and Subdivision Ordinances, after the adoption of this Comprehensive Plan. The purpose of the evaluation is to eliminate inconsistencies in the ordinances with the policies and objectives of new Comprehensive Plan, enhance performance standards, protect public and private investments, and conform to mandatory State and Federal regulations.

At this point, it is anticipated that the zoning ordinance may need to be updated to be consistent with the minimum densities for mixed use development, as shown in the land use chapter to meet standards for affordable housing.

2040 Comprehensive Plan

New Germany, MN

Zoning Map

April 2018

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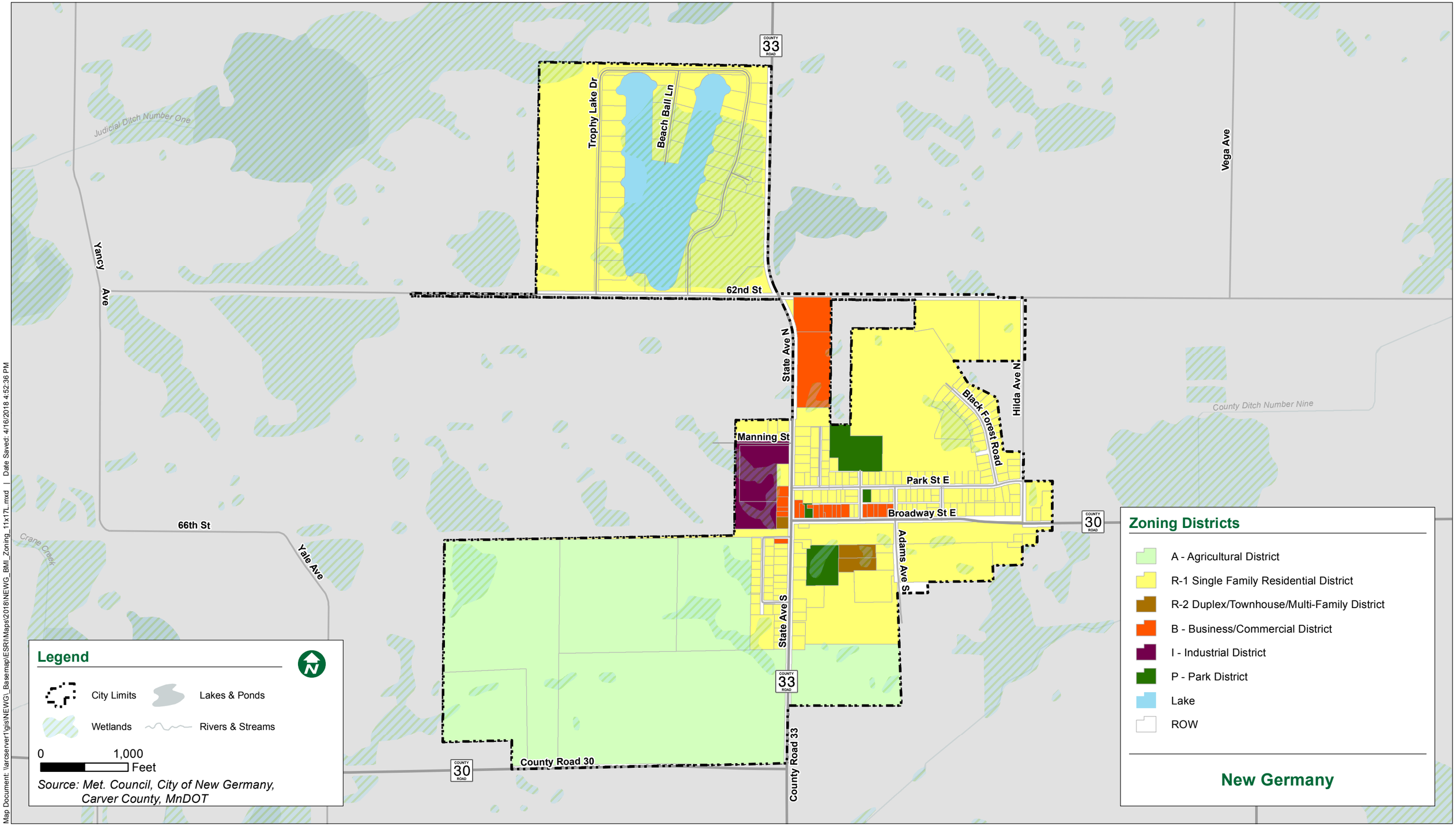


Map Document: \\arcserver1\gis\NEWG_Basemap\ESRI\Maps\2018\NEWG_BMI_Zoning_11x17L.mxd | Date Saved: 4/16/2018 4:52:36 PM

Housing Implementation Program

The City of New Germany is committed to encouraging the availability of affordable housing as a long term community value. Today, many of the existing homes in New Germany are considered affordable for a family of four whose annual adjusted income is at or below 80 percent of the area median income, which in 2017 is $72,320. This income would allow a home purchase of approximately $236,000.

The City will continue to participate and work with programs offered by the Carver County Community Development Agency (CDA) and the Minnesota Housing Finance Agency. Carver County CDA offers the following programs to all residents:

- Homebuyer Education
- Foreclosure Prevention Counseling and Financial Assistance to Qualified County Residents
- Section 8 Rental Assistance
- Transitional Housing
- Rental Rehabilitation Grants and Loans
- Single Family Rehabilitation Grants and Loans

The Minnesota Housing Finance Agency in partnership with the CDA offers the following services:

- MHFA Single Family Fix-Up Fund
- MHFA Single Family Rehabilitation Loan Program
- MHFA HOME Rental Rehab Program
- MHFA also has various other Grant and Loan Programs for Homeowners, Homebuyers, Renters and Landlords

Additionally, the City will continue to maintain the existing Zoning Ordinance standards that allow densities that are consistent with affordable housing objectives.

Other Planning Studies

The City has adopted the City of New Germany Stormwater Management Plan that is made a part of this Comprehensive Plan. As growth occurs in the community, there will be a need to update or establish studies or plans for various functions, including, but not limited to updating the Water System and Distribution Plan and preparing a new Comprehensive Sewer Plan.

Public Programs and Tools

Much of the plan will be implemented through the use of public programs, fiscal devices, and other related actions. **Table 7.2** outlines the overarching community goals for New Germany (as discussed in more detail in Chapter 1) and identifies the primary implementation tools to help the City obtain its goals. For the purposes of this table, short term is defined as within five years or less (significantly less in the case of zoning changes, as identified above).

Table 7.2 – Implementation Tools and Timeline		
Plan Goal	**Primary Tools (Policy, Fiscal, and Programs)**	**Timeline for Implementation**
Land Use		
1. Growth management	Zoning Ordinance; Subdivision Ordinance	Short term: zoning changes to be in conformance with comprehensive plan Ongoing: decisions in response to development applications
2. Land uses to accommodate growth	Zoning Ordinance; Subdivision Ordinance	Short term: zoning changes to be in conformance with comprehensive plan Ongoing: decisions in response to development applications
3. Responsible and efficient land use	Zoning Ordinance; Subdivision Ordinance	Short term: zoning changes to be in conformance with comprehensive plan Ongoing: decisions in response to development applications
Natural Resources		
4. Protect and preserve natural resources	State and Federal Environmental Regulations	Ongoing: City conformance with environmental standards
Community Facilities		
5. Provide range of public services and facilities	City Budget; Capital Improvement Plan; Cooperative agreements with other jurisdictions; Regional and state grant funding	Annual: City Budget, Capital Improvement Plan updates and approvals Ongoing: Provision of basic city services, such as police, fire, parks, administration, etc.
Economic Competitiveness		
6. Business and job growth	Partnership with Carver County; Tax abatements, TIF, and other fiscal incentives	Ongoing: Response to business investment opportunities
Housing		
7. Range of housing options for all residents	*See details in Housing Implementation Plan*	Ongoing: Response to housing development opportunity or request for assistance from residents
Parks and Trails		
8. Active and passive recreational opportunities	City Budget; Capital Improvement Plan; Partnership with Carver County;	Ongoing: Maintenance and operations of park facilities

	Regional and state grant funding	
Transportation		
9. Safe and efficient multimodal system	Capital Improvement Plan; Partnerships with Carver County and MnDOT; Regional and state grant funding	Annual: Evaluate need for improvements to city roadways; cooperate with County and MnDOT on country, state, and federal improvements Ongoing: Respond to developer plans for extension of roads to new development
Public Utilities		
10. Efficient meet needs of development	Capital Improvement Plan; Partnerships with Carver County and MnDOT; Regional and state grant funding; State and federal regulations	Annual: Evaluate need for improvements to city utilities; cooperate with County and State on county and regional improvements Ongoing: Respond to developer request for extension of utilities to new development
Stormwater Management		
11. Maintain or enhance water quality	Capital Improvement Plan; Partnerships with Carver County and Carver County Watershed Management Organization; State and federal regulations	Annual: Evaluate need for improvements to city utilities; cooperate with County and State on county and regional improvements Ongoing: Respond to developer request for extension of utilities to new development
12. Manage stormwater effectively	Capital Improvement Plan; Partnerships with Carver County and Carver County Watershed Management Organization; State and federal regulations	Annual: Evaluate need for improvements to city utilities; cooperate with County and State on county and regional improvements Ongoing: Respond to developer plans for stormwater improvements to serve new development
13. Compliance of development plans with standards	Capital Improvement Plan; Partnerships with Carver County and Carver County Watershed Management Organization; State and federal regulations	Annual: Evaluate need for improvements to city utilities; cooperate with County and State on county and regional improvements Ongoing: Respond to developer plans for stormwater improvements to serve new development

Capital Improvement Plan (CIP)

The City annually reviews capital expenditure needs and will budget for improvements identified throughout the 2040 Comprehensive Plan Update accordingly. Capital needs include public and private investments in infrastructure, infrastructure repair and replacement, transportation, building maintenance and repair, water systems, equipment, and park expenditures. The CIP budget is continually assessed and is subject to modification as appropriate.

The Capital Improvement Plan will require review on an annual basis to determine the need for any adjustments as further development within the city occurs and other governmental decisions are made regarding sub-regional or county improvements. The City of New Germany's current capital improvement plan is located in **Appendix C**.

Schedule of Changes

To meet the goals of the 2040 Comprehensive Plan update and remove any potential inconsistencies in policy, changes and amendments to the city's zoning codes and ordinances will need to be made. These changes will be completed within nine months after the official adoption of the 2040 Comprehensive Plan update.

Plan Amendment Process

The Comprehensive Plan is intended to be general and flexible; however, formal amendments to the Plan will be required when land use elements, sewer staging areas or growth policies are revised. Periodically, the City should undertake a formal review of the plan to determine if amendments are needed to address changing factors or events in the New Germany area.

While a plan amendment can be initiated at any time, the City should carefully consider the implications of the proposed changes before its adoption. When considering amendments to this plan, the City will use procedures outlined in the City's ordinances. Landowners, land developers, organizations, individuals, the City Council and Planning Commission may initiate amendments to the Comprehensive Plan. All amendments to the Comprehensive Plan require a public hearing and must be submitted to the Metropolitan Council, the county, and townships for review prior to implementation.

When considering amendments to this plan, the City will use the following procedure:

1. Landowners, land developers, the Planning Commission or the City Council may initiate amendments.
2. The Planning Commission will direct staff or the planning consultant to prepare a thorough analysis of the proposed amendment.
3. Staff or the planning consultant will present to the Planning Commission a report analyzing the proposed changes, including their findings and recommendations regarding the proposed plan amendment.
4. The Planning Commission will decide whether or not to proceed with the proposed amendment. If a decision to proceed is made, a formal public hearing will be held on the proposed amendment.
5. Following the public hearing the Planning Commission will make a recommendation to the City Council.
6. The City Council will receive the recommendation from the Planning Commission and make a final

decision on whether to adopt the amendment.

7. All amendments must be submitted to area review jurisdictions and the Metropolitan Council for review prior to implementation.

Appendix A: Transportation

◊ Table 4.11: MnDOT and Carver County Access Management Guidelines

Source: MnDOT Access Management Manual, Chapter 3 (January 2008) & Carver County

Category		Area or Facility Type	Typical Functional Class	Intersection Spacing		Signal Spacing	Private Access
				Primary Full Movement Intersection	Conditional Secondary Intersection		
MnDOT Access Spacing Guidelines	1	High Priority Interregional Corridors (US 212)					
	1F	Interstate Freeway	Principal Arterials	Interchange Access Only			
	1A-F	Non-Interstate Freeway		Interchange Access Only			
	1A	Rural, Exurban & Bypass		1 mile	1/2 mile	Interim Only By Deviation Only	By Deviation Only
	2	Medium Priority Interregional Corridors (N/A)					
	2A-F	Non-Interstate Freeway	Principal Arterials	Interchange Access Only			
	2A	Rural, Exurban & Bypass		1 mile	1/2 mile	Strongly Discouraged By Deviation Only	By Exception or Deviation Only
	2B	Urban/Urbanizing		1/2 mile	1/4 mile	Strongly Discouraged By Deviation Only	By Exception or Deviation Only
	2C	Urban Core		300-600 feet dependent upon block length		1/4 mile	Permitted Subject to Conditions
	3	Regional Corridors (TH 7)					
	3A-F	Non-Interstate Freeway	Principal and Minor Arterials	Interchange Access Only			
	3A	Rural, Exurban & Bypass		1 mile	1/2 mile	1 mile	Permitted Subject to Conditions
	3B	Urban/Urbanizing		1/2 mile	1/4 mile	1/2 mile	By Exception or Deviation Only
	3C	Urban Core		300-600 feet dependent upon block length		1/4 mile	Permitted Subject to Conditions
Carver County Access Spacing Guidelines	4	Principal Arterials					
	4A-F	Non-Interstate Freeway	Principal Arterials	Interchange Access Only			
	4A-F	Rural, Exurban & Bypass		1 mile	1/2 mile	1 mile	By Deviation Only
	4B	Urban/Urbanizing		1/2 mile	1/4 mile	1/2 mile	By Exception or Deviation Only
	4C	Urban Core		300-600 feet dependent upon block length		1/4 mile	Permitted Subject to Conditions
	5	Minor Arterials					
	5A	Rural, Exurban & Bypass	Minor Arterials	1/2 mile	1/4 mile	1/2 mile	Permitted Subject to Conditions
	5B	Urban/Urbanizing		1/4 mile	1/8 mile	1/4 mile	By Exception or Deviation Only
	5C	Urban Core		300-600 feet dependent upon block length		1/8 mile	Permitted Subject to Conditions
	6	Collectors					
	6A	Rural, Exurban & Bypass	Collectors	1/2 mile	1/4 mile	1/2 mile	Permitted Subject to Conditions
	6B	Urban/Urbanizing		1/4 mile	1/8 mile	1/4 mile	
	6C	Urban Core		300-600 feet dependent upon block length		1/8 mile	
	7	Specific Action Plan					
	7	All	All	By Adopted Plan			

The following are notes related to Table 4.11:

- The guidelines in Table 4.11 apply primarily to routes with a collector functional classification or above; however, partners may also use the guidelines for applicable local streets.
- The guidelines should be used as long-term goals, not as absolute rules.
- Maintaining a degree of flexibility is important in promoting access consolidation.
- The approach to implementation is as important as the guidelines themselves.
- Existing physical barriers or constraints need to be considered.

The first step in encouraging better access management is to develop consistent access standards for both rural and urban roadways. Access management efforts in urban areas typically focus on addressing mobility concerns while balancing access needs of local businesses and residents. In existing corridors where significant development has occurred, the number of existing access points will likely exceed access guidelines. Unless significant redevelopment is occurring in along these corridors, access management must be approached differently than in undeveloped rural areas. In urban areas, new access points should be minimized while existing access points are consolidated or reduced as redevelopment occurs.

In addition to establishing spacing guidelines, it is important to consider how these guidelines are implemented as part of county planning and development review procedures. Figure 4.18: Access Spacing illustrates the recommended spacing by roadway type.

Best access management practices in urban and developing areas include the following:

- **Encourage shared driveways and internal circulation plans:** If indirect access cannot be achieved during plat reviews, promote internal site circulation using shared access points.
- **Restrict turning movements to reduce conflicts:** If access points cannot be eliminated, consider turning movement restrictions (e.g., left-in only or right -in/right-out only) through the installation of raised median or other channelization or signing. Eliminating a single turning movement can significantly reduce vehicle conflicts and potential crashes.
- **Develop good parallel street systems for carrying local traffic:** Make sure that important arterial routes have connecting parallel street system to provide the local access function and to carry shorter local trips.
- **Develop proper setbacks for future frontage roads:** If frontage roads cannot be justified (benefits do not outweigh costs), make sure that proper building and parking lot setbacks are established so that future frontage roads can be installed with minimal impacts.
- **Develop proper secondary street spacing:** When reviewing plats and new development proposals, be sure that they provide proper intersection spacing for future signals. As a guideline, signalized intersections should be limited depending upon the type of street. Collector streets should provide some continuity and connectivity with other street systems.
- **Encourage proper lot layout to minimize access points:** Promote direct residential access points onto local routes, not arterials or major collectors. Direct residential access to arterial or collector routes can result in complaints when traffic levels increase. In rural areas, where farms have one access point per 40-acre entitlement and where they cluster lots in one portion of the farmstead, access should be encouraged off local roads, not high-speed, high-volume state or county roads.

Appendix B: Water Resources

BOLTON & MENK

Real People. Real Solutions.

SURFACE WATER MANAGEMENT PLAN
CITY OF NEW GERMANY, MN

May 2018

Submitted by:
Bolton & Menk, Inc.
2638 Shadow Lane, Suite 200
Chaska, MN 55318
P: 952-448-8838

Surface Water Management Plan
New Germany, Minnesota

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision, and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

By: _____

Robert Bean, Jr., P.E.
Registration No. 40410

Date: May 29, 2018

Prepared by Bolton & Menk, Inc.

Table of Contents

Appendix A: Figures

1.0 EXECUTIVE SUMMARY

1.1 General Plan Description

The City of New Germany's Surface Water Management Plan has been developed as a guide for the New Germany City Council in its future decision making for related matters. The Plan thoughtfully considers Surface Water Management, identifies Water Resource management and the City's partners therein, includes an inventory of Land and Water Resources, raises major issues, goals, and policy objectives, begins to develop an assessment and implementation plan, and charts administrative procedures to enact the Plan.

The Surface Water Management Plan, as adopted by the City of New Germany, is intended to provide context for the future decisions the City will face. It is not intended to be an absolute document – but rather a dynamic and flexible tool which considers the ever changing pressures related to Surface Water Management. The Plan will address mandated requirements as defined by other Local, State, and Federal agencies. The City will consider these mandates carefully to ensure that its implementation is in the best interest of the broader community.

Many of the action items within the Plan require additional study – including an in-depth investigation into alternative strategies, methods, and processes. This additional study will be completed when it is determined to be most efficient and effective by the City.

The standards outlined in this plan do not supersede those put forth by the Carver County Watershed Management Organization (CCWMO) or other Local, State, or Federal agencies. If a discrepancy exists between regulations contained in this plan and other agencies, the more restrictive requirement shall govern.

This plan is divided into eight sections as follows:

1. ***Section 1.0. Executive Summary*** provides background information and summarizes the plan contents.

2. ***Section 2.0. Surface Water Management Plan Purpose*** outlines the purpose of this plan.

3. ***Section 3.0. Water Resources Management Responsibilities and Related Agreements*** identifies resource management authority and any water resources related agreements existing between New Germany and nearby cities, state, or county.

4. ***Section 4.0. Land and Water Resources Inventory*** presents information about the topography, geology, groundwater, soils, land use, public utilities, surface waters, hydrologic system and data, as well as the existing drainage system.

5. ***Section 5.0. Major Issues, Goals, and Policies*** outlines New Germany's major issues, goals and policies, as well as implementation strategies, pertaining to water resources management.

6. ***Section 6.0. Water Resources Assessment and Implementation Plan*** presents information about existing water resources along with current and potential issues.

This section provides solutions in the form of proposed restorations or stormwater treatment improvements, provides a general opinion of probable costs, discusses funding mechanisms, identifies project partners, provides prioritization and a potential schedule for surface water management capital improvement projects, and discusses educational opportunities.

7. ***Section 7.0. Administration*** describes potential methods of ensuring that this plan is maintained and identifies a procedure to keep the modeled data current as various developments occur. This section also includes an evaluation of the implementation of this plan.

8. ***Section 8.0. Appendices*** provide a general location for attachments, relative documentation and initial modeled system data sheets.

1.2 Background

The City of New Germany (2010 census population 372) is located in western Carver County. CSAH 33 runs north-south through the west side of town. CSAH 30 enters the City from the east and terminates at the intersection with CSAH 33. New Germany is surrounded by Camden and Hollywood Townships, and the nearest incorporated neighbor is Mayer, located approximately 4 miles east on CSAH 30. The majority of the surrounding land use outside of the city is agriculture at this time. The study area has been selected to largely follow the projected 2040 City limits (**Figure 1**); however, those outside areas that contribute runoff to the city have also been included in the analysis. These outside areas were not analyzed for regional stormwater treatment, but they were included in the drainage model as they affect flows in the waterways through the study area. In addition, there are a multitude of wetlands in the surrounding area, which must be protected in accordance with the Minnesota Wetlands Conservation Act.

New Germany is completely located within the boundary of the Carver County Watershed Management Organization (CCWMO). For this plan, two major subwatershed regions were used to analyze drainage as follows (**Figure 10**):

1. *West Watershed* – Western edge of New Germany. Drains west to Judicial Ditch No.1 and ultimately to the South Fork of the Crow River.
2. *East Watershed* – Encompasses most of New Germany. Drains east to County Ditch No.9 and ultimately to the South Fork of the Crow River.

The area around New Germany is predominantly undeveloped agricultural land. The City can expand in most directions and is only limited by the current wetlands; however, care should be exercised in maintaining the naturally forested areas and providing ecological corridors and enhanced natural-area connectivity wherever feasible. Measures must be taken to manage future runoff rates and volumes to maintain the integrity of surface water bodies within and around New Germany. An ordered growth with consideration given to storm water management is the primary goal of this Surface Water Management Plan.

1.3 Major Issues

Section 5.0 outlines New Germany's major issues, goals and policies, as well as implementation strategies, pertaining to water resources management. Following is a summary of the major issues identified:

1.3.1 **Surface Water Management.** Poor management of surface water resources can lead to flooding and low water quality.

1.3.2 **Impaired Waters.** In and around New Germany, the Crow River, South Fork is impaired for aquatic macroinvertebrate bioassessments, fish bioassessment, nutrient/eutrophication, turbidity, fecal coliform, and mercury in fish tissue, which inhibit aquatic life, recreation, and consumption.

1.3.3 **Urban Stormwater Management.** Land development substantially increases the rate and volume of surface water runoff due to the increase in impervious surfaces. Unmanaged runoff increases sedimentation, pollution, erosion, and flooding downstream and decreases groundwater recharge.

1.3.4 **Wetlands Management.** Draining, filling, or excavating wetlands significantly impacts the water quality of downstream surface waters. The loss of existing wetlands leads to increases in sedimentation, pollution, erosion, and flooding downstream and decreases the diversity and integrity of vegetation and wildlife.

1.3.5 **Upland Natural Resources.** Loss of natural upland areas can lead to a decrease in the function and quality of surface water resources.

1.3.6 **Ground Water Management.** Groundwater quality and availability can be significantly impacted by many different land use activities.

1.3.7 **Education.** Most potential contamination threats, sources of pollution, and increases in stormwater runoff to water resources are related to human activities.

1.4 Goals

Section 5.0 outlines New Germany's major issues, goals and policies, as well as implementation strategies, pertaining to water resources management. Following is a summary of the City's goals:

1.4.1 **Surface Water Management.** Maintain or improve the physical, chemical, biological, and aesthetic condition of surface water resources.

1.4.2 **Impaired Waters.** Develop and implement plans as necessary to reduce pollutant loads for waters that do not meet Total Maximum Daily Loads (TMDLs) approved by the EPA. Coordinate City efforts with applicable Implementation Plans as approved by the Minnesota Pollution Control Agency. See Section 5.2.1S for a list of approved TMDLs and Implementation Plans.

1.4.3 **Urban Stormwater Management.** Minimize and mitigate the impacts of urban stormwater runoff on water resources.

1.4.4 **Wetlands Management.** Manage and protect wetlands to maximize wetland functions and improve surface water resources.

1.4.5 **Upland Natural Resources.** Manage and protect natural upland areas adjacent to surface water resources to mitigate degradation of surface waters and increase the quantity, quality and biological diversity of natural areas.

1.4.6 **Ground Water Management.** Protect the quality and quantity of groundwater resources.

1.4.7 **Education.** Provide the public with the knowledge, skills, and motivation to protect and improve surface water and groundwater resources.

1.5 Policies and Implementation Strategies

A list of policies and implementation strategies is included in **Section 5.0** for each major issue. The policies and implementation strategies discuss responsible parties, define specific City policies, and outline strategies to implement this plan. The policies and implementation strategies are intended to guide City planning. Following is a summary of the City's policies:

1.5.1 **Surface Water Management.**

1. Evaluate and correct flooding issues on City property as necessary to protect public safety and minimize potential for property damage.
2. Provide support to landowners in evaluating and correcting localized flooding issues.
3. Promote additional storage and runoff reduction through wetland restoration, regional ponding, and stream or ditch diversions.
4. Evaluate outlet control structures for performance and work with landowners, CCWMO, and/or the Minnesota Department of Natural Resources (MnDNR) to replace or repair the structures if needed.
5. Promote education regarding the benefits of proper surface water resources management.

1.5.2 **Impaired Waters.**

1. Reduce pollutant loading to Impaired Waters in order to restore water quality to State standards.
2. Promote education regarding the benefits of pollutant load reduction.

1.5.3 **Urban Stormwater Management.**

1. Continue to meet or exceed the National Pollutant Discharge Elimination System (NPDES) requirements as they apply to the City of New Germany.
2. Apply regulatory standards that help the City meet its goal for Urban Stormwater Management.
3. Prioritize potential stormwater projects that will decrease local runoff rates and volumes and increase water quality.
4. Maintain the stormwater drainage system using the practices described in this plan.
5. Maintain roads using the practices described in this plan.
6. Maintain City's database for stormwater related data.
7. Promote education regarding the benefits of proper urban stormwater

management.

1.5.4 **Wetlands Management.**

1. Achieve no net loss in the quantity, quality, and diversity of existing wetlands through enforcement of Wetland Management regulations.
2. Promote wetland restoration, as a way to mitigate historical impacts to wetlands and increase the quantity and quality of wetlands locally.
3. Promote education regarding the benefits of proper wetland management.

1.5.5 **Upland Natural Resources.**

1. Increase the quantity and quality of existing natural areas through enforcement of existing regulations and the participation of willing landowners in existing preservation and restoration programs.
2. Promote the restoration of natural upland areas, as a way to mitigate the degradation and fragmentation of natural resources and improve water quality of surface water resources.
3. Promote education regarding the benefits of proper natural upland management.

1.5.6 **Ground Water Management.**

1. Protect groundwater quality and groundwater supplies.
2. Promote groundwater recharge, if soil conditions allow.
3. Promote education regarding the benefits of proper groundwater management.

1.5.7 **Education.**

1. Increase public awareness, understanding, and involvement in water and natural resource issues and management.

2.0 SURFACE WATER MANAGEMENT PLAN PURPOSE

This Surface Water Management Plan (SWMP) meets the requirements of Minnesota Statute 103B.235 and Minnesota Rule 8410. Minnesota Statute 103B.201 states that the purposes of the water management programs are to:

1. Protect, preserve, and use natural surface and groundwater storage and retention systems;
2. Minimize public capital expenditures needed to correct flooding and water quality problems;
3. Identify and plan for means to effectively protect and improve surface and groundwater quality;
4. Establish more uniform local policies and official controls for surface and groundwater management;
5. Prevent erosion of soil into surface water systems;
6. Promote groundwater recharge;
7. Protect and enhance fish and wildlife habitat and water recreational facilities; and
8. Secure the other benefits associated with the proper management of surface and groundwater.

This SWMP complies with Carver County Code – Section 153 – Water Resource Management Rules and the Carver County Watershed Management Organization Comprehensive Water Resources Management Plan (CWRMP).

3.0 WATER RESOURCE MANAGEMENT RESPONSIBILITIES AND RELATED AGREEMENTS

The City of New Germany is responsible for construction, maintenance, and other projects in or along the City's storm water management systems (i.e., ponds, pipes, channels, etc.). However, the City of New Germany must comply with the Carver County Watershed Management Organization Rules (County Code – Section 153), as well as the MPCA's NPDES General Stormwater Permit for Construction Activity (MN R100001). **Section 5.0** of this plan further outlines enforcement responsibilities.

The City has an agreement with Carver County regarding inspection of SSTSs within City limits.

The regulations outlined in this plan do not supersede those put forth by the Carver County Watershed Management Organization (CCWMO) or other Local, State, or Federal agencies. If a discrepancy exists between regulations contained in this plan and other agencies, the more restrictive requirement shall govern.

4.0 LAND AND WATER RESOURCES INVENTORY

4.1 Physical Environment

4.1.1 Climate and Precipitation

New Germany has a Humid Continental Climate, typified by considerable seasonal temperature differences, hot and humid summers, and cold to extremely cold winters, and is located in USDA Plant Hardiness Zone 4b. Native vegetation has a seven month growing season (April to October) and crops have a five month growing season (May to September). Two-thirds of the precipitation occurs during the crop growing season, with a total of almost 32 inches annually. Refer to **Table 4-1** for a 30 year average of temperature and precipitation Data. Refer to Point Precipitation Frequency Estimates provided by the National Oceanic and Atmospheric Administration (NOAA) Atlas 14 for estimated precipitation amounts for specific frequencies, durations, and locations at the link listed below.

https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=mn

Table 4-1: 1981-2010 Monthly Climate Normals (Chaska, MN)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Daily Maximum Temperature (°F)	26.0	30.9	43.3	60.4	72.2	81.2	85.3	82.2	74.3	61.0	42.9	29.0	57.5
Daily Minimum Temperature (°F)	6.6	11.2	23.5	36.3	48.5	57.8	62.5	60.5	51.7	39.1	25.8	11.8	36.4
Average Daily Temperature (°F)	16.3	21.0	33.4	48.4	60.3	69.5	73.9	71.4	63.0	50.1	34.3	20.4	46.9
Precipitation (in)	0.84	0.58	1.73	2.87	3.59	4.24	4.26	4.96	3.43	2.48	1.73	1.14	31.85
Snowfall (in)	10.5	7.0	8.7	2.0	0.0	0.0	0.0	0.0	0.0	0.1	9.3	8.3	45.9

Source: U.S. Climate Normals 1981-2010. National Climate Data Center

4.1.2 Topography and Drainage

The topography of New Germany is undulating, with all storm water runoff from the City ultimately discharging to the South Fork of the Crow River. Runoff from the west side of the City drains to Judicial Ditch No. 1, which connects to the Crow River west of town. Runoff from the east side of the City drains to County Ditch No. 9, which connects to the Crow River northeast of New Germany. The entire study area is within the jurisdiction of CCWMO. Refer to **Figure 10.**

4.1.3 Geology

Refer to CCWMO's Comprehensive Water Resources Management Plan (CWRMP) for a description of Carver County geology.

4.1.4 Soils

Infiltration capacities of soils affect the amount of direct runoff resulting from rainfall. Higher infiltration rates result in lower runoff, and low infiltration rates produce high runoff volumes and high peak discharge rates. Therefore, the Natural Resource Conservation Service (NRCS) developed a system to classify the effect soil has on runoff volumes. Refer to **Table 4-2** for descriptions of each soil classification.

Table 4-2: Hydrologic Soil Groups

A	Soils in this group have low runoff potential when thoroughly wet. Water is transmitted freely through the soil. Group A soils typically have less than 10% clay and more than 90% sand or gravel and have gravel or sand textures. Some soils having loamy sand, sandy loam, loam or silt loam textures may be placed in this group if they are well aggregated, of low bulk density, or contain greater than 35% rock fragments. The saturated hydraulic conductivity of all soil layers exceeds 5.67 in/hr. The depth to any water impermeable layer is greater than 20". The depth to the water table is greater than 24". Soils that are deeper than 40" to a water impermeable layer are in group A if the saturated hydraulic conductivity of all soil layers within 40" of the surface exceeds 1.42 in/hr.
B	Soils in this group have moderately low runoff potential when thoroughly wet. Water transmission through the soil is unimpeded. Group B soils typically have between 10- 20% clay and 50- 90% sand and have loamy sand or sandy loam textures. Some soils having loam, silt loam, silt, or sandy clay loam textures may be placed in this group if they are well aggregated, of low bulk density, or contain greater than 35% rock fragments. The saturated hydraulic conductivity in the least transmissive layer between the surface and 20" ranges from 1.42 to 5.67 in/hr. The depth to any water impermeable layer is greater than 20". The depth to the water table is greater than 24". Soils that are deeper 40" to a water impermeable layer or water table are in group B if the saturated hydraulic conductivity of all soil layers within 40" of the surface exceeds 0.57 in/hr but is less than 1.42 in/hr.
C	Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted. Group C soils typically have between 20- 40% clay and less than 50% sand and have loam, silt loam, sandy clay loam, clay loam, and silty clay loam textures. Some soils having clay, silty clay, or sandy clay textures may be placed in this group if they are well aggregated, of low bulk density, or contain greater than 35% rock fragments. The limits on the diagnostic physical characteristics of group C are as follows. The saturated hydraulic conductivity in the least transmissive layer between the surface and 20" is between 0.14-1.42 in/hr. The depth to any water impermeable layer is greater than 20". The depth to the water table is greater than 24". Soils that are deeper than 40" to a restriction or water table are in group C if the saturated hydraulic conductivity of all soil layers within 40" of the surface exceeds 0.06 in/hr but is less than 0.57 in/hr.
D	Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted. Group D soils typically have greater than 40% clay, less than 50% sand, and have clayey textures. In some areas, they also have high shrink-swell potential. All soils with a depth to a water impermeable layer less than 20" and all soils with a water table within 24" of the surface are in this group, although some may have a dual classification, as described in the next section, if they can be adequately drained. The limits on the physical diagnostic characteristics of group D are as follows. For soils with a water impermeable layer at a depth between 20-40", the saturated hydraulic conductivity in the least transmissive soil layer is less than or equal to 0.14 in/hr. For soils that are deeper than 40" to a restriction or water table, the saturated hydraulic conductivity of all soil layers within 40" of the surface is less than or equal to 0.06 in/hr.
A/D B/D C/D	Certain wet soils are placed in group D based solely on the presence of a water table within 24" of the surface even though the saturated hydraulic conductivity may be favorable for water transmission. If these soils can be adequately drained, then they are assigned to dual hydrologic soil groups (A/D, B/D, and C/D) based on their saturated hydraulic conductivity and the water table depth when drained. The first letter applies to the drained condition and the second to the undrained condition. For the purpose of hydrologic soil group, adequately drained means that the seasonal high water table is kept at least 24" below the surface in a soil where it would be higher in a natural state.

Source: Natural Resource Conservation Service

The underlying soils in and around the city are primarily Type B and Type D, with inclusions of C scattered throughout. Many of the Type D soils will act as Type B soils when containing draintiles, such as those installed for agricultural purposes. During the development process these tiles will be removed and the soils will revert back to their less-permeable state leading to increased surface runoff. Refer to **Figure 4** for location of soil types. Additional information regarding area soils can be found in the CWRMP.

4.1.5 Unique Features, Scenic Areas, & Water-based Recreation

The South Fork of the Crow River and the wetlands surrounding town provide scenic views in New Germany and water-based recreational opportunities. Four parks are scattered throughout the city. The parks are Gazebo Park, Tower Park, Lindstrom Park, and Baseball Park. Amenities provided by the City parks include playgrounds, benches, baseball diamonds, picnic areas and shelters, volleyball courts, natural spaces, horseshoe pits, trails, and basketball courts. The Baylor Regional Park is located a few miles south of town on CSAH 33 and includes trails, a boat ramp, a community room, picnic shelters, disc golf, ball fields, tennis courts, volleyball

courts, a swimming beach, and camp sites. The Dakota Rail trail runs from east to west through the center of town and provides walking, running, and biking opportunities. Also, several regional parks and wildlife management areas are located within the county. Additional information regarding unique features, scenic areas, and water-based recreation can be found in the CWRMP.

4.2 Biological Environment

4.2.1 Land Cover

Very little of the vegetation present prior to European settlement remains in and around New Germany. Land cover now consists of mainly agricultural land, urban development, and wetlands. In 2007, all land within Carver County was mapped using the Minnesota Land Cover Classification System (MLCCS). Refer to **Figure 5** for the portion of area in and around New Germany. The MLCCS was developed by the Minnesota Department of Natural Resources (MnDNR), and categorizes all areas by type of land cover into two categories. Natural/Semi-natural areas consist of forests, grasslands, wetlands, etc, and Cultural areas consist of urban and agricultural areas. The two categories are further subdivided on the basis of plant types, soil hydrology, plant species, and amount of impervious surface. At this point the city has no goals or policies relating to these classifications; however, the city is interested in preserving critical natural areas and working with the county to establish appropriate policies. Additional information regarding land cover can be found in the CWRMP.

4.2.2 Rare, Threatened, and Endangered Species

The Department of Natural Resources' Natural Heritage and Nongame Research Program maintains a database listing rare plant and animal observations. Currently, the database lists one instance of rare plant or animal species in and around (within an approximate 2 mile radius) the City of New Germany. A colonial waterbird nesting site is located approximately one mile west of the study boundary, along Crane Creek. Additional information regarding rare, threatened, and endangered species can be found in the CWRMP.

4.2.3 Natural Resource Assessment

Carver County completed a natural resource assessment in 2007. Utilizing the county's land cover inventory as the base, a GIS-based tool was developed to prioritize networks of connected, high quality open areas and identify areas where natural systems should be preserved or restored. The resource assessment component analyzed existing natural areas for benefits provided to both wildlife and humans and established a natural area ranking system from which land use decisions can be made. The restoration assessment component evaluated and prioritized restoration opportunities. Within the study boundary, several wetland and woodland areas have been assessed from low to medium natural resource value. Also, several wetland and woodland areas have been assessed to have low to high restoration potential. Additional information regarding the natural resource assessment can be found in the CWRMP.

4.2.4 Fish and Wildlife Habitat

Around New Germany, the South Fork of the Crow River and multiple wetlands and woodlands provide habitat for a wide variety of fish, birds, and animals. Fish species include Black Bullhead, Black Crappie, Bluegill, Brown Bullhead, Channel Catfish, Common Carp, Sunfish, Largemouth Bass, Northern Pike, Walleye, White Crappie,

Yellow Bullhead, and Yellow Perch. Bird species include several of both migratory and non-migratory varieties. Animal species include badger, bat, beaver, chipmunk, coyote, ermine, fox (Gray and Red), Heather vole, Least shrew, Long-tailed weasel, mink, mole, muskrat, Plains pocket mouse, porcupine, rabbit (Eastern Cottontail and White-tailed Jack), raccoon, river otter, Striped skunk, squirrel (Fox, Gray, Red, and Thirteen-lined Ground), Virginia Opossum, and white-tailed deer. Additional information regarding county fish and wildlife habitat can be found in the CWRMP.

4.3 Human Environment

4.3.1 Existing and Planned Land Use

The City of New Germany has developable space in most directions and is limited only by area wetlands. Land use is an important factor in estimating surface water runoff, as the impervious surface associated with each land use greatly affects the amount of runoff generated. **Figure 2 and 3** exhibit the existing and future land uses in New Germany. It is presumed that continued development will be predominantly residential. With these projections, priority areas have been identified for future water resource improvements or enhancements. Additional information regarding existing and planned land use in the area can be found in the City of New Germany 2040 Comprehensive Plan and the CWRMP.

4.3.2 Metropolitan Urban Service Area (MUSA)

The MUSA is the area in which the Metropolitan Council oversees the planning, installation, and maintenance of regional facilities, such as sewers and highways. No portion of New Germany is located within the Metropolitan Urban Service Area. Additional information regarding the MUSA can be found in the CWRMP.

4.3.3 Open Space and Recreation

The South Fork of the Crow River provides opportunities for sport fishing and water recreational activities. City parks provide outdoor recreational opportunities, and the Dakota Rail Trail provides a location for walking, running, and biking. Also, several regional parks, trails and wildlife management areas are located within the county. Additional information regarding open space and recreation can be found in the CWRMP.

4.3.4 Potential Environmental Hazards

Potential environmental hazards within the City include known and potential sources of soil and groundwater contamination listed by the Minnesota Pollution Control Agency (MPCA), feedlots, and wells.

Known and Potential Sources of Soil and Groundwater Contamination: The MPCA maintains a database of sites with known or potential soil and groundwater contamination, including Superfund candidate sites, contaminated soil treatment facilities, leak sites, petroleum brownfields, state assessment sites, and voluntary investigation and cleanup sites. The database contains sites that have already been investigated and cleaned up, sites currently enrolled in MPCA cleanup programs, and sites suspected of contamination but found to be clean after investigation. Additional information regarding known or potential contamination sites can also be found in the CWRMP. A complete listing of sources and interactive map is provided on the MPCA's website at the following location:

https://www.pca.state.mn.us/data/contaminated-sites-data

Feedlots: An animal feedlot is defined by MN Administrative Rule 7020.0300 as "a lot or building or combination of lots and buildings intended for the confined feeding, breeding, raising, or holding of animals and specifically designed as a confinement area in which manure may accumulate, or where the concentration of animals is such that a vegetative cover cannot be maintained within the enclosure. For purposes of these parts, open lots used for the feeding and rearing of poultry (poultry ranges) shall be considered to be animal feedlots." Due to the high density of animals and lack of vegetation in feedlots, these areas are likely to produce runoff contaminated with animal waste, sediment, and other pollutants. According to the MPCA's database, several feedlots exist in and around New Germany. Additional information regarding feedlots can be found on the MPCA's website or in the CWRMP.

Wells: Wells are common place in Carver County, and when properly installed, they pose no threat for potential contamination of groundwater. However, if improperly installed or abandoned, wells can provide a conduit for pollutants to enter groundwater. The County maintains an Index of known wells, some of which have been properly abandoned and sealed. However, those still in operation or abandoned but not properly sealed may allow for contamination of aquifers. Additional information regarding wells can be found in the CWRMP.

4.4 Hydrologic Systems

4.4.1 Surface Water Resources

Watershed Boundaries:
Surface water in New Germany drains to the Mississippi River via the Crow River. For this plan, the study area was divided into two subwatersheds (**Figure 10**):

1. *West Watershed* – Western edge of New Germany. Drains west to Judicial Ditch No.1 and ultimately to the South Fork of the Crow River.
2. *East Watershed* – Encompasses most of New Germany. Drains east to County Ditch No.9 and ultimately to the South Fork of the Crow River.

Stormwater Drainage and Treatment System
The majority of streets and storm sewer in New Germany was reconstructed in 2013. In addition, five sump manholes with SAFL Baffles, 4 sump manholes with sand filters, and a bioretention area were installed with the improvements. Therefore, the city's storm sewer is in good condition. A few stormwater ponds provide treatment for the newer development on the northeast side of town. Refer to **Figure 11** for the existing Storm Sewer System. Refer to **Appendix F** for the Storm Treatment System Inventory and Maintenance Plan.

Public Waters
Public waters are lakes, wetlands, and watercourses that are under the regulatory jurisdiction of the Minnesota Department of Natural Resources (MnDNR). In and around New Germany, the MnDNR's Public Water Inventory identifies the South Fork of the Crow River and several smaller basins and wetlands as public waters. Refer to **Figure 6** for National Wetland Inventory and DNR Public Waters.

Streams

South Fork of the Crow River (Stream ID 07010205-508): The South Fork of the Crow River travels around the City on the south side prior to heading northeast past the neighboring city of Mayer, MN. This stretch of the South Fork of the Crow River is on the State's 303(d) Impaired Waters list for aquatic macroinvertebrate bioassessments, fish bioassessment, nutrient/eutrophication, turbidity, fecal coliform, and mercury in fish tissue. Mercury in Fish Tissue is a widespread issue and the State has prepared a state-wide TMDL to reach mercury reduction goals. The TMDLs for the other impairments have not yet been completed. As development occurs, the fecal coliform concentration in the river should be reduced through the reduction in the amount of feedlots contributing runoff and natural fertilizer applied to fields. Additionally, as agricultural land is developed the untreated runoff currently reaching the river should have improved water quality as a result of required Best Management Practices.

Public Ditches

Runoff from the west side of the study area drains west to Judicial Ditch No. 1 (JD1), which then drains southwest to the South Fork of the Crow River. The majority of town drains east to the County Ditch No. 9 (CD9), which then drains northeast to the Crow River.

Wetlands

In 1986, the Emergency Wetland Resources Act mandated the U.S. Fish and Wildlife Service to complete a National Wetland Inventory (NWI). Wetlands in Minnesota were mapped between 1991 and 1994, and the NWI map indicates potential wetlands scattered throughout the City of New Germany (**Figure 6**).

In 2003, CCWMO completed a Wetland Function and Value Assessment (WFVA) for wetlands located within their watershed. Wetlands were evaluated for surface water runoff, flood water storage, shoreline stabilization, water quality, habitat, landscape and wetland characteristics, and aesthetics, with basins smaller than one acre being excluded from the assessment. Rankings of high, medium, or low were then assigned to each wetland or potential wetland restoration site. These rankings are now being used to apply buffer standards, for stormwater and natural resource planning for growth and redevelopment areas, and to prioritize restoration opportunities. The wetlands in and around New Germany vary in rank from low to medium. Also, several potential restoration sites within the study area with rankings of low all the way to high have been identified by the WFVA (**Figure 7**).

Floodplain

The State defines floodplain as the area covered by a flood that has a 1% chance of occurring in a given year, also known as the 100yr flood. A floodplain is divided into two parts: the floodway and flood fringe. The floodway includes the basin, river channel, and portion of the floodplain necessary to discharge the 100yr flood. The flood fringe is the portion of floodplain outside the floodway. The MnDNR oversees administration of the state Floodplain Management Program. This program promotes and ensures sound development in floodplain areas to protect public safety and health and minimize economic impacts from flood damage. Therefore, MnDNR has created

minimum standards for floodplain management and requires all local floodplain regulations to be compliant with these standards. The City does not participate in the National Flood Insurance Program and does not currently have a city ordinance pertaining to floodplain management. Refer to the following link for more information regarding the FEMA 100-year floodplain areas around the City.

https://msc.fema.gov/portal/advanceSearch#

Flood Insurance Studies

- The FEMA map for New Germany is dated January 5, 1978.
- FEMA Resilience Report for Carver County, MN and the communities of Carver, Chanhassen, Chaska, Cologne, Hamburg, Mayer, New Germany, Norwood Young America, Victoria, Waconia, and Watertown dated August 2012
- Preliminary Flood Insurance Study for Carver County, MN and Incorporated Areas (FIS # 27109CV000A) dated January 31, 2018

Known Flooding Issues

No flooding issues have been identified.

Stormwater Runoff Treatment

The streets and storm sewer in the older areas of New Germany were reconstructed in 2013, and treatment measures were installed to provide some treatment of runoff from these areas. Five sump manholes with SAFL Baffles, 4 sump manholes with sand filters, and a rain garden were installed with the reconstruction to provide improvement of storm water runoff quality. Storm water management facilities in the newer areas of town have been constructed to meet the standards set forth in the County Ordinances current at the time of construction, and as such these areas contain wet retention ponds and rain gardens to provide water quality improvement. Refer to **Figure 9** for differing areas of stormwater runoff treatment.

Water Quality Data & Monitoring Sites

New Germany does not monitor surface water resources nor is it equipped to do so. However, the City will continue to support monitoring of surface waters within the City. Data will be obtained through cooperation and coordination with other various agencies, including the CCWMO, Minnesota Pollution Control Agency (MPCA), and the Department of Natural Resources. Refer to CCWMO's Comprehensive Water Resources Management Plan (CWRMP) for more information on water quality data and monitoring.

Impaired Waters

The Federal Clean Water Act requires states to establish water quality standards, to test surface waters, and formally list those as "impaired" that do not meet the water quality standards. Subsequent sections presents more detail on the impaired waters program and its relationship to New Germany's stormwater management program. A Total Maximum Daily Load (TMDL) study is the next step for an impaired water, although it can be delayed years after identification of the impairment. The TMDL

study can result in very specific water quality obligations for Cities. Once the TMDL Study is accepted by the MPCA, an Implementation Plan must be developed to meet the obligations identified in the TMDL Study.

In and around New Germany, the South Fork of the Crow River is the only surface water listed as impaired, and no TMDL Studies or Implementation Plans have been completed yet, as of 2018. Impairments for the South Fork of the Crow River are summarized in **Table 4.3**, and the location is depicted on **Figure 8**.

Table 4-3: Impaired Waters

Waterbody/ Watercourse	DNR ID#	Listed Pollutant	Impaired Use	Year Listed	Year TMDL Approved
South Fork of the Crow River	07010205-508	Mercury in Fish Tissue	Aquatic Consumption	1998	
		Aquatic macroinvertebrate bioassessments	Aquatic Life	2016	
		Fishes bioassessments	Aquatic Life	2002	
		Nutrient/ Eutrophication	Aquatic Life	2016	
		Turbidity	Aquatic Life	2004	
		E. Coli	Aquatic Recreation	2006	

Shoreland Ordinance

No shoreland exists within the City of New Germany.

4.4.2 Groundwater Resources

Water quality of surface waters can have great effect on groundwater due to the interaction via groundwater recharge and discharge. New Germany relies strictly on groundwater (aquifers) for drinking water, and therefore, groundwater quality is equally as important as surface water quality. Multiple aquifers exist within Carver County, but the majority of wells are finished in the Prairie du Chien-Jordan Aquifer.

Wellhead Protection

The Safe Drinking Water Act requires states to implement protection programs to prevent contamination of public drinking water sources. Therefore, the Minnesota Department of Health requires public water suppliers to delineate and manage Wellhead Protection Areas (WHPA) surrounding public water sources. Refer to New Germany's Wellhead Protection Plan for specific information regarding wellhead management and protection. Additional information regarding groundwater resources can be found in the CWRMP.

5.0 MAJOR ISSUES, GOALS, AND POLICIES

The City of New Germany highly values the natural resources within its jurisdiction and seeks to protect surface and groundwater storage systems, effectively manage expenditures to correct flooding and water quality problems, prevent erosion into surface waters, promote groundwater recharge, enhance wildlife habitats and water recreational facilities, and improve the water quality of all water resources. Therefore, the following issues requiring action have been described, and each issue is followed by the City's goal, specific policies, and implementation strategies.

5.1 Surface Water Management

Issues

5.1I Poor management of surface water resources can lead to flooding and low water quality.

Goal

5.1G Maintain or improve the physical, chemical, biological, and aesthetic condition of surface water resources.

Policies

5.1.1P Evaluate and correct flooding issues on City property as necessary to protect public safety and minimize potential for property damage.

Flooding can create public safety issues and cause significant damage to properties. Flooding issues on public property can be the result of various factors, including temporary conveyance blockages, undersized conveyances, inadequate flood storage volume, and an increase in impervious surfaces. By evaluating and correcting flooding issues on public property, the City can improve public safety during extremely wet conditions and limit potential for erosion and damage of property.

5.1.2P Provide support to landowners in evaluating and correcting localized flooding issues.

Localized flooding can cause significant damage to private properties. Localized flooding issues are usually created due to improper grading and are located outside the City's jurisdiction. By providing assistance in evaluating and correcting localized flooding issues, the City can limit erosion, sedimentation, and damage to vegetation and structures.

5.1.3P Promote water quality improvement, runoff volume reduction, and additional storage through wetland restoration, regional ponding, infiltration, filtration, bioretention, and stream or ditch diversions.

By providing water quality improvement, runoff volume reduction, and additional storage, peak runoff rates and pollutants are reduced, and groundwater recharge is increased. These actions will help meet TMDL goals.

5.1.4P Evaluate outlet control structures for performance and work with landowners, CCWMO, and/or the Minnesota Department of Natural Resources (MnDNR) to replace or repair the structures if needed.

The condition of outlet control structures can have a significant impact on riparian property and wildlife habitat due to flooding or low water levels. Flooding can cause erosion, sedimentation, flooding of nesting sites and vegetation, and damage to structures. Low water levels can lower the value of recreation, impact wildlife, and reduce water supplies.

5.1.5P Promote education regarding the benefits of proper surface water resources management.

Public understanding and involvement is essential in maintaining and improving the quality of surface water resources.

Implementation Strategies

5.1.1S The City will continue to monitor and evaluate flooding issues on City property as necessary to protect public safety and minimize potential for property damage. Flood improvement projects identified will be prioritized based on available funds, feasibility, potential project partners, and benefits provided. Once projects are identified, this plan will be updated to list projects in **Section 6.0**.

5.1.2S The City will provide assistance to landowners in evaluating and correcting localized flooding issues. If potential flooding will damage nearby dwellings or cause significant erosion and sedimentation, the City will partner with the landowner to correct drainage as feasible. Applications for localized drainage improvements will be submitted for review by City Staff and approved by the City Council. The City's participation may include engineering costs as well as public construction costs. Private property owners shall be responsible for all private construction costs necessary to remedy the issue.

5.1.3S In order to provide water quality improvement, runoff volume reduction, and additional storage, wetland restoration, regional ponding, infiltration, filtration, bioretention, and stream or ditch diversion sites will be identified and prioritized. Sites will be coordinated with the CWRMP and will consider available funds, feasibility, possible project partners, benefits provided, bioengineered solutions, and TMDL Implementation Plans. Once sites are identified, this plan will be updated to list the sites in **Section 6.0**.

5.1.4S Outlet control structures will be evaluated for responsible authority, condition, and performance and prioritized for repair or replacement. Evaluations will consider design outflows and design outlet elevations as well as available funds, feasibility, possible project partners, benefits provided, bioengineered solutions, and TMDL Implementation Plans. Once sites are identified, this plan will be updated to list the structures in **Section 6.0**. Structures under the authority of the City will be maintained regularly by City staff and repaired or replaced when performance is evaluated as unacceptable. For structures not under the authority of the City, the City will work with the CCWMO and MnDNR with the following activities: resolve conflicts between riparian landowners and/or the public, assist with modeling to

determine appropriate outflow rate and outlet elevations, assist with structure design and construction, and provide support with maintenance.

5.1.5S Goals, policies and implementation strategies for Surface Water Management will be incorporated into the City's public education programs. Also, the City will provide support and assistance to the CCWMO with the County's education programs.

5.2 Impaired Waters

Issues

5.2I In and around New Germany, the South Fork of the Crow River is impaired for aquatic macroinvertebrate bioassessments, fish bioassessment, nutrient/ eutrophication, turbidity, fecal coliform, and mercury in fish tissue, which inhibit aquatic life, recreation, and consumption.

Goal

5.2G Develop and implement plans as necessary to reduce pollutant loads for waters that do not meet Total Maximum Daily Loads (TMDLs) approved by the EPA. Coordinate City efforts with applicable Implementation Plans as approved by the Minnesota Pollution Control Agency. See Section 5.2.1S for a list of approved TMDLs and Implementation Plans.

Policies

5.2.1P Reduce pollutant loading to Impaired Waters in order to restore water quality to State standards.

The Federal Clean Water Act (CWA) requires States to set water quality standards for surface waters. The standards assign uses for each waterbody and establish criteria to maintain water quality necessary for the designated use. Waters that do not meet State water quality standards are designated as "Impaired". For Impaired Waters, the CWA requires the development and implementation of a TMDL. A TMDL establishes the pollutant loading to an Impaired Water that still meets water quality standards and develops an allocation for the identified contributors. The TMDL includes point sources, non-point sources, natural background, reserve capacity, and a margin of safety. A TMDL must be approved by the EPA, and an Implementation Plan must be developed and approved by the MPCA within one year of TMDL approval. The City does not plan to lead any TMDLs.

5.2.2P Promote education regarding the benefits of pollutant load reduction.

Public understanding and involvement is essential in maintaining and improving the quality of surface water resources.

Implementation Strategies

5.2.1S Adopt TMDLs and Implementation Plans into this plan by reference as they are approved and list below. Update this plan regularly to incorporate TMDLs approved in the future. The City should be directly involved with the portions of

the studies and implementation plans that it is required to be responsible for. The City should provide support as necessary to the County for the remaining portions.

- List Approved TMDLs and Implementation Plans here

  Refer to individual TMDLs for more detailed information regarding allocations and required reductions.

5.2.2S Goals, policies and implementation strategies for Impaired Waters should be incorporated into the City's public education programs. Also, the City should provide support and assistance to the CCWMO with the County's education programs.

5.3 Urban Stormwater Management

Issues

5.3I Land development substantially increases the rate and volume of surface water runoff due to the increase in impervious surfaces. Unmanaged runoff increases sedimentation, pollution, erosion, and flooding downstream and decreases groundwater recharge.

Goal

5.3G Minimize and mitigate the impacts of urban stormwater runoff on water resources.

Policies

5.3.1P Continue to meet or exceed the National Pollutant Discharge Elimination System (NPDES) requirements as they apply to the City of New Germany.

As authorized by the Clean Water Act and EPA, the State administers the NPDES program through the Minnesota Pollution Control Agency (MPCA). As it pertains to stormwater runoff, the NPDES program is designed to reduce pollution entering surface and ground waters through regulation of construction sites, Municipal Separate Storm Sewer Systems (MS4s), and industrial sites.

Construction: The most active portion of the NPDES program in the City is Construction Stormwater (CSW) permitting. Controlling erosion during land development/redevelopment is paramount to significantly reducing transport of sediment and pollutants. A NPDES CSW Permit is required for any construction activity that disturbs 1 or more acres, is part of a development greater than 1 acre, or is determined by the MPCA to pose a risk to water resources. The CSW also lists additional requirements for discharges to impaired or special waters that must be incorporated. The CSW must be signed by both the Owner and Contractor. Prior to obtaining the permit, a Stormwater Pollution Prevention Plan (SWPPP) must be developed that shows the BMPs to control runoff during and after construction. City, County, and MPCA inspectors are responsible for field inspections and enforcement of permit requirements.

MS4s: MS4s are systems of conveyances (curb and gutter, sewer, and ditches) owned and operated by a state, city, county, township, association or other public body having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes that discharges to waters of the United States. There are currently three categories of MS4s regulated by the NPDES program; Mandatory – urban areas with a population of at least 50,000, Designated – urban areas with a population of at least 10,000 and cities and townships with a population of at least 5,000 that discharge to valuable or impaired waters, and Petition – MS4s petitioned by the public to the Commissioner of the MPCA for regulation. Regulated MS4s must obtain a NPDES MS4 Permit and implement a SWPPP that addresses six minimum control measures as follows: 1) Public Education and Outreach, 2) Public Participation, 3) Illicit Discharge Detection and Elimination, 4) Construction Site Stormwater Runoff Control, 5) Post-construction Stormwater Management, and 6) Pollution Prevention and Good Housekeeping for Municipal Operations. Also, MS4s will be required to comply with and report on TMDLs as part of future permitting. ***Carver County and the Minnesota Department of Transportation (MnDOT) are regulated MS4s with jurisdiction in New Germany, but the City itself is not currently required to obtain a NPDES MS4 permit.***

Industrial: Industrial Stormwater (ISW) permits are required for any facility engaged in a Narrative Activity or a Primary Standard Industrial Classification (SIC) code, as listed in the MPCA's Multi-Sector General Permit in order to discharge stormwater runoff. Each facility must develop and implement a SWPPP to describe and control potential significant pollutants generated or be certified for a condition of "No Exposure".

5.3.2P Apply regulatory standards that help the City meet its goal for Urban Stormwater Management.

As the City grows, land is converted from natural/rural landscapes to urbanized areas, increasing areas of compacted soils and impervious surfaces. This will lead to increased runoff rates and volumes. Surface water degradation occurs at relatively low levels of imperviousness (10-20%) due to increases in runoff volume and velocity, which results in flooding, sedimentation, and transportation of pollutants. Therefore, Urban Stormwater Management is essential in decreasing flooding and protecting water quality.

5.3.3P Prioritize potential stormwater management projects that will decrease local runoff rates and volumes and improve water quality.

Stormwater management BMP projects will help improve water quality and achieve TMDL goals by decreasing runoff rates and volumes and removing pollutants. In order to maximize benefits, projects should be prioritized by considering available funding, feasibility, project partners, number of benefits provided, bioengineered solutions, and TMDL plans.

5.3.4P Maintain the stormwater drainage system using the practices described in this plan.

As the City's drainage system (storm sewer, catchbasins, ponds, infiltration basins, etc) is a conduit for stormwater, it is also a conduit for pollutants and sediment.

Therefore, regular maintenance of the system is required to maintain pollutant removal efficiencies as well as hydraulic capacity

5.3.5P Maintain roads using the practices described in this plan.

The City's roads can be a conduit for significant pollution. Pollution is created when chemicals, debris, fertilizers, automotive oils, salt, and litter are washed off roadways during rainstorms or snowmelt. With proper planning, maintenance BMPs will help reduce pollutant loads.

5.3.6P Maintain City's database for stormwater related data.

A database of the City's stormwater infrastructure will aid in tracking maintenance, evaluating progress toward goals, and prioritizing future projects.

5.3.7P Promote education regarding the benefits of proper urban stormwater management.

Public understanding and involvement is essential in maintaining and improving the quality of urban stormwater runoff.

Implementation Strategies

5.3.1S Any project within the City boundary that requires a NPDES CSW permit must provide a copy of the permit to the City prior to any work. Any facility required to obtain an ISW permit will be required by the City to do so in accordance with MPCA requirements.

5.3.2S Rely on the Water Resource Management Standards set forth in the Carver County Ordinances and provide the necessary resources for the implementation of those standards and this Surface Water Management Plan. Employ staff or a consultant to perform the following tasks:

A. Review Planning and Zoning Applications with regards to Water Resource Management Standards.
B. Inspect BMP installations.
C. Enforce BMP maintenance.

The City will continue to rely on CCWMO to maintain authority for reviewing and approving applications for compliance with CCWMO's rules and enforcing those rules as necessary. The City will also review all applications to ensure it is not adversely impacted by proposed improvements (i.e. infiltration over sanitary sewer, potential conflicts with future projects).

5.3.3S Potential stormwater projects that decrease local runoff rates and volumes and increase water quality will be identified and prioritized. Sites will be coordinated with the CWRMP and will consider available funds, feasibility, possible project partners, benefits provided, bioengineered solutions, and TMDL Implementation Plans. Once projects are identified, this plan will be updated to list the improvement sites in **Section 6.0**.

5.3.4S Maintain the stormwater drainage system including the following:

A. An inspection program and schedule to ensure general maintenance is performed. Erosion control and stormwater treatment devices are inspected regularly.
B. Energy dissipaters and volume controls are maintained to prevent erosion.
C. An inspection program and schedule for pond cleaning. Ponds will be cleaned when sediment has reduced the volume below the outlet to half of the design volume.
D. Accumulated sediment collected from BMPs and any waste generated during maintenance is properly disposed of in accordance with state and federal regulations.

5.3.5S Maintain roads using the following:
A. An inspection program and schedule to ensure general maintenance is performed.
B. Retaining walls and pavements are maintained to minimize cracks and leakage and prevent failure.
C. Accumulated sediment collected from BMPs and any waste generated during maintenance is properly disposed of in accordance with state and federal regulations.
D. When blading gravel roads, a structurally sound surface with adequate crown is maintained to prevent erosion or scattering of gravel.
E. Drainage ditches are kept free of debris.
F. Salt storage piles are covered and located outside the 100 year floodplain.
G. The application of deicing salts is regulated to prevent over-salting of pavements.
H. Accumulated snow is not allowed to be dumped onto frozen surface waters.
I. Vegetation is established on eroded or damaged areas in a timely manner.
J. Pesticide and fertilizer use is restricted as much as possible.
K. Native plantings are promoted within buffer strips and ditches.
L. Residential streets and parking lots are swept at least two times per year (in the spring after snowmelt and in the fall after leaves have dropped).
M. Road debris is collected and removed in a timely manner.

5.3.6S Employ staff or a consultant to maintain the City's database of the entire storm drainage system. The database include all facilities associated with stormwater runoff drainage, including catchbasins, storm sewer, wet stormwater ponds, bioretention basins, infiltration/filtration basins, hydrodynamic separators, sump manholes, outlet structures, and any other device used to convey runoff. The database also includes the specific characteristics for all the facilities, including locations, sizes, materials, elevations, areas, volumes, condition, and any other information deemed necessary. The database is updated regularly to include newly constructed or replaced facilities. This database is used for Implementation Strategy 5.3.3 to identify and prioritize stormwater projects.

5.3.7S Goals, policies and implementation strategies for Urban Stormwater Management will be incorporated into the City's public education programs. Also, the City will provide support and assistance to the CCWMO with the County's education programs. The City's education program will promote the following practices to the public to help reduce impacts to water resources:
A. Maintain a healthy lawn.
B. Plant native plants or plants with deep roots to capture more runoff.
C. Preserve and maintain native vegetation areas, especially adjacent to wetlands.
D. Redirect downspouts to drain on pervious surfaces (grass) instead of impervious surfaces (driveways).

E. Install rain gardens to capture localized runoff.
F. Capture rainwater from rooftops with a rain barrel or cistern and use for irrigation.
G. Use a compost bin for leaves, lawn clippings, and other organic waste.
H. Test soils for nutrients in order to apply the correct amount of fertilizer.
I. Use zero phosphorus fertilizers.
J. Keep leaves and lawn clippings out of streets and gutters.
K. Pick up pet wastes.
L. Limit the use of herbicides and pesticides.
M. Wash cars on pervious surfaces to prevent soaps from running off-site.
N. Do not dispose any household product into the storm sewer.
O. Keep neighborhoods free from litter and debris.

5.4 Wetland Management

Issues

5.4I Draining, filling, or excavating wetlands significantly impacts the water quality of downstream surface waters. The loss of existing wetlands leads to increases in sedimentation, pollution, erosion, and flooding downstream and decreases the diversity and integrity of vegetation and wildlife.

Goal

5.4G Manage and protect wetlands to maximize wetland functions and improve surface water resources.

Policies

5.4.1P Achieve no net loss in the quantity, quality, and diversity of existing wetlands through enforcement of Wetland Management regulations.

Wetlands moderate nutrient and sediment flow, provide runoff storage, filter pollutants, buffer riverbanks and lake shores from erosion, and produce abundant and diverse plant and animal life. Therefore, the protection and restoration of wetlands is critical for maintaining and improving the water quality of local water resources. Refer to County Ordinances for wetland and buffer setback requirements.

5.4.2P Promote wetland restoration, as a way to mitigate historical impacts to wetlands and increase the quantity and quality of wetlands locally.

Today, less than 50 percent of pre-settlement wetlands remain in Carver County. Wetland restoration projects will help improve water quality and achieve TMDL goals by filtering sediment and pollutants, attenuating stormwater runoff, and preventing erosion. In order to maximize benefits, wetland restoration projects should be prioritized by considering available funding, feasibility, project partners, number of benefits provided, bioengineered solutions, and TMDL plans.

5.4.3P Promote education regarding the benefits of proper wetland management.

Public understanding and involvement is essential in maintaining and improving the quality of local wetlands.

Implementation Strategies

5.4.1S Implement the standards listed in the Carver County Ordinances and this Surface Water Management Plan. Employ staff or a consultant to perform the following tasks:

A. Review and approve wetland delineations and determinations.
B. Review and approve wetland exemptions/no-loss applications.
C. Review and approve wetland replacement plan applications.
D. Coordinate and arrange TEP meetings for pre-application reviews and other WCA related items.
E. Send application notices to TEP members.
F. Send decision notices to TEP members.
G. Enforce replacement wetland monitoring requirements, review monitoring reports, and certify replacement wetlands.
H. Work with DNR and SWCD to identify and enforce WCA violations.

5.4.2S Potential wetland restoration projects that mitigate historical impacts and increase the quantity and quality of local wetlands will be identified and prioritized. Sites will be coordinated with the CWRMP and will consider available funds, feasibility, possible project partners, benefits provided, bioengineered solutions, and TMDL Implementation Plans. For planning purposes, the County's functional value rankings and wetland restoration potential delineations have been included as **Figure 7**. Once projects are identified, this plan will be updated to list the restoration sites in **Section 6.0**.

5.4.3S Goals, policies and implementation strategies for Wetland Management will be incorporated into the City's public education programs. Also, the City will provide support and assistance to the CCWMO with the County's education programs.

5.5 Upland Natural Resources

Issues

5.5I Loss of natural upland areas can lead to a decrease in the function and quality of surface water resources.

Goal

5.5G Manage and protect natural upland areas adjacent to surface water resources to mitigate degradation of surface waters and increase the quantity, quality and biological diversity of natural areas.

Policies

5.5.1P Increase the quantity and quality of existing natural areas through enforcement of existing regulations and the participation of willing landowners in existing preservation and restoration programs.

Natural upland areas moderate nutrient and sediment flow, filter pollutants, buffer surface waters, and provide habitat for diverse species of plants and wildlife. Therefore, preserving natural upland areas is critical for maintaining and improving the water quality of local water resources.

5.5.2P Promote the restoration of natural upland areas, as a way to mitigate the degradation and fragmentation of natural resources and improve water quality of surface water resources.

Today, only about 3 percent of pre-settlement natural areas remain in Carver County. Natural upland restoration projects will help improve water quality and achieve TMDL goals by filtering sediment and pollutants. In order to maximize benefits, natural upland restoration projects should be prioritized by considering available funding, feasibility, project partners, number of benefits provided, bioengineered solutions, and TMDL plans.

5.5.3P Promote education regarding the benefits of proper natural upland management.

Public understanding and involvement is essential in maintaining and restoring natural upland areas.

Implementation Strategies

5.5.1S Employ staff or a consultant to implement this Surface Water Management Plan and enforce the regulations set forth in the Wetland Conservation Act, Shoreland Management Act, TMDLs, and other relevant laws and regulations.

5.5.2S Potential natural upland restoration projects that mitigate the degradation and fragmentation of natural resources and improve water quality of surface water resources will be identified and prioritized. Sites will be coordinated with the CWRMP and will consider available funds, feasibility, possible project partners, benefits provided, bioengineered solutions, and TMDL Implementation Plans. Once projects are identified, this plan will be updated to list the restoration sites in **Section 6.0**.

5.5.3S Goals, policies and implementation strategies for managing natural uplands will be incorporated into the City's public education programs. Also, the City will provide support and assistance to the CCWMO with the County's education programs.

5.6 Groundwater Management

Issues

5.6I Groundwater quality and availability can be significantly impacted by many different land use activities.

Goal

5.6G Protect the quality and quantity of groundwater resources.

Policies

5.6.1P Protect groundwater quality and groundwater supplies.

Pollutants from land use activities within well recharge areas, areas with unused, unsealed wells, and failing storage tanks as well as unplanned or overuse of groundwater supplies due to development can impact the quality and availability of groundwater. Protection from contamination and overuse is critical in maintaining and improving the quantity and quality of groundwater resources.

5.6.2P Promote groundwater recharge, if soil conditions allow.

Construction of impervious surfaces due to development increases runoff and reduces groundwater recharge. By promoting Low Impact Development (LID) techniques and BMPs, groundwater recharge is increased and the quality of local water resources is improved.

5.6.3P Promote education regarding the benefits of proper groundwater management.

Public understanding and involvement is essential in managing groundwater resources.

Implementation Strategies

5.6.1S The City will provide support or assistance to the following activities:

A. Work with the CCWMO to identify and seal potential contaminate sources, such as unused, unsealed wells and failing storage tanks.
B. Support the Metropolitan Council, MNDNR, and MDH in their efforts to monitor and protect regional groundwater supplies.
C. Support the MPCA in regulating storage tanks.
D. Implement water conservation efforts, as necessary.

5.6.2S The City will distribute LID materials to developers during the planning phase via comment and review letters and promote incorporation of LID techniques and BMPs into site designs.

5.6.3S Goals, policies and implementation strategies for managing groundwater resources will be incorporated into the City's public education programs. Also, the City will provide support and assistance to the CCWMO with the County's education programs.

5.7 Education

Issues

5.7I Most potential contamination threats, sources of pollution, and increases in stormwater runoff to water resources are related to human activities.

Goal

5.7G Provide the public with the knowledge, skills, and motivation to protect and improve surface water and groundwater resources.

Policies

5.7P Increase public awareness, understanding, and involvement in water and natural resource issues and management.

Because most degradation of water resources is due to human activities, education of the public is critical in implementing good water quality and conservation practices.

Implementation Strategies

5.7.1S The City will provide support and assistance to CCWMO with the County's educational programs in the form of financial support, information sharing, and help with promotional materials. The City will identify target audiences and educational needs and collaborate with CCWMO to create educational opportunities to meet these needs (workshops, seminars, K-12 programs, etc.), create education tools (website, newsletter, pamphlets, fairs, etc.), and create volunteer programs. The City will meet annually with CCWMO's Education Coordinator to discuss goals and strategies each year and create short, specific annual education plans.

5.7.2S The City will provide CCWMO with the following information and update CCWMO as changes occur;

- Provide city staff contact information and information on media/methods of communicating with the public to Carver County WMO's Education Coordinator. This includes city newsletter times and distribution numbers, city fairs, and any other outreach methods to the public.
- Provide information on major issues of concern.
- Provide information on topic areas where the city would like to increase citizen awareness (e.g. stormwater ponds, wetlands, water conservation).

6.0 WATER RESOURCES ASSESSMENT AND IMPLEMENTATION PLAN

6.1 General Assessment Procedures

The general procedure and scope of this SWMP includes the development of a planning document to identify 1) regional storage, volume reduction, and water quality improvement sites, 2) outlet control structure repair or replacement sites, 3) localized storage, volume reduction, and water quality improvement sites, 4) wetland restoration sites, and 5) natural upland restoration sites. The sites listed here should be used for planning purposes and are intended to highlight any potential large-scale issues.

The following summarizes the major activities associated with original plan development:

1. The existing City utility and storm sewer mapping was researched to determine existing drainage patterns and locations of catch basins, culverts, storm sewer, outlet structures, treatment basins, and other pertinent drainage features. Additionally, existing storm water models from recent developments were analyzed. This work was completed for the development of the plan approved December 11, 2007 and updated January 7, 2008.

3. USGS topographic mapping was correlated with the existing storm drainage data to determine and model existing drainage patterns. However, due to the level of accuracy of USGS topographic mapping, more detailed survey information would be necessary for specific improvements. This work was completed for the development of the plan approved December 11, 2007 and updated January 7, 2008.

3. Key areas of concern were identified for field inspection using topographic mapping and storm sewer data. Field inspections and surveys were then performed to identify culvert sizes and invert elevations of critical culverts in the drainage system, as well as road top elevations. This work was completed for the development of the plan approved December 11, 2007 and updated January 7, 2008.

4. Each minor drainage area flowing to a collection point, such as a low area, was identified and mapped on a master drainage area drawing. Two subwatershed collection areas were identified as part of this project. This work was completed for the development of the plan approved December 11, 2007 and updated January 7, 2008.

5. Drainage area maps were plotted for the City. This work was completed for the development of the plan approved December 11, 2007 and updated January 7, 2008. These maps were used to review existing drainage patterns and determine reasonable alternatives for future storm drainage improvements. Many factors were considered in this planning/design process including, but not limited to the following:

    A. Incorporation of recent storm drainage improvements into the future plan to assure maximum usage and benefit was achieved from prior City investments.
    B. Incorporation of regional basins into the storm water quality aspects of the plan for future ease of maintenance.
    C. Combination or rerouting of parts of subwatersheds to assure cost effective future storm drainage improvements.

D. Diversion of subwatershed areas into regional basins to assist in water quality management.

Surface runoff and storm drainage design is primarily dependent upon the permeability of existing surfaces, travel time and rainfall intensity. Curve Numbers for the SCS method were computed for each subwatershed to reasonably reflect the degree of existing industrial, commercial and residential development. The subwatershed delineations and node identifications are shown in **Figures 10**. Undeveloped areas were modeled using runoff coefficients and curve numbers representative of the expected future land use. Based on the subwatershed and routing analysis, a potential future stormwater management system was developed. This work was completed for the development of the plan approved December 11, 2007 and updated January 7, 2008.

For each prospective retention basin site, the SCS TR-20 method was used to size basins for flood mitigation potential. HydroCad, a computer program developed by HydroCad Solutions LLC, was used as a watershed-modeling tool to assist in locating and sizing potential retention basins (additional information on modeling methodology is provided in **Appendix B**). Preliminary basin sizing was based on the guidelines recommended by:

1. Walker's PondNet model.
2. The Minnesota Stormwater Manual.

Storm sewer sizing immediately upstream of retention basins has not been integrated at this time, as it will depend on more detailed localized development plans. The pond outlet structures and pipes have been included in the design, but may need adjustment when specific development plans become available. This work was completed for the development of the plan approved December 11, 2007 and updated January 7, 2008.

6.2 Regional Stormwater Treatment System

6.2.1 Existing Stormwater Treatment System:

The streets and storm sewer in the older areas of New Germany were reconstructed in 2013. In addition, five sump manholes with SAFL Baffles, 4 sump manholes with sand filters, and a rain garden were installed with the reconstruction to provide some improvement of storm water runoff quality. Storm water management facilities in the newer areas of town have been constructed to meet the standards set forth in the County Ordinances. Therefore, the city's storm sewer is in good condition.

6.2.2 Proposed Regional Treatment System Analysis Criteria

Regional basins were used to analyze the proposed stormwater treatment system in lieu of smaller localized treatment ponds. Siting was done from the 10' contour topography data provided by the U.S.G.S. quadrangle maps, with only cursory consideration given to land availability. Due to existing soils, infiltration and filtration practices will need to be carefully considered as an option for supplemental storm water treatment during the planning and design phases of individual developments. Care must be taken to ensure the presence of appropriate soils for such practices on a case-by-case basis. The County will review the design and location of any infiltration/filtration basins.

Another option for the City is to consider regional dry/filtration basins in certain

locations. An advantage of incorporating large, dry/filtration basins is the multi-functional use potential for these areas. Although buildings would be prohibited in the direct retention area, the open spaces may be used for greenway walking trails, parks, soccer fields and much more. For a large majority of the time, the basins will be relatively dry and the park type use is similar to the way many river cities have parks in river flood plains.

Regional basins may be designed to reduce the length of trunk storm sewer pipe that would be required for storm water transport between basins. When considering the proposed basins, the actual design of the regional basin need not be a symmetrical depression designed only to hold water, but could easily be designed as a non-uniform meandering waterway creating a more natural appearance while maintaining the design intent and saving the length of interconnecting pipe. Further consideration should be given to future development in order to maintain viable and safe flood routing. Thus, the proposed ultimate network makes every attempt to utilize the natural drainage routes.

Regardless of the form or layout of the treatment basins, all regional treatment can be expected to provide the following benefits to the downstream system:

1. Restrict runoff rates and volumes to match pre-developed conditions.

2. Treat runoff from previously untreated areas.

3. Reduce maintenance required compared to many smaller, localized basins.

4. Provide ecological benefits from placing a large basin adjacent to a wetland/natural area. The basin would become part of a larger ecological corridor.

6.2.3 Proposed Regional Stormwater Treatment Analysis

The proposed future regional system improvements indicated in the plan are solely based on the analysis of the drainage situation for the potential future developments within the 2040 City limits. In certain instances the potential may exist for regional basins outside of these boundaries, which have not been analyzed at this time. Following are a few key design features and recommendations.

1. The proposed retention basins are highlighted on the proposed watershed map **(Figure 10)**. Basins have been generally located in strategic low areas around the community to allow for future development. They are intended to minimize peak runoff flows and provide water quality enhancement. Only cursory consideration has been given to land use, development potential, and boundary lines.

2. If ultimate development characteristics of the watershed change significantly, retention basin design and outlet structures will need to be modified accordingly.

The following are brief descriptions of the various major subwatershed areas where regional ponding was analyzed. At present, the descriptions are limited to the potential growth areas around the City of New Germany, and the areas and pond names

described correspond to the labels shown in **Figure 10**. Since it has been assumed that some of the existing drainage areas will change/combine during development, some of the nodes differ between the existing and proposed models.

Basin modeling/sizing and cost estimates have been completed for only part of the potential future basins. Those areas not included were deemed to be planned too far in the future for detailed analysis at this time; however, rough estimates were made of basin size and location for planning purposes. It should also be noted that the potential regional pond locations are not the only option; these layouts could be adjusted to better fit proposed developments in the area.

1. Subwatershed W1

Subwatershed W1 is located west of town, north of the Dakota Rail trail and south of 62nd Street. It consists of approximately 76 acres comprised of agricultural lands, wooded areas, NWI wetlands and a large residential lot on the western end. Several small, isolated wetlands and one large wetland are located within this area. The larger wetland is centrally located, just north of the trail, and drains south through a 24" culvert into Subwatershed W2. The soil characteristics of this area are best described as loams (type B) in upland areas and silty clay loams, peat and muck (type D) in and around wetlands and low areas. Since this area contributes runoff to Subwatershed W2, it has been included within the stormwater runoff analysis. However, since this area is outside the 2040 City Boundary, no regional pond is proposed for this area.

2. Subwatersheds W2 – W4

Subwatersheds W2 – W4 are located south of the Dakota Rail Trail on the southwest side of the city. The area consists of approximately 199 acres comprised of agricultural land, wetland, and woodland and drains west to Judicial Ditch No. 1 (JD1). The soil characteristics of this area are best described as loams (type B) in upland areas and silty clay loams, peat and muck (type D) in and around wetlands and low areas. This area is zoned for low density residential land use, and when future development occurs, a regional pond could be constructed in the low area on the west edge of the 2040 Boundary. Pond W4A would require 4.0 acres of land, provide 9.9 acre-feet permanent pool treatment volume, and serve 111 acres. This regional pond has not been included in the CWRMP as a priority.
Prioritization: **Low**
Estimated Cost: $266,500
Project Partner(s): CCWMO, Developer
Funding Source(s): Stormwater Utility Fee, CCWMO, Developer
Timeframe: Unknown

3. Subwatershed W5

Subwatershed W5 consists of approximately 83 acres on the southwest corner of the study boundary, south of C.S.A.H. 30. The area is primarily agricultural land with isolated NWI wetlands in the northern region. Runoff from this watershed drains north through a culvert beneath C.S.A.H. 30 to Subwatershed W4. Soils in this subwatershed consist primarily of loams (type B) in upland areas and silty clay loams, peat and muck (type D) in and around wetlands and low areas. Since this area contributes runoff to Subwatershed W4, it has been included within the stormwater runoff analysis. However, since this area is outside the 2040 City Boundary, no regional pond is proposed for this area.

4. Subwatershed W6

Subwatershed W6 consists of approximately 42 acres on the northwest side of town, south of 62nd Street and west of State Avenue. The area is comprised of agricultural land and drains west to JD1. One NWI wetland is located in the central portion of the subwatershed. The soil characteristics of this area are moderately permeable loams (Type B) in the higher regions to relatively impermeable silty-clay loams (Type D) in the lower regions and around wetlands. This area is identified as low-density residential in the City's 2030 comprehensive growth management plan. The runoff from this area could be managed with a regional pond. However, depending on the actual water balance observed for the proposed water bodies at the Trophy Lake Estates, it may be desirable to discharge runoff into the new lakes north of 62nd Street. Additionally, it may be desirable to redirect runoff from the subcatchments to the east and south towards Area W6 for supplemental water volume. Due to the unknown water balance and schedule for development in this area, a regional pond analysis has not been completed for this subwatershed.

5. Subwatershed W8

Subwatershed W8 is located north of 62nd Street and west of CSAH 33 and drains west to JD1. The proposed Trophy Lake Estates is located in this subwatershed, and proposed ponds will provide treatment as well as water recreation for the development. The soil characteristics of this area are moderately permeable loams (Type B) in the higher regions to relatively impermeable silty-clay loams (Type D) in the lower regions. The proposed ponds will serve approximately 120 acres residential development. Runoff will be directed to swales and bioretention areas for treatment prior to entering the lakes. The controlled discharge from the lakes will reduce flow rates to downstream water bodies and maintain or reduce existing high water elevations in upstream and downstream water bodies (all of which has been included in the attached model). The relatively small watersheds for the lakes may necessitate groundwater pumping to maintain adequate lake levels, which has been considered and approved in the proposal. However, it may be desirable for future development of adjacent lands to attempt to redirect runoff towards the lakes to minimize the need for pumping.

6. Subwatershed W9

Subwatershed W9 is approximately 119 acres in size and is located north of 62nd Street along CSAH 33. The existing land consists of agricultural land and a large wetland complex on both sides of CSAH 33. The wetland complex appears to discharge through a draintile system to the northwest, as well as a ditch outlet to the east. Soils in this subwatershed consist primarily of loams (type B) in upland areas and silty clay loams, peat and muck (type D) in and around wetlands and low areas. Due to the unknown water balance and schedule for development in this area, a regional pond analysis has not been completed for this subwatershed.

7. Subwatershed W11

Subwatershed W11 is approximately 59 acres in size and is located north of Trophy Lakes Estates, west of Highway 33 and south of Highway 7. It consists of agricultural land in the upland areas and wetland to the west. The area drains southwest to JD1. The soil characteristics of this area are best described as loams (Type B) in upland areas and silty clay loams, peat and muck (Type D) in and around wetlands. Due to topography and location of wetlands, no regional ponds are proposed for this area. Smaller, localized ponds should be considered for this area if future development

occurs. The existing treatment pond to the north (southwest of the TH 7 and CSAH 33 intersection) should be examined for potential excavation into a regional basin when future development occurs.

8. Subwatershed W12

Subwatershed W12 is approximately 64 acres in size and is located on the north side of New Germany, east of CSAH 33. It consists of agricultural land and wetland and drains west through a draintile system and 24" culvert under CSAH 33 to JD1. The soil characteristics of this area are best described as loams (Type B) in upland areas and silty clay loams, peat and muck (Type D) in and around wetlands. The area is projected as future low-density residential, commercial and industrial land in the City's 2030 Growth Management Plan. It is proposed that the runoff from the area be managed with a regional basin near the east side of CSAH 33. Pond W12A would require 1.7 acres of land, provide 4.1 acre-feet permanent pool treatment volume, and serve 64 acres. This regional pond has not been included in the CWRMP as a priority.
Prioritization: **Low**
Estimated Cost: $111,900
Project Partner(s): CCWMO, Developer
Funding Source(s): Stormwater Utility Fee, CCWMO, Developer
Timeframe: Unknown

9. Subwatershed W13

Subwatershed W13 consists of approximately 38 acres east of CSAH 33 and south of TH 7. It is comprised of agricultural land to the east and commercial development near the highways. Runoff drains west through a 36" culvert under CSAH 33. The soil characteristics of this area are best described as loams (Type B) in upland areas and silty clay loams, peat and muck (Type D) in and around wetlands. The area is projected as future commercial and industrial land uses in the City's 2030 Growth Management Plan. Smaller, localized ponds should be considered for this area if future development occurs. The existing treatment pond to the west (southwest of the TH 7 and CSAH 33 intersection) should also be examined for potential excavation into a regional basin when future development occurs.

10. Subwatersheds E1, E2, E4 & E5

Subwatersheds E1, E2, E4 and E5 are located on the northeast side of New Germany and are part of the Black Forest Estates residential development. The soil characteristics of this area are best described as loams (Type B) in upland areas and silty clay loams, peat and muck (Type D) in and around wetlands. The design for this development was completed utilizing localized treatment ponds. Runoff drains east to County Ditch No. 9.

11. Subwatershed E3

Subwatershed E3 consists of 14 acres directly north of town and east of State Avenue (CSAH 33). The area drains east to Subwatershed E4 and ultimately to CD9. Current use of this area is primarily agricultural and park space, with a NWI wetland located on the western side of the subwatershed. The soil characteristics of this area consist mainly of relatively impermeable silty-clay loams (Type D). Since Subwatershed E3 is relatively small and the downstream Black Forest Estates development utilizes local ponds, smaller, localized treatment ponds are recommended for this area as well when development occurs.

12. Subwatershed E6

Subwatershed E6 consists of 27 acres directly north of town and west of State Avenue (CSAH 33). The area drains east through an 18" culvert to Subwatershed E3 and ultimately to CD9. Current use of this area is primarily agricultural, with a NWI wetland located in the southeastern corner of the subwatershed. The soil characteristics of this area are moderately permeable loams (Type B) in the higher regions to relatively impermeable silty-clay loams (Type D) in the lower regions and around the wetland. Since Subwatershed E6 is relatively small and the downstream Black Forest Estates development utilizes local ponds, smaller, localized treatment ponds are recommended for this area as well when development occurs.

13. Subwatershed E7

Subwatershed E7 consists of approximately 38 acres developed residential area on the north side of New Germany, north of Broadway Street (CSAH 30) and east of State Avenue (CSAH 33). Runoff drains into the City's storm sewer system, which outlets east to the south ditch along CSAH 30 and ultimately to CD9. Soil characteristics of the area consist primarily of moderately permeable loams (Type B). Since the majority of this area is already developed, no regional ponds are proposed. However, 5 sump manholes with SAFL Baffles, 4 sump manholes with sand filters, and a bioretention area provide some treatment and volume reduction. Additional retrofits could be added in the future, and a regional basin could be constructed east of the storm sewer outlet in subwatershed E11. A regional basin would require working with several parties, including MNDOT, Carver County, New Germany, and private landowners. Pond E7/8 would require 1.5 acres of land, provide 5.0 acre-feet permanent pool treatment volume, and serve 53 acres of existing residential development. This regional pond has not been included in the CWRMP as a priority.
Prioritization: **Low**
Estimated Cost: $123,100
Project Partner(s): CCWMO, Developer
Funding Source(s): Stormwater Utility Fee, CCWMO, Developer
Timeframe: Unknown

14. Subwatershed E8

Subwatershed E8 consists of approximately 15 acres developed residential area on the southwest side of New Germany, south of the Dakota Rail Trail along State Avenue (CSAH 33). Runoff drains into the City's storm sewer system, which outlets east to the south ditch along CSAH 30 and ultimately to CD9. Soil characteristics of the area consist primarily of moderately permeable loams (Type B). Since the majority of this area is already developed, no regional ponds are proposed. However, 5 sump manholes with SAFL Baffles, 4 sump manholes with sand filters, and a bioretention area provide some treatment and volume reduction. Additional retrofits could be added in the future, and a regional basin could be constructed east of the storm sewer outlet in subwatershed E11. See Subwatershed E7 above for regional pond analysis.

15. Subwatershed E9

Subwatershed E9 consists of approximately 66 acres south of the city, east of State Avenue (CSAH 33). The area is comprised of agricultural land with some scattered NWI wetlands. Runoff drains southeast to CD9. The soil characteristics in the area are best classified as loams (Type B) in the higher regions, and clay loams and silty-clay loams (Type D) in the low-lying areas. This area is zoned for medium density residential development, and when development occurs, a regional pond constructed in

subwatershed E10 could serve a portion of subwatershed E9.

16. Subwatershed E10

Subwatershed E10 is located southeast of town, east of subwatershed E9. It consists of approximately 75 acres residential development, commercial development, parkland, agricultural land, wetland, and woodland. Runoff drains southeast to CD9. The soil characteristics of this area are best described as loams (Type B) in upland areas and silty clay loams, peat and muck (Type D) in and around wetlands. The undeveloped area of this subwatershed is zoned for medium density residential, and when development occurs, a regional pond could treat runoff from both subwatersheds E9 and E10. Pond E10A would require 1.7 acres of land, provide 4.6 acre-feet permanent pool treatment volume, and serve 57 acres. This regional pond has not been included in the CWRMP as a priority.
Prioritization: **Low**
Estimated Cost: $119,100
Project Partner(s): CCWMO, Developer
Funding Source(s): Stormwater Utility Fee, CCWMO, Developer
Timeframe: Unknown

17. Subwatershed E11

Subwatershed E11 is located southeast of town, south of the Dakota Rail trail. It consists of approximately 70 acres comprised of agricultural lands, wooded areas, NWI wetlands, and residential development. Runoff drains southeast to CD9. The soil characteristics of this area are best described as loams (type B) in upland areas and silty clay loams, peat and muck (type D) in and around wetlands and low areas. Since the majority of this area is outside the 2040 City Boundary, no regional pond is proposed for this area.

18. Subwatershed E12

Subwatershed E12 is located on the east side of town, east of Hilda Avenue and north of Broadway Street (CSAH 30). It consists of approximately 45 acres residential development, agricultural land, wetland, and woodland. Runoff drains east to CD9. The soil characteristics of this area are best described as loams (Type B) in upland areas and silty clay loams, peat and muck (Type D) in and around wetlands. The undeveloped area of this subwatershed is zoned for low density residential, and when development occurs, a regional pond could be constructed to treat runoff. Pond E12 would require 0.8 acres of land, provide 1.6 acre-feet permanent pool treatment volume, and serve 25 acres. This regional pond has not been included in the CWRMP as a priority.
Prioritization: **Low**
Estimated Cost: $47,600
Project Partner(s): CCWMO, Developer
Funding Source(s): Stormwater Utility Fee, CCWMO, Developer
Timeframe: Unknown

19. Subwatershed E13

Subwatershed E13 is located east of Hilda Avenue and consists of approximately 30 acres agricultural land and wetland. Runoff from the west, northwest and north drains through this subwatershed and outlets east to CD9. The soil characteristics of this area are best described as loams (Type B) in upland areas and silty clay loams, peat and muck (Type D) in lowland areas. Area E13 is identified as future low-density

residential area in the City's 2030 comprehensive growth management plan. When development occurs, a regional pond could be constructed on the west side of the subwatershed adjacent to CD9 to treat runoff from subwatersheds E12, E13, and E21. Pond E13/21 would require 2.9 acres of land, provide 6.5 acre-feet permanent pool treatment volume, and serve 102 acres. This regional pond has not been included in the CWRMP as a priority.
Prioritization: **Low**
Estimated Cost: $183,800
Project Partner(s): CCWMO, Developer
Funding Source(s): Stormwater Utility Fee, CCWMO, Developer
Timeframe: Unknown

20. Subwatersheds E14 – E16

Subwatersheds E14 – E16 are located on the west side of New Germany, west of State Avenue (CSAH 33) and north of the Dakota Rail Trail. The area consists of approximately 91 acres commercial development, wetland, woodland, and agricultural land that drain south to subwatershed E17 on the south side of the Dakota Rail Trail. The soil characteristics of this area are best described as loams (type B) in upland areas and silty clay loams, peat and muck (type D) in and around wetlands and low areas. No regional ponds are proposed because the area has many wetlands and would be better suited to localized ponds if developed. Additionally, runoff from this area could be treated by a regional pond in subwatershed E17.

21. Subwatersheds E17

Subwatershed E17 is located on the southwest side of town, west of CSAH 33 and north of CSAH 30. It consists of approximately 100 acres agricultural land and wetland and drains southeast through a 12" culvert under CSAH 33 and ultimately to CD9. The soil characteristics of this area are best described as loams (Type B) in most high-ground areas and silty-clay loams, peat and muck (Type D) in and around low areas. When Area E17 develops, a regional pond is proposed to manage flows associated with the anticipated increase in impermeable surfaces and higher runoff rates. Pond E17 would require 4.8 acres of land, provide 8.1 acre-feet permanent pool treatment volume, and serve 187 acres future residential development. This regional pond has not been included in the CWRMP as a priority.
Prioritization: **Low**
Estimated Cost: $256,700
Project Partner(s): CCWMO, Developer
Funding Source(s): Stormwater Utility Fee, CCWMO, Developer
Timeframe: Unknown

22. Subwatershed E18

Subwatershed E18 is located north of 62nd Street, east of subwatershed W9A. The area consists of approximately 71 acres agricultural land, wetland, and woodland and drains southeast through subwatershed E13 to CD9. The soil characteristics of the area are best classified as loams (Type B) in upland areas and silty-clay loams (Type D) in and around wetlands. Subwatershed E18 is identified as future low-density residential area in the City's 2040 comprehensive growth management plan. Due to topography restrictions and wetland locations, no regional ponds are proposed for this subwatershed. Smaller, localized ponds should be considered for this area if future development occurs.

23. Subwatershed E19

Subwatershed E19 is located north of 62nd Street, east of subwatershed E18. The area consists of approximately 20 acres agricultural land and drains south through subwatershed E13 to CD9. The soil characteristics of the area are best classified as loams (Type B) in upland areas and silty-clay loams (Type D) in low regions. Since this area contributes runoff to Subwatershed E13, it has been included within the stormwater runoff analysis. However, since this area is outside the 2040 City Boundary, no regional pond is proposed for this area.

24. Subwatershed E20

Subwatershed E20 is located north of 62nd Street, east of subwatershed E19. The area consists of approximately 37 acres agricultural land and drains south through subwatershed E21 to CD9. The soil characteristics of the area are best classified as loams (Type B) in upland areas and silty-clay loams (Type D) in low regions. Since this area contributes runoff to Subwatershed E13, it has been included within the stormwater runoff analysis. However, since this area is outside the 2040 City Boundary, no regional pond is proposed for this area.

25. Subwatershed E21

Subwatershed 21 consists of approximately 57 acres agricultural land and wetland on the east side of New Germany, south of 62nd Street. Runoff drains south to CD9. The soil characteristics of the area are best classified as loams (Type B) in upland areas and silty-clay loams (Type D) in and around wetlands. This area is identified as future low-density residential area in the City's 2030 comprehensive growth management plan, and when development occurs, runoff could be treated by a regional pond constructed in subwatershed E13. See Subwatershed E13 above for regional pond analysis.

26. Subwatersheds E22

Subwatershed E22 is located on the east side of town, north of CSAH 30 and east of CD9. It consists of approximately 25 acres agricultural land and drains to CD9. The soil characteristics of this area are best described as loams (Type B) in most high-ground areas and silty-clay loams, peat and muck (Type D) in and around low areas. This area is identified as future low-density residential area in the City's 2030 comprehensive growth management plan. When subwatershed E22 develops, a regional pond is proposed to manage flows associated with the anticipated increase in impermeable surfaces and higher runoff rates. Pond E22 would require 0.9 acres of land and provide 1.6 acre-feet permanent pool treatment volume. This regional pond has not been included in the CWRMP as a priority.
Prioritization: **Low**
Estimated Cost: $50,700
Project Partner(s): CCWMO, Developer
Funding Source(s): Stormwater Utility Fee, CCWMO, Developer
Timeframe: Unknown

6.3 Outlet Control Structures Improvements

6.3.1 Proposed Outlet Control Structure Improvement Projects

Currently, no outlet control structure improvement projects have been identified. Should any outlet control structure improvement sites be identified in the future, this plan will be updated to include proposed sites.

6.4 Localized Stormwater Treatment Improvements

6.4.1 Proposed Localized Stormwater Treatment Improvement Projects

The City will continue to maintain the existing storm drainage system and evaluate flooding issues on City property as necessary to protect public safety and minimize potential for property damage. Additionally, the City will be available to work with the CCWMO and private landowners to investigate potential localized stormwater management improvement sites.

The following are localized stormwater treatment improvement projects identified to help manage stormwater runoff and improve water quality

1. General Storm System Maintenance

The streets and storm sewer in the older areas of New Germany were reconstructed in 2013. In addition, five sump manholes with SAFL Baffles, 4 sump manholes with sand filters, and a rain garden were installed with the reconstruction to provide some improvement of storm water runoff quality. Storm water management facilities in the newer areas of town have been constructed to meet the standards set forth in the County Ordinances. Therefore, the city's storm sewer is in good condition. However, system maintenance will be required annually. Storm drainage system maintenance required includes pond assessment and cleaning, street sweeping, sewer televising, and GIS/mapping, as well as inlet and pipe repair.
Prioritization: **Low**
Estimated Cost: Unknown
Project Partner(s): None
Funding Source(s): City
Timeframe: Ongoing

2. Street and Utility Improvement Projects

As street, sanitary sewer, and water main improvement projects are scheduled, project areas will also be reviewed for potential stormwater management and treatment improvements that were not previously identified. Potential improvements include, but are not limited to, conveyance improvements, stormwater treatment devices, bioretention basins, wet retention ponds, slope stabilizations, and native vegetation restoration.
Prioritization: **Low**
Estimated Cost: Unknown
Project Partner(s): CCWMO, Private Landowners
Funding Source(s): City, CCWMO, Grant Funding
Timeframe: Unknown

3. Stormwater Runoff Management and Treatment Measures

Correct flooding issues on City property as necessary to protect public safety and minimize potential for property damage. Also, install stormwater treatment measures (i.e. rain gardens, stormwater treatment devices, etc.) throughout the City to provide additional runoff storage capacity, reduce runoff rates and volumes, and/or reduce pollutant loads. The City will evaluate public properties and collaborate as necessary with CCWMO and willing private landowners for viable locations not on City land to install measures. Measures will be coordinated to treat stormwater discharge from

areas with inadequate or no treatment (**Figure 9**) and improve the quality of runoff reaching area surface waters.
Prioritization: **Low**
Estimated Cost: Unknown
Project Partner(s): CCWMO, Private Landowners
Funding Source(s): City, CCWMO, Grant Funding
Timeframe: Unknown

When additional localized stormwater treatment improvement projects are identified in the future, this plan will be updated to include proposed projects.

6.5 Wetland Restorations

6.5.1 Proposed Wetland Restoration Sites

The wetland locations, descriptions, and references were taken from the National Wetlands Inventory Map (**Figure 6)**, as well as the County "Functional Value" and "Restoration Potential" map (**Figure 7**). The following are potential wetland restoration sites identified to help manage stormwater runoff and improve water quality. The sites may reference subwatersheds as described in **Section 6.2**. Refer to **Figure 10** for locations.

1. Subwatershed W2
Collaborate with the County and Developer to restore the wetland south of the Dakota Rail Trail on the west side of town when development occurs. This wetland area has been identified by the county to have "medium" restoration potential, and the project would help meet the goal of improving the quality and quantity of wetlands in New Germany and increase flood storage, as well as improve the quality of runoff to the Crow River. This site has not been included in the CWRMP as a priority.
Prioritization: **Low**
Estimated Cost: $20,000
Project Partner(s): CCWMO, Developer
Funding Source(s): Stormwater Utility Fee, CCWMO, Developer
Timeframe: Unknown

2. Subwatersheds E12, E13, & E21
Collaborate with the County and Developer to restore the wetland along CD9 when development occurs. This wetland area has been identified by the county to have "medium" restoration potential, and the project would help meet the goal of improving the quality and quantity of wetlands in New Germany and increase flood storage, as well as improve the quality of runoff to the Crow River. This site has not been included in the CWRMP as a priority.
Prioritization: **Low**
Estimated Cost: $20,000
Project Partner(s): CCWMO, Developer
Funding Source(s): Stormwater Utility Fee, CCWMO, Developer
Timeframe: Unknown

3. Subwatershed E17
Collaborate with the County to restore the wetland west of CSAH 33 and southwest of the existing residential area when development occurs. This wetland area has been

identified by the county to have "low" restoration potential, and the project would help meet the goal of improving the quality and quantity of wetlands in New Germany and increase flood storage, as well as improve the quality of runoff to the Crow River. This site has not been included in the CWRMP as a priority.
Prioritization: **Low**
Estimated Cost: $20,000
Project Partner(s): CCWMO, Developer
Funding Source(s): Stormwater Utility Fee, CCWMO, Developer
Timeframe: Unknown

4. Subwatershed E18

Collaborate with the County to restore the wetland in the center of this subwatershed when development occurs. This wetland area has been identified by the county to have "high" restoration potential, and the project would help meet the goal of improving the quality and quantity of wetlands in New Germany and increase flood storage, as well as improve the quality of runoff to the Crow River. This site has not been included in the CWRMP as a priority.
Prioritization: **Low**
Estimated Cost: $20,000
Project Partner(s): CCWMO, Developer
Funding Source(s): Stormwater Utility Fee, CCWMO, Developer
Timeframe: Unknown

When any additional wetland restoration sites are identified in the future, this plan will be updated to include proposed sites.

6.6 Natural Area Preservation and Restoration

6.6.1 Proposed Natural Area Preservation and Restoration Sites

Currently, no natural area preservation or restoration projects have been identified. Should any preservation or restorations sites be identified in the future, this plan will be updated to include proposed sites.

6.7 Education

6.7.1 Proposed Education Programs and Tools

The following are education programs and tools identified to help inform the public regarding stormwater runoff management and methods to improve water quality. The following are only listed here as possible education strategies. The City will meet annually with CCWMO's Education Coordinator to discuss goals and strategies each year and create short, specific annual education plans. As annual plans are assembled, this SWMP will be updated to list the specific education strategies developed.

1. Education Programs and Tools for Home/Landowners

- Provide sticker "Keep Grass Clippings on the Lawn!" with brochure explaining the detrimental effect of grass clippings on water quality when transported to water bodies. The sticker could be placed on lawnmowers as a reminder. Stickers may possibly be obtained from the County for distribution by the City. Method of distribution would have to be determined

by the City.

- Provide bookmarkers/brochures regarding a variety of water quality topics, including 1) common household pollutants, contaminants, and waste and proper disposal methods, 2) raingardens, 3) Total Maximum Daily Loads, 4) reducing water footprint, 5) stormwater ponds, and 6) phosphorus-free fertilizer. The City could collaborate with the County for development of bookmarkers/brochures for distribution by the City. Method of distribution would have to be determined by the City.
- Implement Volunteer programs. The City could coordinate community cleanups, shoreline stabilization projects, or wetland buffer restorations.
- Hold workshops/seminars on a variety of water quality topics, including 1) common household pollutants, contaminants, and waste and proper disposal methods, 2) raingardens, 3) Total Maximum Daily Loads, 4) reducing water footprint, 5) stormwater ponds, and 6) phosphorus-free fertilizer. The City could also assist with the County's workshops/seminars.
- Promote reduction of water footprint. The City could collaborate with the County to promote and provide rainbarrels at a reduced cost, a mulch/compost dump site at no cost during certain times of year, and tree whips at a reduced cost in the spring.

2. Education Programs and Tools for Decision Makers

- Collaborate with the County to hold Carver County Stormwater Workshops. This workshop is intended to educate developers, city staff, and elected officials regarding stormwater Best Management Practices and new developments in stormwater research.
- Collaborate with the County to provide Non-point Source Education for Municipal Officials (NEMO) opportunities. NEMO is intended to educate decision makers about the relationship between land use and water quality.

3. Education Programs and Tools for K-12 Students

- Collaborate with the County to participate in a variety of student education programs.

Refer to the CWRMP for additional information regarding education programs and tools provided by the County. When any additional education programs and tools are identified in the future, this plan will be updated to include them accordingly.

6.8 Surface Water Management Costs and Funding Considerations

The cost and funding considerations contained in this plan are included for scoping purposes only. Prior to including projects into the City's Capital Improvement Plan (CIP), further investigation is required into conditions meriting improvement and correction/mitigation strategies to be implemented. This plan recognizes the changing regulatory environment and evolving technologies necessary to understand prior to further developing a CIP or construction schedule.

6.8.1 Regional Stormwater Treatment System Costs

Proposed regional stormwater treatment basins are described in **Section 6.2**, and cost estimates were prepared for basins identified. **Table 6.1** summarizes the costs

associated with the proposed regional basins. For a detailed breakdown of costs, refer to **Appendix D**.

Table 6.1: Regional Stormwater Treatment Pond Cost Estimates

Area I.D.	Total Cost	Area Served (acres)	Cost/Acre
E7/8	$123,100	53.0	$2,323
E10A	$119,100	56.7	$2,101
E12	$47,600	24.8	$1,919
E13/21	$183,800	101.6	$1,809
E17	$256,700	187.0	$1,373
E22	$50,700	24.7	$2,053
W4A	$266,500	111.3	$2,394
W12A	$111,900	64.0	$1,748

* Note: The approximated cost breakdown does not include localized development ponds or a trunk conveyance system into the ponds. The cost breakdown is comprised of the regional basins shown in **Figure 10** and is subject to change.

6.8.2 Capital Improvement Plan

As part of this assessment of water resources in New Germany, a Capital Improvement Plan (CIP) has been developed to aid with implementation of surface water management improvements and maintenance. The CIP includes budgeting for regional stormwater treatment, outlet control structure improvements, localized stormwater treatment, wetland restoration, natural area preservation and restoration, education, stormwater treatment system mapping, and maintenance. Since improvement projects are completed on an annual basis, City priorities can change, and new surface water management issues can arise, the CIP should be reviewed yearly and updated as necessary. Refer to **Appendix E** for New Germany's 5-Year Surface Water Management Plan CIP.

6.8.3 Proposed Surface Water Management Funding

The City could implement a Stormwater Utility Fee to fund regional stormwater treatment, outlet control structure improvements, localized stormwater treatment, wetland restoration, natural area preservation and restoration, education, stormwater treatment system mapping, and maintenance. However, this fee would likely be insufficient to cover all costs associated with surface water management. Since surface water management treatment improvement and restoration projects will improve the quality of downstream waters, New Germany should rely on the addition of County, State, and Federal funding as available to complete such projects. Potential projects should be coordinated with CCWMO for inclusion in the County's annual 5-year CIP process.

Regional Stormwater Treatment System

The largest prohibitive factor foreseen in the development of the regional pond system (aside from potential land-acquisition issues) is acquiring the initial money necessary for the land purchase and pond construction. The funding for such a large-scale system for new development cannot be expected to come solely from the City's Stormwater Utility Fee, but must be aided by the new development and potentially the County. With large regional basins likely to treat runoff from multiple developments, coordination between the City, Developer, and County will be necessary to cover costs associated with the land purchase and basin construction. Once the regional basins are put into service, costs will be recouped through fees from additional developments tying into the system.

Since regional basins would provide treatment for the new developments, it is the developers that will be required to ultimately provide the funding. One option is to have developments contribute a dollar amount equal to the percentage of the regional basin's watershed area times the costs associated with constructing the regional basin and associated piping and ditching. For example, a regional basin with a total watershed of 100 acres would require a development of 40 acres to cover 40% of the costs of the regional basin. Another option is to stage the construction of the pond to meet requirements of actual development constructed and expand the pond as needed to meet requirements for future development as they are completed. In the event the regional pond cannot be completed at the time of development, localized treatment ponds may be the only feasible and practical alternative.

Also, the regional basins proposed to treat runoff from existing developed areas may require funds above and beyond those provided by the Stormwater Utility Fee since costs will not be recouped from new developments. Funding could be sought from County, State, or Federal sources.

6.8.4 Stormwater Utility Fee

The storm drainage system in New Germany is adequate for stormwater conveyance. However, the City is continuing to grow, and the maintenance of the storm drainage system and the quality of water resources are becoming more of a priority. Therefore, the City should consider a funding mechanism to help pay for stormwater management.

A Stormwater Utility Fee could be used to partially or completely fund stormwater drainage and treatment system improvements and maintenance of system elements. These improvement and maintenance projects could include regional stormwater system improvements, outlet control structure improvements, localized stormwater treatment improvements, wetland restoration, natural area restoration and preservation, education regarding stormwater issues, pond cleaning, pond delineation, storm sewer maintenance, street sweeping, flood control, grant programs for drainage improvements, ponds and outlets inspection, land acquisition for drainage improvements, and volunteer programs for stormwater improvements.

The City does not currently use a Stormwater Utility Fee. However, the 5 Year CIP for Stormwater Utility Improvements and Maintenance requires an estimated $1,050/month. Therefore, in order to complete necessary improvements and maintenance without impacting the City's general fund, the City should consider implementing a Stormwater Utility Fee. With 140 residential connections and 20

commercial connections, the recommended rates to accomplish the objectives listed in this plan are $6.36. See **Appendix F** for the Stormwater Utility Fee Analysis. As priorities are established by the City, the Stormwater Utility Fee should be reviewed annually and adjusted accordingly.

7.0 ADMINISTRATION

7.1 Amendment Procedures

The potential future regional pond network described in previous sections presents one method of accommodating the future growth of the City of New Germany. However, the City will continue to meet or exceed the County watershed standards set forth in the future regardless of the plan chosen to manage runoff. In the event that a discrepancy exists between this plan and regulations set forth by a County, State or Federal agency, the more restrictive regulation shall govern.

Any major amendments to the adopted plan shall be submitted to the County, Metropolitan Council, and the Board of Water and Soil Resources for review in accordance with the provisions of Minnesota Statute 103B.231, subdivisions 7, 8, and 9.

As stated earlier, the hydrologic modeling in this report is largely based on the USGS topographic quadrangle maps with a 10-foot contour interval. The quality and accuracy of this report should be further validated with more detailed survey data in the growth areas as they develop. Also, as new developments are reviewed and accepted by the City, the new areas will be added to the overall stormwater model.

7.2 Plan Coordination

The City will meet with CCWMO annually to coordinate plan elements (i.e. improvement projects, education opportunities, potential partnerships, etc.). Annual meetings will be coordinated to account for the City and CCWMO budgeting schedules.

7.3 Plan Evaluation

Table 7.1 provides for evaluation of the current Surface Water Management Plan by listing the implementation strategies identified and accomplishments achieved. This Table will be reviewed and updated regularly.

Table 7.1: Current Plan Evaluation

SURFACE WATER MANAGEMENT			
POLICY	TIME FRAME	STATUS	IMPLEMENTATION STRATEGY
1. Evaluate and correct flooding issues on City property as necessary to protect public safety and minimize potential for property damage.	2018 -	Ongoing	City will continue to administer and maintain the Shoreland Overlay District ordinance as required.
2. Provide support to landowners in evaluating and correcting localized flooding issues.	2018 -	Ongoing	City will provide support to landowners as necessary in the form of engineering recommendations and construction oversight.
3. Promote additional storage and runoff reduction through wetland restoration, regional ponding, and stream or ditch diversions.	2018 -	Ongoing	During development/redevelopment, the City will encourage the use of runoff reduction stormwater treatment features.
4. Evaluate outlet control structures for performance and work with landowners, CCWMO, and/or the Minnesota Department of Natural Resources (MnDNR) to replace or repair the structures if needed.	2018 -	Ongoing	City will inspect outlet structures every five years, prioritize improvement projects as needed, and coordinate with CCWMO, Landowners, and MnDNR for inspection and work required. **List completed projects here.**

5. Promote education regarding the benefits of proper surface water resources management.	2018 -	Ongoing	City will coordinate with CCWMO to provide educational opportunities for the public and City staff.
IMPAIRED WATERS			
POLICY	TIME FRAME	STATUS	IMPLEMENTATION STRATEGY
1. Reduce pollutant loading to Impaired Waters in order to restore water quality to State standards.	2018 -	Ongoing	City will adopt all TMDLs and Implementation Plans for local impaired waters. The City will also provide improvements as necessary to reduce pollutants to required levels. **List TMDL Implementation Plans here.**
2. Promote education regarding the benefits of pollutant load reduction.	2018 -	Ongoing	City will coordinate with CCWMO to provide educational opportunities for the public and City staff.
URBAN STORMWATER MANAGEMENT			
POLICY	TIME FRAME	STATUS	IMPLEMENTATION STRATEGY
1. Continue to meet or exceed the National Pollutant Discharge Elimination System (NPDES) requirements as they apply to the City of New Germany.	2018 -	Ongoing	City will continue to apply the requirements of the Construction Stormwater Permit as necessary, require facilities to obtain an Industrial Stormwater Permit if applicable, and maintain its MS4 Permit as required.
2. Apply regulatory standards that help the City meet its goal for Urban Stormwater Management.	2018 -	Ongoing	City will rely on CCWMO for reviewing applications and enforcing standards with regards to stormwater management, and will also review all applications to ensure City is not adversely affected.
3. Prioritize potential stormwater projects that will decrease local runoff rates and volumes and increase water quality.	2018 -	Ongoing	City will continually review, evaluate, and prioritize potential stormwater treatment improvements to reduce runoff rates and volumes. SWMP will be updated annually. **List completed projects here.**
4. Maintain the stormwater drainage system using the practices described in this plan.	2018 -	Ongoing	City will continue to maintain the stormwater drainage system using practices described in this plan.
5. Maintain roads using the practices described in this plan.	2018 -	Ongoing	City will continue to maintain roads using practices described in this plan.
6. Maintain City's database for stormwater related data, such as location and type.	2018 -	Ongoing	City will employ staff and consultant as necessary to maintain a database of the stormwater system.
7. Promote education regarding the benefits of proper urban stormwater management.	2018 -	Ongoing	City will coordinate with CCWMO to provide educational opportunities for the public and City staff.
WETLANDS MANAGEMENT			
POLICY	TIME FRAME	STATUS	IMPLEMENTATION STRATEGY
1. Achieve no net loss in the quantity, quality, and diversity of existing wetlands through enforcement of Wetland Management regulations.	2018 -	Ongoing	City will adopt CCWMO standards, but also maintain right to review all applications to ensure City is not adversely affected.
2. Promote wetland restoration, as a way to mitigate historical impacts to wetlands and	2018 -	Ongoing	City will continually review, evaluate, and prioritize potential wetland restoration projects. SWMP

increase the quantity and quality of wetlands locally.			will be updated annually. **List completed projects here.**
3. Promote education regarding the benefits of proper wetland management.	2018 -	Ongoing	City will coordinate with CCWMO to provide educational opportunities for the public and City staff.
UPLAND NATURAL RESOURCES			
POLICY	TIME FRAME	STATUS	IMPLEMENTATION STRATEGY
1. Increase the quantity and quality of existing natural areas through enforcement of existing regulations and the participation of willing landowners in existing preservation and restoration programs.	2018 -	Ongoing	As development/redevelopment occurs, City will work with landowners to preserve and restore natural areas as possible.
2. Promote the restoration of natural upland areas, as a way to mitigate the degradation and fragmentation of natural resources and improve water quality of surface water resources.	2018 -	Ongoing	City will continually review, evaluate, and prioritize potential natural area restoration projects. SWMP will be updated annually. **List completed projects here.**
3. Promote education regarding the benefits of proper natural upland management.	2018 -	Ongoing	City will coordinate with CCWMO to provide educational opportunities for the public and City staff.
GROUNDWATER MANAGEMENT			
POLICY	TIME FRAME	STATUS	IMPLEMENTATION STRATEGY
1. Protect groundwater quality and groundwater supplies.	2018 -	Ongoing	City will work with CCWMO to seal potential contaminate sources, support Met Council in effort to monitor and protect regional supplies, and implement conservation efforts as necessary.
2. Promote groundwater recharge, if soil conditions allow.	2018 -	Ongoing	City will promote LID techniques for development/redevelopment projects via comment and review letters and develop a LID policy over the next two years.
3. Promote education regarding the benefits of proper groundwater management.	2018 -	Ongoing	City will coordinate with CCWMO to provide educational opportunities for the public and City staff.
EDUCATION			
POLICY	TIME FRAME	STATUS	IMPLEMENTATION STRATEGY
1. Increase public awareness, understanding, and involvement in water and natural resource issues and management.	2018 -	Ongoing	City will coordinate with CCWMO to provide educational opportunities for the public and City staff. The City will meet annually with CCWMO's Education Coordinator to discuss goals and strategies each year and create short, specific annual education plans.

8.0 APPENDICES

Appendix A

Maps:

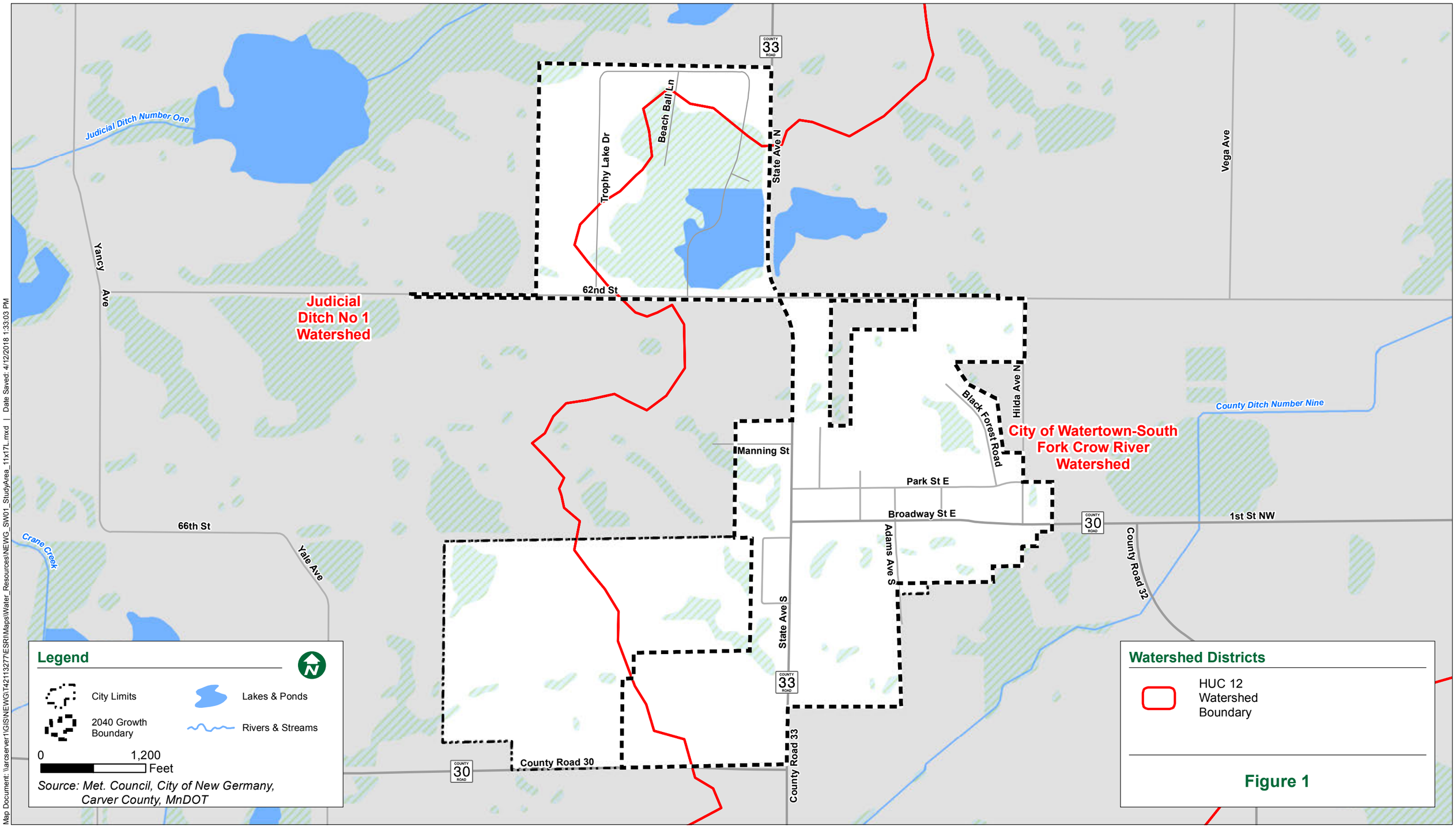
2040 Comprehensive Plan

New Germany, MN

Study Area

April 2018

BOLTON & MENK
Real People. Real Solutions.



Legend

- City Limits
- 2040 Growth Boundary
- Lakes & Ponds
- Rivers & Streams

0 1,200 Feet

Source: Met. Council, City of New Germany, Carver County, MnDOT

Watershed Districts

- HUC 12 Watershed Boundary

Figure 1

Map Document: \\arcserver1\GIS\NEWG\T42113277\ESRI\Maps\Water_Resources\NEWG_SW01_StudyArea_11x17L.mxd | Date Saved: 4/12/2018 1:33:03 PM

2040 Comprehensive Plan

New Germany, MN

Existing Land Use

April 2018

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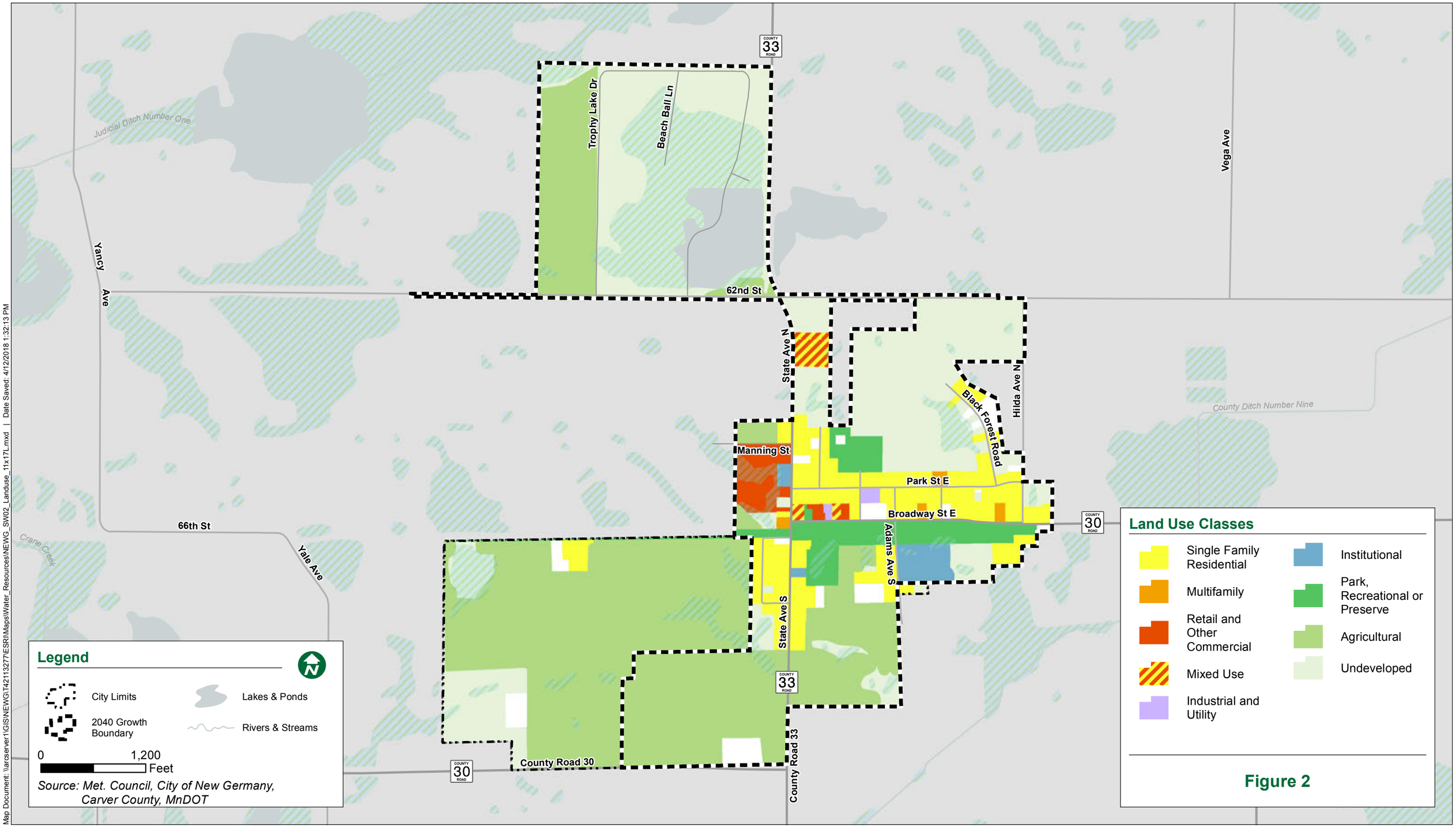

Legend

- City Limits
- 2040 Growth Boundary
- Lakes & Ponds
- Rivers & Streams

0 1,200 Feet

Source: Met. Council, City of New Germany, Carver County, MnDOT

Land Use Classes

- Single Family Residential
- Multifamily
- Retail and Other Commercial
- Mixed Use
- Industrial and Utility
- Institutional
- Park, Recreational or Preserve
- Agricultural
- Undeveloped

Figure 2

Map Document: \\arcserver1\GIS\NEWG\T42113277\ESRI\Maps\Water_Resources\NEWG_SW02_Landuse_11x17L.mxd | Date Saved: 4/12/2018 1:32:13 PM

2040 Comprehensive Plan

New Germany, MN

Future Land Use

April 2018

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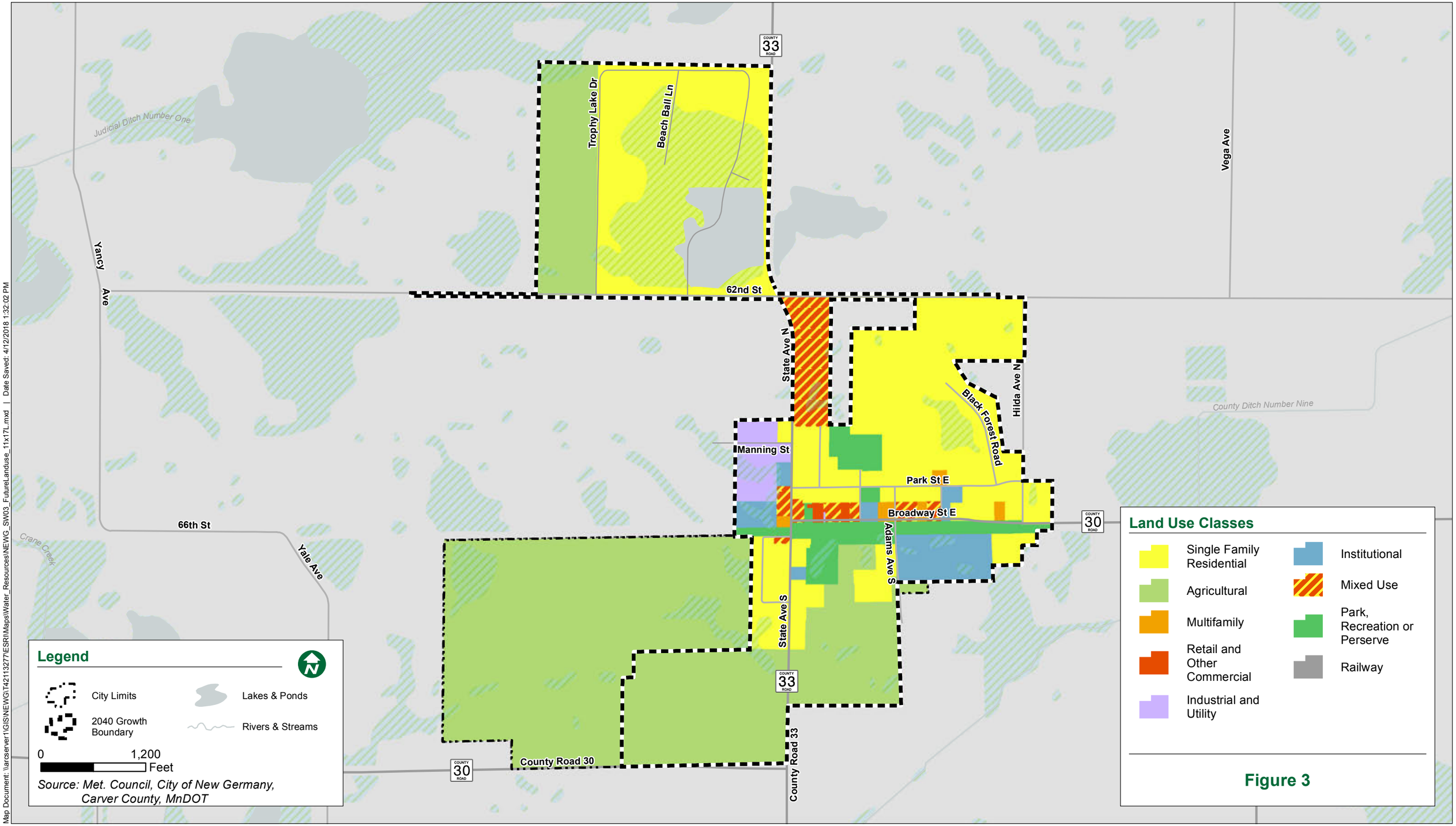

Figure 3

Map Document: \\arcserver1\GIS\NEWG\T42113277\ESRI\Maps\Water_Resources\NEWG_SW03_FutureLanduse_11x17L.mxd | Date Saved: 4/12/2018 1:32:02 PM

2040 Comprehensive Plan

New Germany, MN

Soils

April 2018

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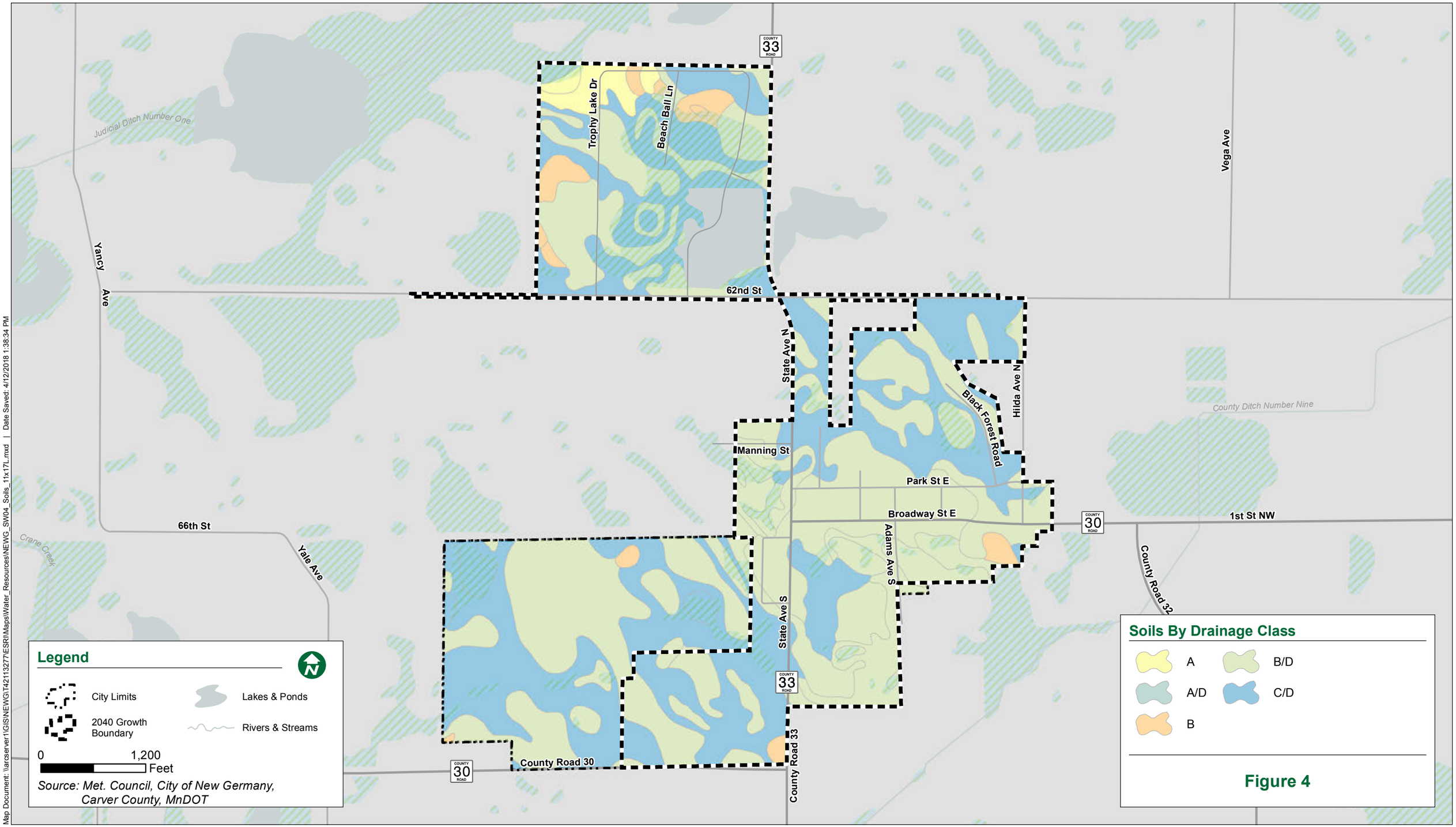

Figure 4

Map Document: \\arcserver1\GIS\NEWG\T4211327\ESRI\Maps\Water_Resources\NEWG_SW04_Soils_11x17L.mxd | Date Saved: 4/12/2018 1:38:34 PM

2040 Comprehensive Plan

New Germany, MN

Minnesota Land Cover Classification

April 2018

BOLTON & MENK
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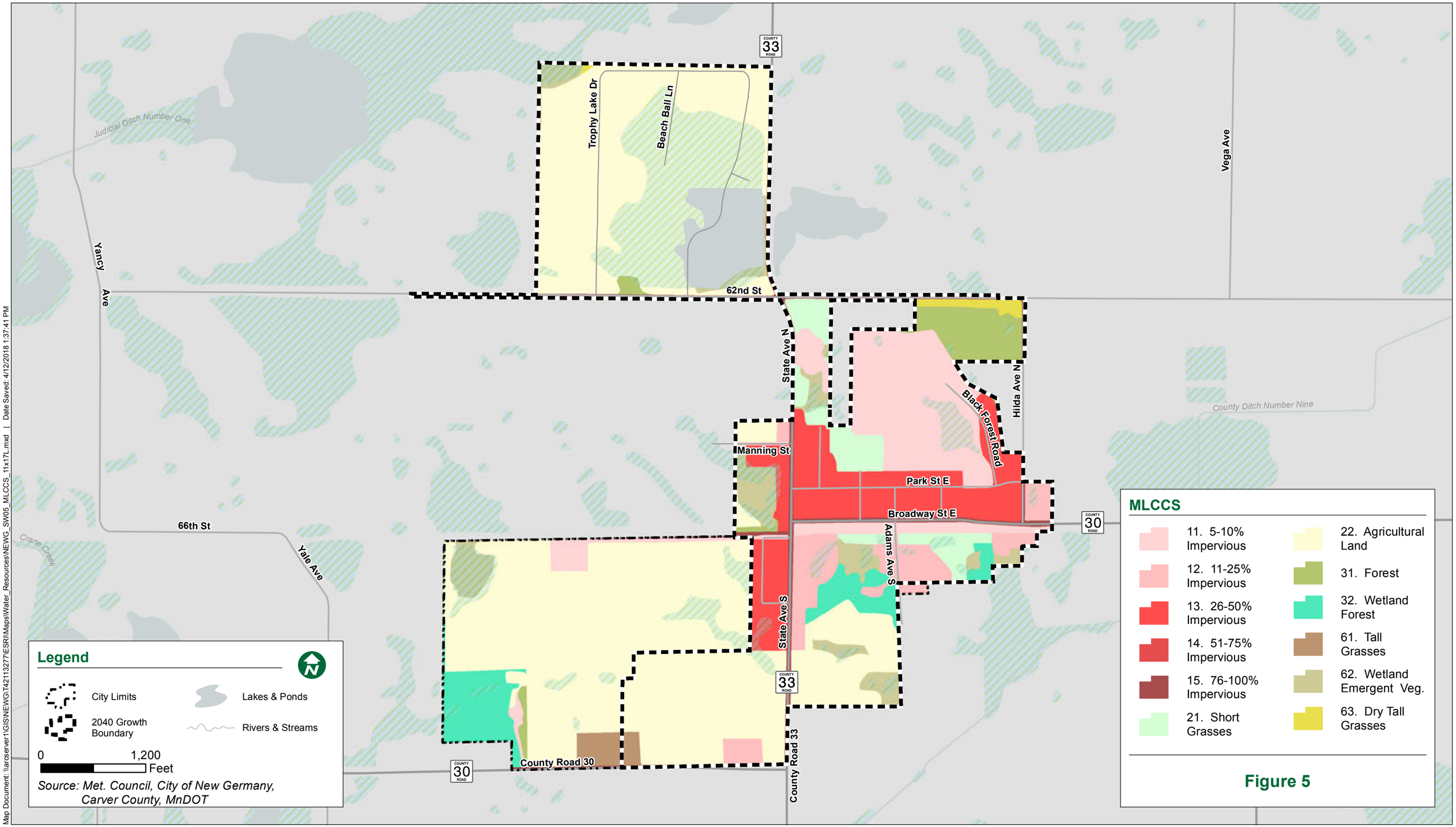

Figure 5

Map Document: \\arcserver1\GIS\NEWG\T42113277\ESRI\Maps\Water_Resources\NEWG_SW05_MLCCS_11x17L.mxd | Date Saved: 4/12/2018 1:37:41 PM

2040 Comprehensive Plan

New Germany, MN

National Wetlands Inventory & DNR Public Waters

April 2018

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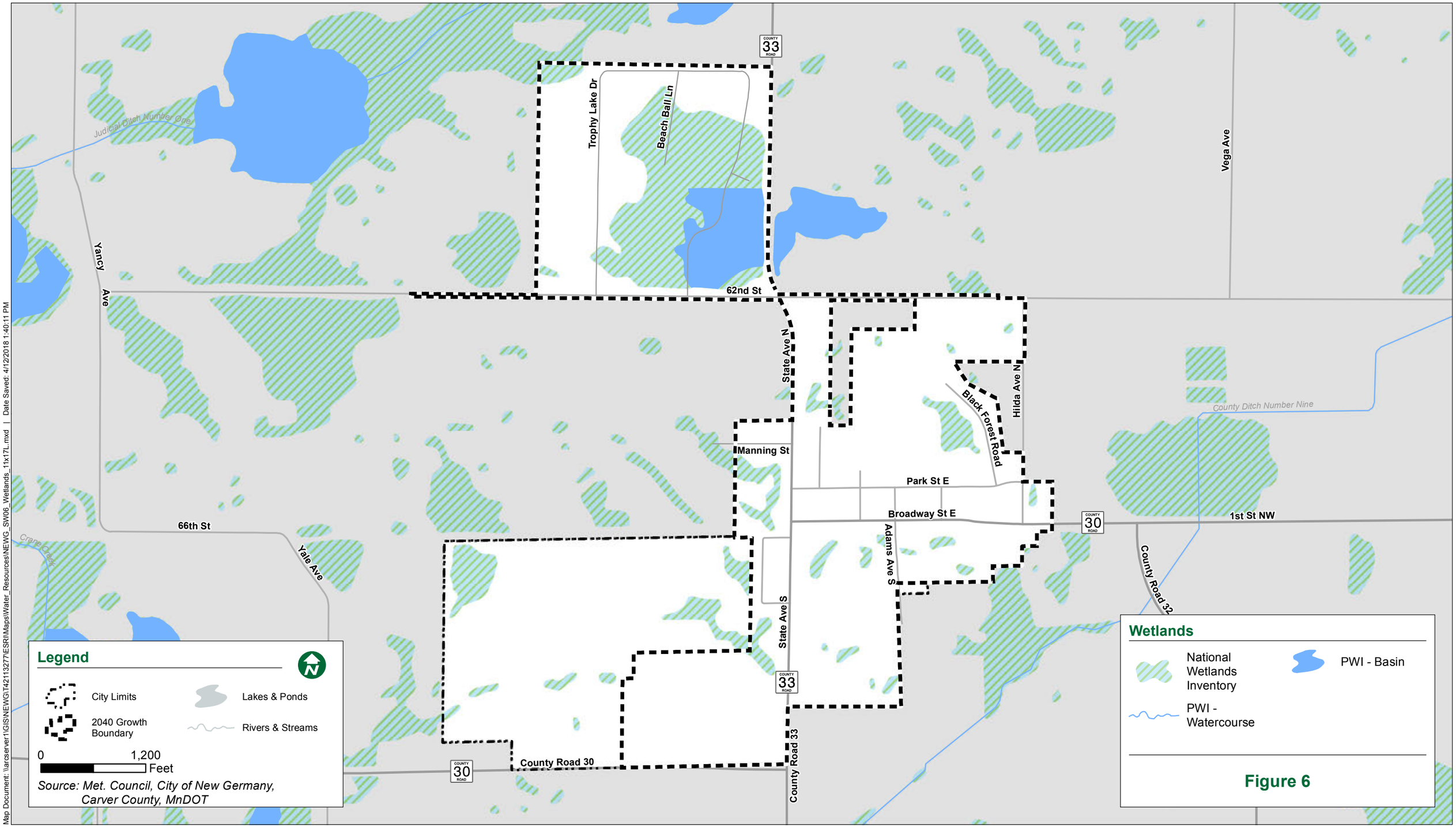
Real People. Real Solutions.



Map Document: \\arcserver1\GIS\NEWG\T42113277\ESRI\Maps\Water_Resources\NEWG_SW06_Wetlands_11x17L.mxd | Date Saved: 4/12/2018 1:40:11 PM

Wetland Ranking & Restoration Potential

April 2018

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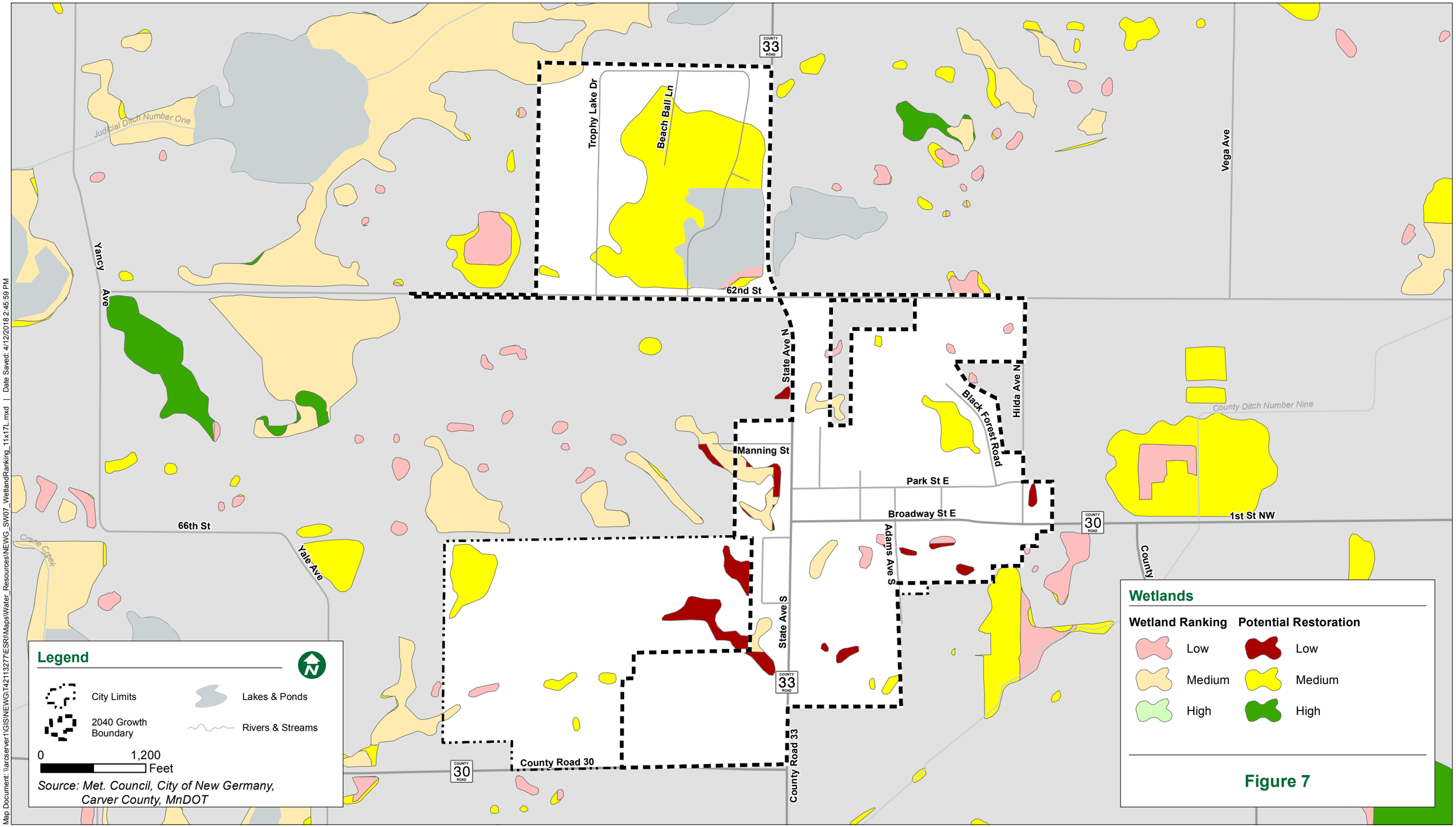

Figure 7

Map Document: \\arcserver1\GIS\NEWG\T42113277\ESRI\Maps\Water_Resources\NEWG_SW07_WetlandRanking_11x17L.mxd | Date Saved: 4/12/2018 2:45:59 PM

2040 Comprehensive Plan

New Germany, MN

Impaired Waters

May 2018

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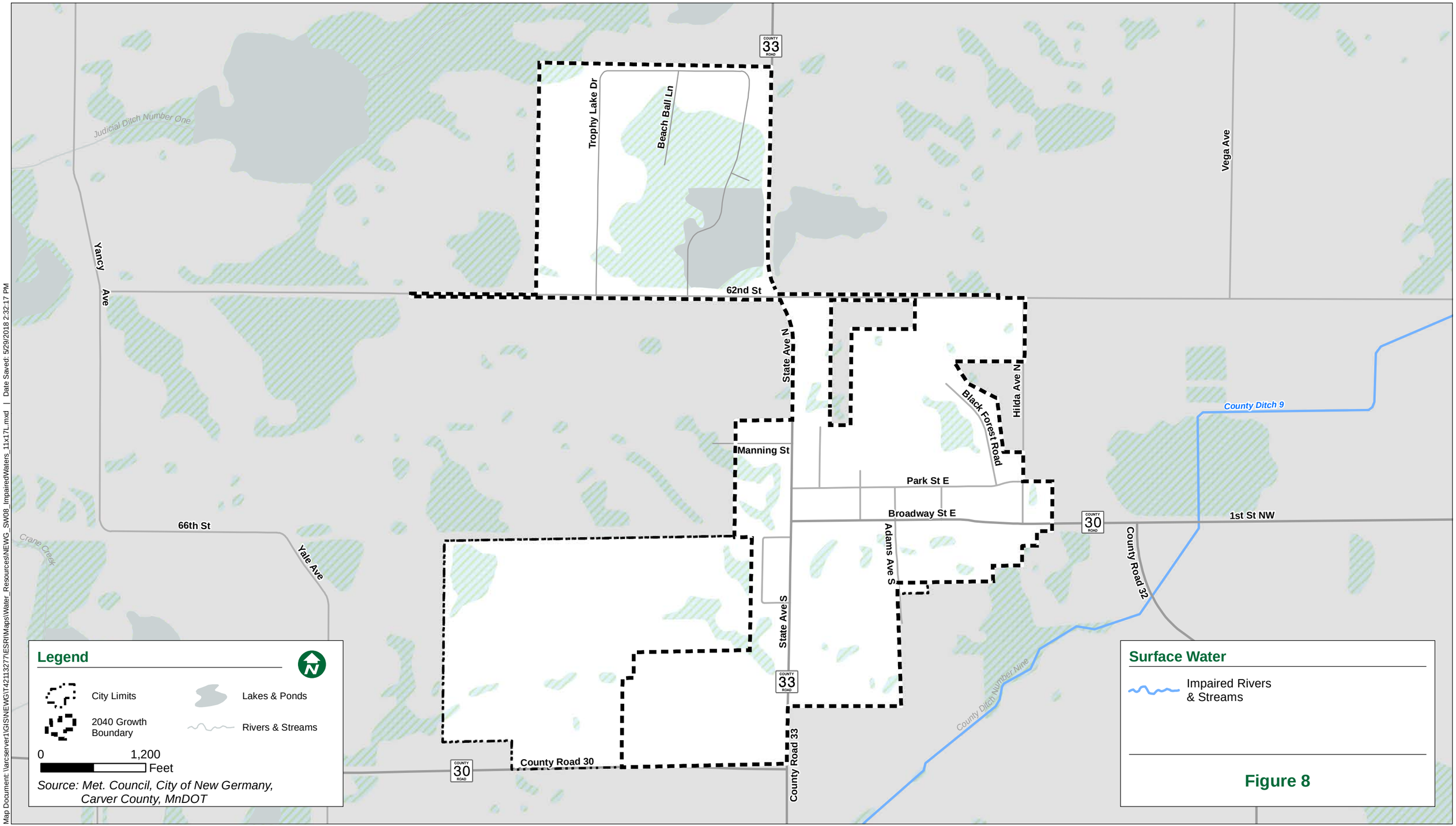


Legend

- City Limits
- 2040 Growth Boundary
- Lakes & Ponds
- Rivers & Streams

0 1,200 Feet

Source: Met. Council, City of New Germany, Carver County, MnDOT

Surface Water

- Impaired Rivers & Streams

Figure 8

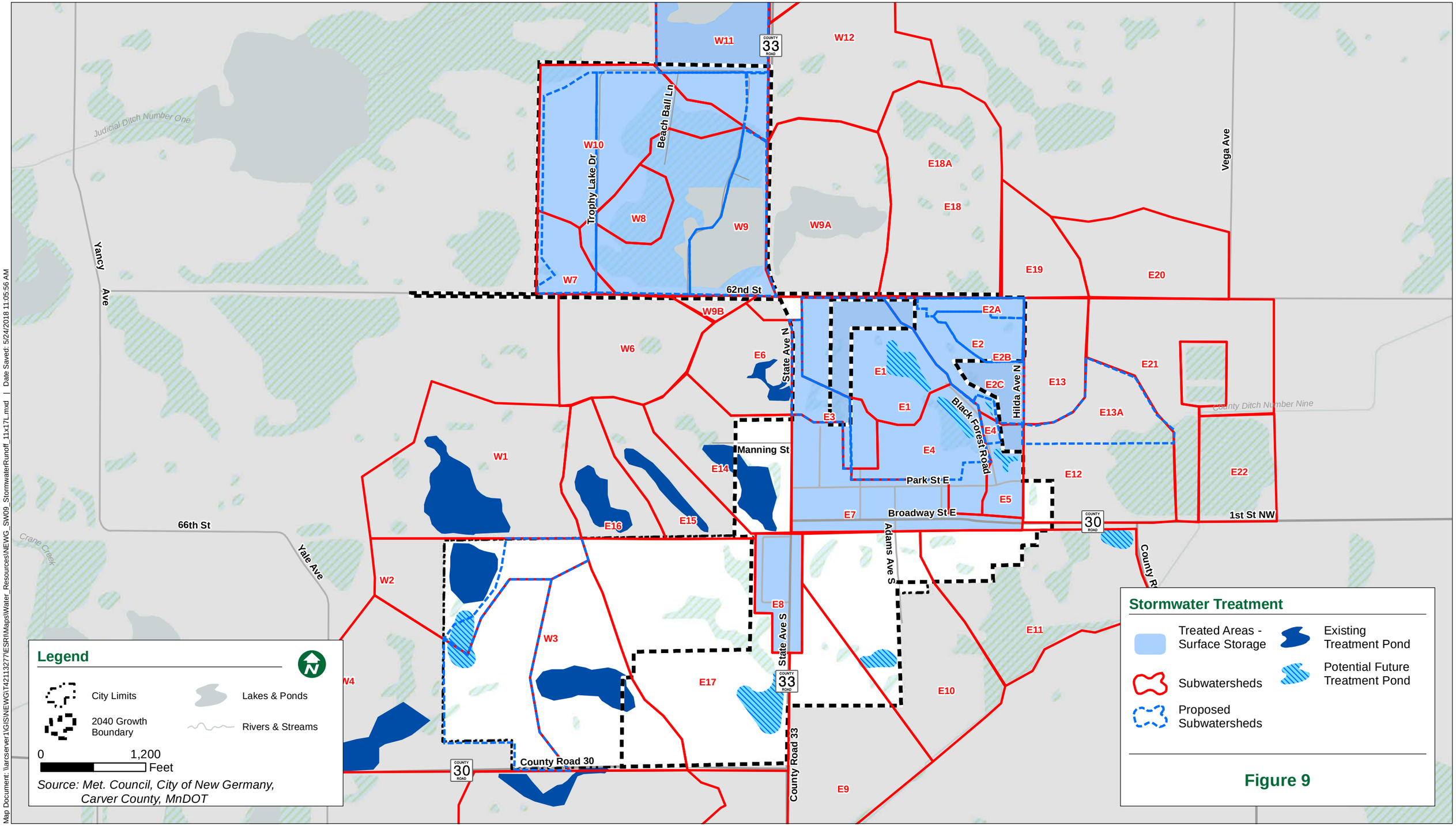
2040 Comprehensive Plan

New Germany, MN

Stormwater Runoff Treatment Areas

May 2018

BOLTON & MENK
Real People. Real Solutions.



Legend

- City Limits
- 2040 Growth Boundary
- Lakes & Ponds
- Rivers & Streams

0 1,200 Feet

Source: Met. Council, City of New Germany, Carver County, MnDOT

Stormwater Treatment

- Treated Areas - Surface Storage
- Subwatersheds
- Proposed Subwatersheds
- Existing Treatment Pond
- Potential Future Treatment Pond

Figure 9

Map Document: \\arcserver1\GIS\NEWGIT42113277\ESRI\Maps\Water_Resources\NEWG_SW09_StormwaterRunoff_11x17L.mxd | Date Saved: 5/24/2018 11:05:56 AM

2040 Comprehensive Plan

New Germany, MN

Subwatershed Map

May 2018

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Real People. Real Solutions.

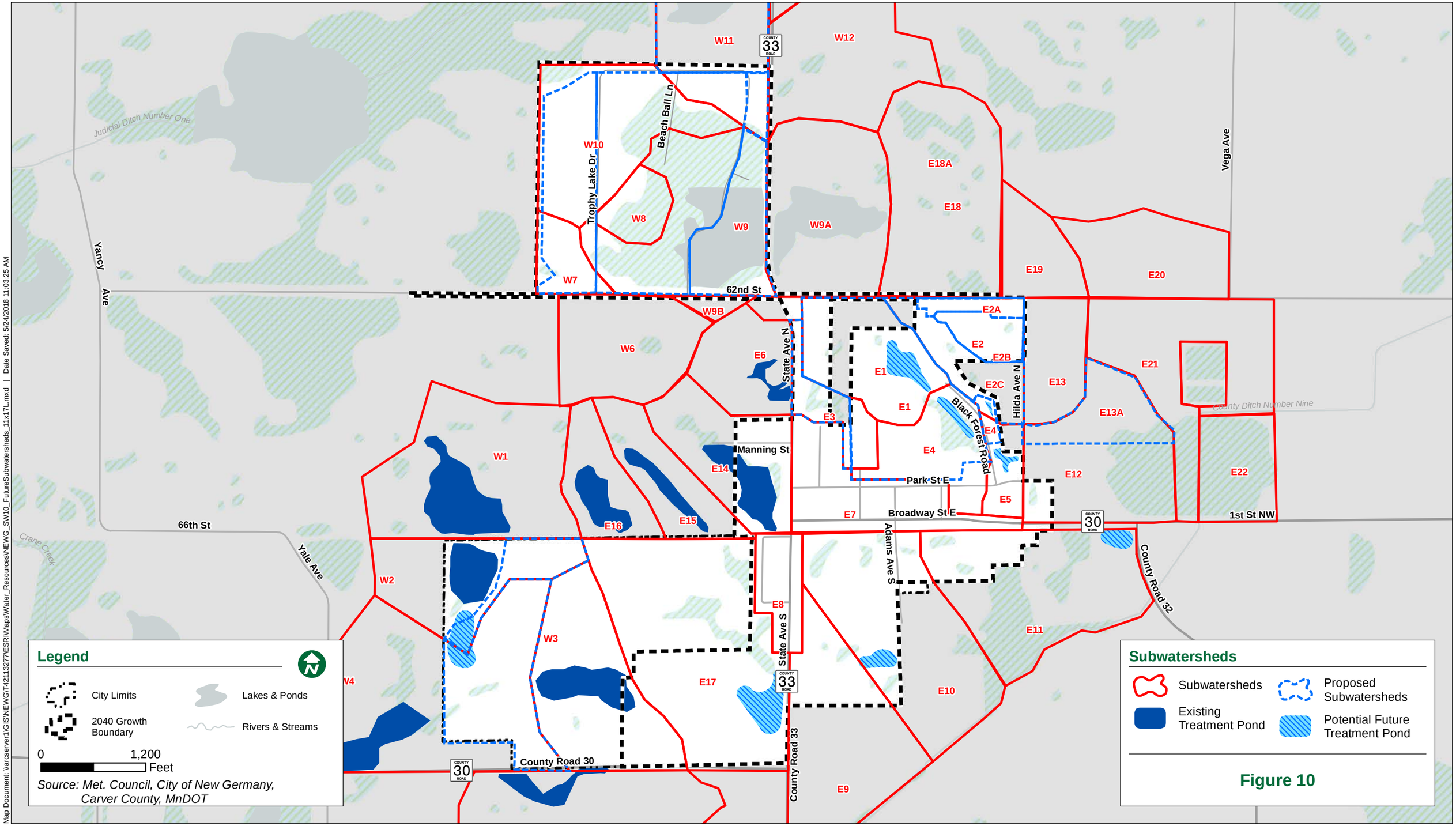

Figure 10

Map Document: \\arcserver1\GIS\NEWGIT42113277\ESRI\Maps\Water_Resources\NEWG_SW10_FutureSubwatersheds_11x17L.mxd | Date Saved: 5/24/2018 11:03:25 AM

2040 Comprehensive Plan

New Germany, MN

Existing Storm Sewer System

May 2018

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Real People. Real Solutions.

Judicial Ditch Number One
Trophy Lake Dr
Beach Ball Ln
COUNTY 33 ROAD
Vega Ave
Yancy Ave
62nd St
State Ave N
Black Forest Road
Hilda Ave N
County Ditch Number Nine
Manning St
Park St E
Broadway St E
COUNTY 30 ROAD
1st St NW
66th St
Crane Creek
Yale Ave
Adams Ave S
State Ave S
COUNTY 33 ROAD
County Road 30
COUNTY 30 ROAD
County Road 33

Legend

- City Limits
- 2040 Growth Boundary
- Lakes & Ponds
- Rivers & Streams

0 1,200 Feet

Source: Met. Council, City of New Germany, Carver County, MnDOT

Storm Sewer Pipe (By Diameter)

N/A	15"	27"
8"	18"	30"
10"	21"	36"
12"	24"	42"
		48"

Figure 11

Map Document: \\arcserver1\GIS\NEWG\T4211327\ESRI\Maps\Water_Resources\NEWG_SW11_ExistingStorm_11x17L.mxd | Date Saved: 5/24/2018 10:18:40 AM

Appendix B

Modeling Methodology

MODELING METHODOLOGY AND MAPPING

1. The general procedure used in the runoff modeling aspects of this analysis has been performed using the XP-SWMM (Version 10.6) modeling software. The typical analysis is based on Soil Conservation Service, Technical Release No. 20 (SCS TR-20). The SCS procedure is based on a standard synthetic rainfall hydrograph, which is modified by local parameters (i.e., rainfall, soil type, time to peak flow, etc.) and is widely accepted among drainage engineers across the United States.

2. Once the existing system was modeled, the watershed areas were modeled again under fully developed conditions (within the study boundaries) and superimposed onto the existing network so that the effects of continued growth could be studied. Retention basins were then designed and modeled to mitigate the effects of the continued development. Those areas deemed to be too far into the future were not analyzed at this time; instead, approximate locations/sizes were given based on potential drainage area and patterns.

3. For purposes of this report, typical 24-hour rainfall events of 2.8", 4.2" and 6.0" have been chosen to analyze runoff/development interaction. These events are best described as those having probabilities of occurring once every 2, 10 and 100 years, respectively. In addition, the 10-day, 100-year snowmelt was analyzed, which can be approximated by the 10-day, 7.2" rainfall event.

4. The probabilities of occurrence do not imply that a 2.8", 4.2" or a 6.0" rainfall cannot occur multiple times within the same year; they simply say that a 2.8" rainfall will occur *on the average* once every 2 years, a 4.2" rainfall will occur *on the average* once every 10 years and a 6.0" rainfall will occur *on the average* once every 100 years. It is often better to think of the 2-year rainfall as having a 50 percent chance of occurring in any given year. Similarly, the 10-year rainfall has a 10 percent chance of occurring in any given year and the 100-year rainfall has a 1 percent chance of occurring in any given year.

Appendix C

HydroCad Model Results – Available Upon Request

Appendix D

Regional Stormwater Treatment System Cost Analysis

Regional Stormwater Treatment System Cost Analysis

Surface Water Management Plan
New Germany, MN

Assumptions:

1. Excavation volume is based on the computed storage volume needed as computed from the HydroCAD model and/or Walker storage volume requirements plus 20%.
2. No liner has been assumed to be needed for the ponds.
3. Outlet costs have been assumed to be about 15% of the pond cost.
4. Unit price for excavation assumes on-site use of the material without trucking.
5. Riprap quantity is an approximation.
6. Soft Costs at 25% of construction cost.
7. Land Cost equals pond NWL area plus 20% @ $25,000/acre.
8. Conveyance system to pond not included.

Pond No.		**E7/8**		
Area (from HydroCAD)		1.0	Acres	(NWL)
Volume (from walker)		5.0	Acre-feet	
Item	**Estimated Quantity**	**Units**	**Unit Price**	**Amount**
Common Excavation	9680	C.Y.	$ 6.00	$ 58,080.00
Riprap	15	C.Y.	$ 100.00	$ 1,500.00
Outlet Works		L.S.	15%	$ 8,937.00
Subtotal				$ 68,517.00
Soft Costs			25%	$ 17,129.25
Land Costs	1.5	Acre	$ 25,000.00	$ 37,500.00
TOTAL COST (to the nearest $100)				**$ 123,100.00**

Pond No.		**E10A**		
Area (from HydroCAD)		1.1	Acres	(NWL)
Volume (from walker)		4.6	Acre-feet	
Item	**Estimated Quantity**	**Units**	**Unit Price**	**Amount**
Common Excavation	8906	C.Y.	$ 6.00	$ 53,433.60
Riprap	20	C.Y.	$ 35.00	$ 700.00
Outlet Works		L.S.	15%	$ 8,120.04
Subtotal				$ 62,253.64
Soft Costs			25%	$ 15,563.41
Land Costs	1.7	Acre	$ 25,000.00	$ 41,250.00
TOTAL COST (to the nearest $100)				**$ 119,100.00**

Regional Stormwater Treatment System Cost Analysis

Pond No.		**E12**		
Area (from HydroCAD)		0.50	Acres	(NWL)
Volume (from walker)		1.6	Acre-feet	
Item	**Estimated Quantity**	**Units**	**Unit Price**	**Amount**
Common Excavation	3098	C.Y.	$ 6.00	$ 18,585.60
Riprap	15	C.Y.	$ 100.00	$ 1,500.00
Outlet Structure		L.S.	15%	$ 3,012.84
Subtotal				$ 23,098.44
Soft Costs			25%	$ 5,774.61
Land Costs	0.8	Acre	$ 25,000.00	$ 18,750.00
TOTAL COST (to the nearest $100)				**$ 47,600.00**

Pond No.		**E13/21**		
Area (from HydroCAD)		1.9	Acres	(NWL)
Volume (from walker)		6.5	Acre-feet	
Item	**Estimated Quantity**	**Units**	**Unit Price**	**Amount**
Common Excavation	12584	C.Y.	$ 6.00	$ 75,504.00
Riprap	28	C.Y.	$ 100.00	$ 2,800.00
Outlet Works		L.S.	15%	$ 11,745.60
Subtotal				$ 90,049.60
Soft Costs			25%	$ 22,512.40
Land Costs	2.9	Acre	$ 25,000.00	$ 71,250.00
TOTAL COST (to the nearest $100)				**$ 183,800.00**

Pond No.		**E17**		
Area (from HydroCAD)		1.6	Acres	(NWL)
Volume (from walker)		8.1	Acre-feet	
Item	**Estimated Quantity**	**Units**	**Unit Price**	**Amount**
Common Excavation	15682	C.Y.	$ 6.00	$ 94,089.60
Riprap	10	C.Y.	$ 100.00	$ 1,000.00
Outlet Works		L.S.	15%	$ 14,263.44
Subtotal				$ 109,353.04
Soft Costs			25%	$ 27,338.26
Land Costs	4.8	Acre	$ 25,000.00	$ 120,000.00
TOTAL COST (to the nearest $100)				**$ 256,700.00**

Regional Stormwater Treatment System Cost Analysis

Pond No.		**E22**		
Area (from HydroCAD)		0.6	Acres	(NWL)
Volume (from walker)		1.6	Acre-feet	
Item	**Estimated Quantity**	**Units**	**Unit Price**	**Amount**
Common Excavation	3098	C.Y.	$ 6.00	$ 18,585.60
Riprap	10	C.Y.	$ 100.00	$ 1,000.00
Outlet Works		L.S.	15%	$ 2,937.84
Subtotal				$ 22,523.44
Soft Costs			25%	$ 5,630.86
Land Costs	0.9	Acre	$ 25,000.00	$ 22,500.00
TOTAL COST (to the nearest $100)				**$ 50,700.00**

Pond No.		**W4A**		
Area (from HydroCAD)		2.2	Acres	(NWL)
Volume (from walker)		9.9	Acre-feet	
Item	**Estimated Quantity**	**Units**	**Unit Price**	**Amount**
Common Excavation	19166	C.Y.	$ 6.00	$ 114,998.40
Riprap	15	C.Y.	$ 100.00	$ 1,500.00
Outlet Works		L.S.	15%	$ 17,474.76
Subtotal				$ 133,973.16
Soft Costs			25%	$ 33,493.29
Land Costs	4.0	Acre	$ 25,000.00	$ 99,000.00
TOTAL COST (to the nearest $100)				**$ 266,500.00**

Pond No.		**W12A**		
Area (from HydroCAD)		1.1	Acres	(NWL)
Volume (from walker)		4.1	Acre-feet	
Item	**Estimated Quantity**	**Units**	**Unit Price**	**Amount**
Common Excavation	7938	C.Y.	$ 6.00	$ 47,625.60
Riprap	15	C.Y.	$ 100.00	$ 1,500.00
Outlet Works		L.S.	15%	$ 7,368.84
Subtotal				$ 56,494.44
Soft Costs			25%	$ 14,123.61
Land Costs	1.7	Acre	$ 25,000.00	$ 41,250.00
TOTAL COST (to the nearest $100)				**$ 111,900.00**

Appendix E

Stormwater Utility Fee Analysis and Capital Improvement Plan

Storm Sewer Utility Fee

Surface Water Management Plan
New Germany, MN

Storm Sewer Fee Analysis

5-year CIP Budgeted Costs	$	63,000.00
Average monthly CIP Budgeted Costs	$	1,050.00
Residential Units		145
Commercial Units		20
2013 Proposed Residential Fee	$	6.36
2013 Proposed Commercial Fee	$	6.36

Surface Water Management Capital Improvement Plan

Surface Water Management Plan
New Germany, MN

	Timeframe	Estimated Project Cost	Funding Source	Additional Funding Req'd	Funding Req'd From CCWMO	Funding From Other Sources	City's 5-year Budgeted Cost	2018	2019	2020	2021	2022	Long Range Annual Cost (2)	Long Range Periodic Cost (3)	Long Range One-Time Cost (4)
Regional Stormwater Treatment System	Long Term	$ 1,159,400.00	SUF/CCWMO	Yes	$ -	$ -	$ -							$ 1,159,400.00	
Street and Utility Improvement Opportunities	Ongoing	$ -	SUF/CCWMO	Yes	$ -		$ -								
Stormwater Runoff Management and Treatment Measures	Ongoing	$ -	SUF/CCWMO	Yes	$ -		$ -								
Wetland Restoration (W2)	Long Term	$ 20,000.00	SUF/CCWMO	Yes	$ -	$ -	$ -								$ 20,000.00
Wetland Restoration (E12, E13, E21)	Long Term	$ 20,000.00	SUF/CCWMO	Yes	$ -	$ -	$ -								$ 20,000.00
Wetland Restoration (E17)	Long Term	$ 20,000.00	SUF/CCWMO	Yes	$ -	$ -	$ -								$ 20,000.00
Wetland Restoration (E18)	Long Term	$ 20,000.00	SUF/CCWMO	Yes	$ -	$ -	$ -								$ 20,000.00
Education	Ongoing	$ 2,500.00	SUF/CCWMO	Yes	$ -	$ -	$ 2,500.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00		
Grant Program for Homeowner Drainage Improvements	Ongoing	$ 10,000.00	Stormwater Utility Fee	No	$ -	$ -	$ 10,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00		
Sealing of Abandoned Wells	Ongoing	$ -	Stormwater Utility Fee	No	$ -	$ -	$ -								
Extension of Sanitary Sewer to eliminate existing SSTSs	Ongoing	$ 100,000.00	Stormwater Utility Fee	No	$ -	$ -	$ -								$ 100,000.00
Maintenance:															
Neighborhood Pond Delineation	Ongoing	$ 5,000.00	Stormwater Utility Fee	No	$ -	$ -	$ 5,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00		
Neighborhood Pond Cleaning	Ongoing	$ -	Stormwater Utility Fee	No	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ 20,000.00		
Street Sweeping	Ongoing	$ 25,000.00	Stormwater Utility Fee	No	$ -	$ -	$ 25,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00		
Neighborhood Pond/Outlet Control Inspection	Ongoing	$ 2,500.00	Stormwater Utility Fee	No	$ -	$ -	$ 2,500.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00	$ 500.00		
General Storm Sewer Maintenance	Ongoing	$ 10,000.00	Stormwater Utility Fee	No	$ -	$ -	$ 10,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00	$ 2,000.00		
System Mapping/GIS Update and Maintenance	Ongoing	$ 4,000.00	Stormwater Utility Fee	No	$ -	$ -	$ 4,000.00		$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00		
Surface Water Management Plan Updates	Ongoing	$ 4,000.00	Stormwater Utility Fee	No	$ -	$ -	$ 4,000.00		$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00	$ 1,000.00		
Total			Storm Fund		$ -		$ 63,000.00	$ 11,000.00	$ 13,000.00	$ 13,000.00	$ 13,000.00	$ 13,000.00	$ 33,000.00	$ 1,159,400.00	$ 180,000.00

Notes:
(1) CCWMO to provide assistance with inspecting and evaluating streams banks and channels.
(2) Cost liklely incurred every year
(3) Costs incured in coordination with development for multiple project areas or as projects become priority.
(4) Costs incured one time for a specific project when it becomes a priority.

Appendix F

Storm Treatment System Inventory and Maintenance Plan

Storm Treatment System
Inventory and Maintenance Plan

Surface Water Management Plan
New Germany, MN

Inventory															Maintenance											
Location					Design (1)										Current Condition (2)						Visual Inspection					
ID NO	Feature Type	Plat/Address	X Coord (UTM)	Y Coord (UTM)	Year Const.	Drainage Area	# of Inlets	# of Outlets	NWL Elev (FT)	Area at NWL (SF)	Bottom Elev (FT)	Area at Bottom (SF)	HWL Elev (FT)	Storage Volume Below Outlet (AF)	Date Inspected	NWL Elev (FT)	Area at NWL (SF)	Bottom Elev (FT)	Area at Bottom (AF)	Storage Volume Below Outlet (CF)	Trash and Debris (3)	Erosion (4)	Condition of Vegetation (5)	Condition of Outlet (6)	Condition of Infiltration Features (7)	Comments

Notes:
1. HWL, NWL, and Bottom elevations determined from record drawing information.
2. Measure volume of sediment in ponds once 15 years after construction and every two years after. Measure volume of sediment in treatment devices once per year. Sediment should be removed if less than 50% of design volume remains.
3. Perform visual inspection once per year following large storm event. Pass equals no trash or debris present.
4. Perform visual inspection once per year following large storm event. Pass equals slopes around basin, inlet, and outlet are stable.
5. Perform visual inspection once per year following large storm event. Pass equals vegetation well established and dominated by non-invasive species.
6. Perform visual inspection once per year following large storm event. Pass equals structural components in good working order.
7. Perform visual inspection twice per year during first growing season and once per year after. Pass equals feature draws down within 48 hours following storm event.

Appendix C: Capital Improvement Plan

CITY OF NEW GERMANY, MINNESOTA
FINANCIAL MANAGEMENT PLAN (FMP)
LONG RANGE BUDGET PROJECTIONS

DRAFT 9/18/2017

(31,606) 19,251
41,082
(47,654) (38,178) (18,927)

	Inflation Assumptions														
1	Revenue (Non-property tax)	0.0%	2.0%	2.0%	3.0%	3.0%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
2	Expenses	0.0%	2.0%	2.5%	3.5%	3.5%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
3	Interest Earnings	0.00%	1.00%	0.50%	0.75%	1.00%	1.25%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%

GENERAL FUND BUDGET

	GENERAL FUND	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
		ACTUAL			BUDGETED	BUDGETED	PROJECTED									
	Revenue															
4	General Property Taxes	217,277	233,304	263,918	283,169	297,193	293,206	274,360	298,436	271,859	280,151	293,904	310,942	292,886	302,809	313,573
5	Levy Adjustments - Fiscal Disparities "roller coaster"						-	20,000	(5,000)	25,000	20,000	10,000	(10,000)	10,000	(20,000)	(10,000)
6	Special Assessments			-	-	-	-	-	-	-	-	-	-	-	-	-
7	Licences & Permits	22,896	21,089	38,660	13,120	13,120	13,514	13,987	14,476	14,983	15,507	16,050	16,612	17,193	17,795	18,418
8	Intergovernmental	36,114	59,488	44,148	33,035	37,944	37,944	37,944	37,944	37,944	37,944	37,944	37,944	37,944	37,944	37,944
9	Charges for Services	85,433	88,543	91,792	90,637	88,155	90,800	93,978	97,267	100,671	104,195	107,842	111,616	115,523	119,566	123,751
10	Fines & Forfeits	1,357	1,599	586	1,200	1,200	1,236	1,279	1,324	1,370	1,418	1,468	1,519	1,573	1,628	1,685
11	Interest Earnings	3,625	422	820	2,894	4,341	6,055	7,568	9,382	9,307	9,682	9,982	10,132	9,982	10,132	9,832
12	Miscellaneous Revenues	36,389	48,139	18,837	3,100	3,100	3,193	3,305	3,420	3,540	3,664	3,792	3,925	4,062	4,205	4,352
13	**Total Revenue**	**403,091**	**452,584**	**458,761**	**427,155**	**445,053**	**445,947**	**452,421**	**457,250**	**464,675**	**472,561**	**480,982**	**482,690**	**489,162**	**474,078**	**499,554**
	Expenses															
14	Current															
15	General Government	96,420	96,898	103,228	132,208	143,283	148,298	154,230	160,399	166,815	173,488	180,427	187,644	195,150	202,956	211,074
16	Public Safety	32,640	34,464	31,295	21,109	21,350	22,097	22,981	23,900	24,856	25,851	26,885	27,960	29,078	30,242	31,451
17	Fire Department	45,757	59,724	49,917	60,255	68,955	67,233	69,922	72,717	75,626	78,651	81,797	85,069	88,471	92,010	95,691
18	Public Works	48,094	35,141	29,575	41,875	42,175	43,651	45,397	47,213	49,102	51,066	53,108	55,233	57,442	59,740	62,129
19	Culture & Recreation	7,766	9,914	15,834	8,150	8,650	8,953	9,311	9,683	10,071	10,473	10,892	11,328	11,781	12,252	12,743
20	Sanitation	20,460	22,142	25,402	28,600	27,750	28,721	29,870	31,065	32,308	33,600	34,944	36,342	37,795	39,307	40,879
21	Miscellaneous		28	14	150	-	-	-	-	-	-	-	-	-	-	-
22	Debt Service															
23	Principal (For Fire Truck Lease)	27,078	28,543	30,087	31,715	33,432	45,774	28,386	28,386	28,386	28,386	23,446	23,446	23,446	23,446	23,446
24	Interest	8,627	7,162	5,618	3,990	2,273	464	-	-	-	-	-	-	-	-	-
25	Capital Outlay	2,808	519	-	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
30	**Total Expenses**	**289,650**	**294,535**	**290,970**	**332,052**	**351,868**	**369,191**	**364,097**	**377,364**	**391,163**	**405,514**	**415,499**	**431,021**	**447,164**	**463,953**	**481,413**
31	**Revnue Over / (Under) Expenses**	**113,441**	**158,049**	**167,791**	**95,103**	**93,185**	**76,756**	**88,324**	**79,886**	**73,512**	**67,047**	**65,483**	**51,669**	**41,998**	**10,125**	**18,141**
	Other Financing Sources/(Uses)															
32	Transfers In: Water Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
33	Sale of Fixed Assets	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	Bond Proceeds		-	-	-	-	-	-	-							
35	Transfers Out: Water Fund			(120,000)	(56,000)	(46,000)	(36,000)	(35,000)	(35,000)							
36	Transfers Out: Fire Department Capital Project Fund			(4,146)	(11,992)	1,315	12,744	20,176	3,614	4,988	6,453	8,017	4,736	6,502	8,375	10,359
37	Transfers Out: Fire Department Repayment				(8,000)	(10,000)	(15,000)	(15,000)	(15,000)	(15,000)	(15,000)	(25,000)	(27,905)	-	-	-
38	Transfers Out: Capital Project 2011 Infrastructure Fund	(1,135)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Transfers Out: Sealcoat Capital Project Fund	(5,000)	(5,000)	(10,000)	(10,000)	(18,000)	(18,000)	(18,000)	(18,000)	(18,000)	(18,000)	(18,000)	(18,000)	(18,000)	(18,000)	(18,000)
40	Transfers Out: Public Works Capital Equipment Fund	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)
41	Transfers Out: Captial Improvement Fund - Other	(5,500)	(5,500)	(6,500)	(7,000)	(7,000)	(7,000)	(7,000)	(7,000)	(7,000)	(7,000)	(7,000)	(7,000)	(7,000)	(7,000)	(7,000)
42	Transfers Out: Capital Improvement Park Fund	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)	(3,500)
43	**Total Other Sources / (Uses)**	**(25,135)**	**(24,000)**	**(154,146)**	**(106,492)**	**(93,185)**	**(76,756)**	**(68,324)**	**(84,886)**	**(48,512)**	**(47,047)**	**(55,483)**	**(61,669)**	**(31,998)**	**(30,125)**	**(28,141)**
44	Prior Period Adjustments															
45	**Ending General Cash Fund Balance (FB)**	**469,164**	**603,213**	**616,858**	**605,469**	**605,469**	**605,469**	**625,469**	**620,469**	**645,469**	**665,469**	**675,469**	**665,469**	**675,469**	**655,469**	**645,469**
46	% of FB to Current Year Exp (basis for City Policy)	162%	205%	212%	182%	172%	164%	172%	164%	165%	164%	163%	154%	151%	141%	134%
47	% of FB to Current Year Revenues (calcs used by Moody's)	116%	133%	134%	142%	136%	136%	138%	136%	139%	141%	140%	138%	138%	138%	129%

Jeanne Vogt:
Existing Fire Truck Lease and SCBA's

EHLERS

** Current Repayment Allocation of 29% / 34% / 37% For the 2009A 2013C Bonds **

CITY OF NEW GERMANY, MINNESOTA **DRAFT 9/18/2017** (31,606) 19,251
FINANCIAL MANAGEMENT PLAN (FMP) 41,082
LONG RANGE BUDGET PROJECTIONS (47,654) (38,178) (18,927)

	Inflation Assumptions	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1	Revenue (Non-property tax)	0.0%	2.0%	2.0%	3.0%	3.0%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
2	Expenses	0.0%	2.0%	2.5%	3.5%	3.5%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
3	Interest Earnings	0.00%	1.00%	0.50%	0.75%	1.00%	1.25%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%

PROPERTY TAX LEVY AND TAX IMPACT

	GENERAL FUND	Payoff	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
			ACTUAL			BUDGETED	BUDGETED	PROJECTED									
48	**General Fund Operating Tax Levy**		**234,460**	**226,468**	**258,401**	**283,169**	**297,193**	**293,206**	**294,360**	**293,436**	**296,859**	**300,151**	**303,904**	**300,942**	**302,886**	**282,809**	**303,573**
49	Annual Increase		4.2%	-3.4%	14.1%	9.6%	5.0%	-1.3%	0.4%	-0.3%	1.2%	1.1%	1.3%	-1.0%	0.6%	-6.6%	7.3%
50	**Special Levies**																
51	$1,660,000 G.O. Improvement Bond, Series 2009A (BFE-After Refunding	2031	18,445	17,700	8,083	13,000	13,000	12,000	12,000	12,000	11,000	11,000	11,000	10,000	10,000	10,000	3,358
52	$1,505,000 G.O. Refunding Bonds, Series 2013C (TLE)	2035			16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	3,211
53	$510,000 G.O. Improvement Bonds, Series 2011B (Sewer Fund)	2033			20,528	20,370	20,118	25,116	24,738	24,360	23,730	23,100	22,470	21,840	21,210	20,580	20,580
54	$1,660,000 G.O. Improvement Bond, Series 2009A (BFE-Sewer Portion)	2031			18,461	19,991	19,466	20,884	20,272	19,593	18,913	16,290	15,708	15,125	14,542	15,887	15,887
55	**Total Special Levies**		**18,445**	**17,700**	**63,072**	**69,361**	**68,584**	**74,000**	**73,010**	**71,953**	**69,643**	**66,390**	**65,178**	**62,965**	**61,752**	**62,467**	**43,036**
56	**Total Tax Levy**		**252,905**	**244,168**	**321,473**	**352,530**	**365,777**	**367,206**	**367,370**	**365,389**	**366,502**	**366,541**	**369,082**	**363,907**	**364,638**	**345,276**	**346,610**
57	**Potential Debt Levy (See Page 2 for details)**		**-**	**-**	**0**	**0**	**0**	**28,386**	**28,386**	**28,386**	**28,386**	**28,386**	**23,446**	**23,446**	**23,446**	**23,446**	**23,446**
58	Less: Fiscal Disparities		(39,997)	(88,714)	(60,259)	(105,309)	(94,295)	(92,578)	(91,820)	(90,323)	(88,397)	(87,621)	(86,153)	(85,678)	(82,603)	(82,090)	(81,171)
59	**Net Levy to Taxpayers**		**212,908**	**155,454**	**261,214**	**247,221**	**271,482**	**303,014**	**303,937**	**303,452**	**306,492**	**307,306**	**306,376**	**301,675**	**305,481**	**286,632**	**288,884**
60																	
61	Existing Urban Tax Base		180,341	213,061	236,665	246,239	270,784	284,307	289,993	295,793	301,708	307,743	313,898	320,175	326,579	333,111	339,773
62	New Tax Capacity (See Page 7 for details)		0	0	0	3,179	7,948	0	0	0	0	0	0	0	0	0	0
63	Total Tax Capacity		180,341	213,061	236,665	249,418	278,732	284,307	289,993	295,793	301,708	307,743	313,898	320,175	326,579	333,111	339,773
64	**Urban Tax Rate on Net Tax Capacity**		**118.059%**	**73.637%**	**111.294%**	**99.901%**	**98.093%**	**97.273%**	**95.691%**	**93.652%**	**92.838%**	**91.292%**	**90.794%**	**87.539%**	**87.000%**	**86.047%**	**85.023%**
65	**Tax Rate % Change**		**54.42%**	**-37.63%**	**51.14%**	**-10.24%**	**-1.81%**	**-0.84%**	**-1.63%**	**-2.13%**	**-0.87%**	**-1.67%**	**-0.55%**	**-3.59%**	**-0.62%**	**-1.10%**	**-1.19%**
66	City Taxes $100,000 (prior to homestead credit) as of 2015		651	529	934	886	994	1,012	1,023	1,027	1,045	1,056	1,078	1,067	1,088	1,104	1,119
67	% tax increase/decrease avg home 100,000 value		-8.81%	-18.72%	76.61%	-5.10%	12.14%	1.81%	1.12%	0.43%	1.75%	1.04%	2.03%	-0.99%	1.99%	1.43%	1.35%
68	Existing Tax Base Inflation / (Deflation)		-29.3%	18.1%	11.1%	4.0%	10.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%

CITY OF NEW GERMANY, MINNESOTA
Increase in Property Tax Levy
For Taxes Payable in 2018

	Breakdown of Tax Levy	Pay 2017	Pay 2018	Difference
1	General Fund Operating Tax Levy	$ 283,169	$ 297,193	$ 14,024
2	Debt Service Levy	69,361	68,584	(777)
3	Total Tax Levy	$ 352,530	$ 365,777	$ 13,247
4	Less: Fiscal Disparities	105,309	94,295	(11,014)
5	**Net Levy to Taxpayers**	**$ 247,221**	**$ 271,482**	**$ 24,261**

	Detail of Changes in Tax Levy	2017 Budget	2018 Budget	Difference
1	General Operating (Line 1)			
2	Revenues			
3	Licenses & Permits	$ 13,120	$ 13,120	$ -
4	Intergovernmental Revenues	33,035	37,944	4,909
5	Charges for Services	90,637	88,155	(2,482)
6	Fines & Permits	1,200	1,200	-
7	Interest Earnings	2,894	4,341	1,447
8	Miscellaneous Revenues	3,100	3,100	-
9	Total Revenues	$ 143,986	$ 147,860	$ 3,874
10				
11	Expenses			
12	General Government	$ 132,208	$ 143,283	$ 11,075
13	Public Safety	21,109	21,350	241
14	Fire Department	60,255	68,955	8,700
15	Public Works	41,875	42,175	300
16	Culture & Recreation	8,150	8,650	500
17	Sanitation	28,600	27,750	(850)
18	Miscellaneous	150	-	(150)
21	Debt Service	35,705	35,705	-
22	Capital Outlay	4,000	4,000	-
19	Total Expenses	$ 332,052	$ 351,868	$ 19,816
20				
23	Transfers Out	106,492	93,185	(13,307)
20				
21	Use of Fund Balance	11,389	-	(11,389)
24				
21	**TOTALS**	**(283,169)**	**(297,193)**	**(14,024)**

** Current Repayment Allocation of 29% / 34% / 37% For the 2009A 2013C Bonds **

CITY OF NEW GERMANY, MINNESOTA

PUBLIC SAFETY

Fire Department (42210)

Department Description

The City has a volunteer fire department with a full time Fire Chief. The Fire Chief serves as the chief administrator for the fire department and reports to _____. The Fire Chief is responsible for managing the overall operations of the fire department, the coordinator of safety training, record keeping and program coordination. The City currently has ____ volunteer fire fighters, all of whom are paid on call.

Department Services

The city currently has contracts to provide fire department services, including fire suppression and emergency management services to the townships listed below. Each party, including the City, pays one-third of the prior year's actual expenditures. Invoices are sent out to the townships by _____ of each year.

	Township Name	Contract Expires
1	Camden Township	12/31/2018
2	Hollywood Township	12/31/2018

Budget Summary

This budget remains stable; staffing levels for the Fire Department are expected to remain unchanged for the next five years.

Annual Increase 1.50%

Revenues by Type

Revenues	Account Number	2014 Actual	2015 Actual	2016 Actual	2017 Budget	2018 Budget	2019	2020	2021	2022	2023	2024	2025	2026
											Proposed			
General Property Taxes	100-31000	28,969	29,273	28,541	29,537	28,261	28,685	29,115	29,552	29,995	30,445	30,902	31,366	31,836
Fire Contract Revenue	100-34202	62,464	63,223	63,680	65,108	63,655	64,610	65,579	66,563	67,561	68,574	69,603	70,647	71,707
Fire Department Revenue	100-34203	-	-	-	-	-	-	-	-	-	-	-	-	-
Fire Dept Grants/Aids/Donations	100-34206	2,560	6,121	5,393	-	-	-	-	-	-	-	-	-	-
Total		**$ 93,993**	**$ 98,617**	**$ 97,614**	**$ 94,645**	**$ 91,916**	**$ 93,295**	**$ 94,694**	**$ 96,115**	**$ 97,556**	**$ 99,019**	**$ 100,505**	**$ 102,013**	**$ 103,543**

Expenditures by Use

Expenditures	Account Number	2014 Actual	2015 Actual	2016 Actual	2017 Budget	2018 Budget	2019	2020	2021	2022	2023	2024	2025	2026
											Proposed			
Wages & Salaries	101-42201-100	7,333	8,575	8,829	9,000	10,000	10,350	10,764	11,195	11,643	12,109	12,593	13,097	13,621
Relief Association	101-42210-124	7,500	8,500	7,500	7,500	8,000	8,280	8,611	8,955	9,313	9,686	10,073	10,476	10,895
Office Supplies	101-42210-200	23	-	77	200	100	104	108	112	116	121	126	131	136
Operating Supplies	101-42210-210	649	613	650	900	1,000	1,035	1,076	1,119	1,164	1,211	1,259	1,309	1,361
Small Tools & Minor Equip	101-42210-240	1,452	2,231	2,243	4,000	5,000	5,175	5,382	5,597	5,821	6,054	6,296	6,548	6,810
Rescue Tools/Majors Tools	101-42210-245		-	1,379	2,000	2,000	2,070	2,153	2,239	2,329	2,422	2,519	2,620	2,725
Turn Out Gear	101-42210-260	3,618	5,091	5,119	2,500	5,000	5,175	5,382	5,597	5,821	6,054	6,296	6,548	6,810
Professional Serivices	101-42210-300	-	-	-	500	-	-	-	-	-	-	-	-	-
Criminal Background Checks	101-42210-303	45	-	40	100	100	104	108	112	116	121	126	131	136
Med/Physicians/Hep B Shots	101-42210-305	1,681	1,770	1,459	2,100	2,600	2,691	2,799	2,911	3,027	3,148	3,274	3,405	3,541
Telephone	101-42210-321	903	882	874	950	950	983	1,022	1,063	1,106	1,150	1,196	1,244	1,294
Postage	101-42210-322		8	-	100	-	-	-	-	-	-	-	-	-
Mileage	101-42210-331	187	73	-	100	100	104	108	112	116	121	126	131	136
Travel/Meal Expense	101-42210-332	366	722	173	250	250	259	269	280	291	303	315	328	341
Fuel/Diesel	101-42210-335	1,169	1,448	895	2,500	2,500	2,588	2,692	2,800	2,912	3,028	3,149	3,275	3,406
Advertising	101-42210-340	799	934	810	1,100	1,100	1,139	1,185	1,232	1,281	1,332	1,385	1,440	1,498
Insurance	101-42210-360	7,470	6,912	6,696	7,000	7,000	7,245	7,535	7,836	8,149	8,475	8,814	9,167	9,534
Electric	101-42210-381	1,274	1,329	1,200	1,700	1,700	1,760	1,830	1,903	1,979	2,058	2,140	2,226	2,315
Gas-Natural	101-42210-383	2,800	1,977	1,408	3,500	3,500	3,623	3,768	3,919	4,076	4,239	4,409	4,585	4,768
Education/Training	101-42210-390	4,278	10,297	3,607	7,200	7,000	7,245	7,535	7,836	8,149	8,475	8,814	9,167	9,534
Repair/maint - Contractor	101-42210-400	2,955	6,995	5,174	5,500	5,500	5,693	5,921	6,158	6,404	6,660	6,926	7,203	7,491
Rentals	101-42210-410	50	54	53	55	55	57	59	61	63	66	69	72	75
Dues/Subscriptions	101-42210-433	1,205	1,313	1,731	1,500	1,500	1,553	1,615	1,680	1,747	1,817	1,890	1,966	2,045
SCBA's	101-42210-435	-	-	-	-	4,000	-	-	-	-	-	-	-	-
Total Operating (Line 16 SUMMARY Tab)		**45,757**	**59,724**	**49,917**	**60,255**	**68,955**	**67,233**	**69,922**	**72,717**	**75,623**	**78,650**	**81,795**	**85,069**	**88,472**
Debt Service - Principal (Line 22)	101-42210-605	27,078	28,543	30,087	31,715	33,432	45,774	28,386	28,386	28,386	28,386	23,446	23,446	23,446
Debt Service - Interest (Line 23)	101-42210-610	8,627	7,162	5,618	3,990	2,273	464	-	-	-	-	-	-	-
Refunds & Reimbursements	101-42210-810		-											
Total		**$ 81,462**	**$ 95,429**	**$ 85,622**	**$ 95,960**	**$ 104,660**	**$ 113,471**	**$ 98,308**	**$ 101,103**	**$ 104,009**	**$ 107,036**	**$ 105,241**	**$ 108,515**	**$ 111,918**
Revenues Over / (Under) Expenditures *		**$ 12,530**	**$ 3,188**	**$ 11,992**	**$ (1,315)**	**$ (12,744)**	**$ (20,176)**	**$ (3,614)**	**$ (4,988)**	**$ (6,453)**	**$ (8,017)**	**$ (4,736)**	**$ (6,502)**	**$ (8,375)**

Note: When Revenues exceed Expenditures, the difference is tranferred to the Fire Department Capital Project Fund

CITY OF NEW GERMANY, MINNESOTA
Financial Management Plan
Sealcoat Fund
Fund 401

	Inflation Assumptions	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1	Revenue (Non-property tax)				3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
2	Interest Earnings				1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
3	Expenses				4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
4	CIP Inflation Factor				2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%

CASH FLOW ANALYSIS

	SEALCOAT FUND	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
		Actual			Budget	Budget	Projected									
	REVENUE															
5	General Property Tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Intergovernmental	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Charges for Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Interest Earnings	26	13	13	151	252	95	276	90	271	453	263	445	223	405	589
9	Contributions & Donations	0	0	0	0	0	0									
10	Miscellaneous Revenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**Total Revenue**	**26**	**13**	**13**	**151**	**252**	**95**	**276**	**90**	**271**	**453**	**263**	**445**	**223**	**405**	**589**
	EXPENSES															
12	Total Current	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Total Capital Projects (Line 52)	0	29,937	0	0	33,996	0	36,860	0	0	37,534	0	40,696	0	0	41,441
14	Bond Issuance Costs	0	0		0											
15	**Total Expenses**	**0**	**29,937**	**0**	**0**	**33,996**	**0**	**36,860**	**0**	**0**	**37,534**	**0**	**40,696**	**0**	**0**	**41,441**
16	**Revenues Over / (Under) Expenses**	**26**	**(29,924)**	**13**	**151**	**(33,744)**	**95**	**(36,584)**	**90**	**271**	**(37,081)**	**263**	**(40,251)**	**223**	**405**	**(40,852)**
	OTHER FINANCING SOURCES / (USES)															
17	Bond Proceeds (Line 53)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Sale of Capital Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Transfers In	5,000	5,000	10,000	10,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000	18,000
20	Transfers Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**Total Other Sources / (Uses)**	**5,000**	**5,000**	**10,000**	**10,000**	**18,000**	**18,000**	**18,000**	**18,000**	**18,000**	**18,000**	**18,000**	**18,000**	**18,000**	**18,000**	**18,000**
22	Prior Period Adjustments															
23	**Ending Cash Fund Balance**	**29,972**	**5,048**	**15,061**	**25,212**	**9,468**	**27,563**	**8,979**	**27,069**	**45,340**	**26,258**	**44,521**	**22,270**	**40,493**	**58,898**	**36,046**

CAPITAL PROJECTS & DEBT LEVY

	Capital Project Name	Department	Multiple Year?	Project First Year	Project Last Year	2016 Costs	2017 Budget	2018 Budget	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
									Projected									
24	Sealcoating	Areas 1 & 2	No	2018		32,676	-	33,996	-	-	-	-	-	-	-	-	-	-
25	Sealcoating	Areas 1 & 2	No	2023		32,676	-	-	-	-	-	-	37,534	-	-	-	-	-
26	Sealcoating	Areas 1 & 2	No	2028		32,676	-	-	-	-	-	-	-	-	-	-	-	41,441
27	Sealcoating	Other Roads	No	2020		34,053	-	-	-	36,860	-	-	-	-	-	-	-	-
28	Sealcoating	Other Roads	No	2025		34,053	-	-	-	-	-	-	-	-	40,696	-	-	-
29	Sealcoating	Other Roads	No	2030		34,053	-	-	-	-	-	-	-	-	-	-	-	-
30							-	-	-	-	-	-	-	-	-	-	-	-
51						-	-	-	-	-	-	-	-	-	-	-	-	-
52	**Total Capital Projects**					**200,187**	**-**	**33,996**	**-**	**36,860**	**-**	**-**	**37,534**	**-**	**40,696**	**-**	**-**	**41,441**

PROJECTED NEW DEBT TERMS — Per MA: Shelly Eldridge — As of Date: 9/20/2016

		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
53	Par Amount (Line 17)	-	-	-	-	-	-	-	-	-	-	-	-
54	Number of Years	15	15	15	15	15	15	15	15	15	15	15	15
55	Interest Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
56	**New Debt Levy (See Page 2)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

CITY OF NEW GERMANY, MINNESOTA
Financial Management Plan
Capital Improvement - Park
Fund 403

	Inflation Assumptions	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1	Revenue (Non-property tax)				3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
2	Interest Earnings				1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
3	Expenses				4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
4	CIP Inflation Factor				2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%

CASH FLOW ANALYSIS

	CAPITAL IMPROVEMENT - PARK	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
		Actual			Budget	Budget	Projected									
	REVENUE															
5	General Property Tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Intergovernmental	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Charges for Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Interest Earnings	5	7	23	240	102	38	74	109	145	182	219	256	293	331	370
9	Contributions & Donations	0	0	0	10,195	2,290	0									
10	Miscellaneous Revenue	0	0	10,000	0	0	0	0	0	0	0	0	0	0	0	0
11	**Total Revenue**	**5**	**7**	**10,023**	**10,435**	**2,392**	**38**	**74**	**109**	**145**	**182**	**219**	**256**	**293**	**331**	**370**
	EXPENSES															
12	Total Current	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Total Capital Projects (Line 52)	0	0	0	27,809	12,240	0	0	0	0	0	0	0	0	0	0
14	Bond Issuance Costs	0	0	0	0											
15	**Total Expenses**	**0**	**0**	**0**	**27,809**	**12,240**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
16	**Revenues Over / (Under) Expenses**	**5**	**7**	**10,023**	**(17,374)**	**(9,848)**	**38**	**74**	**109**	**145**	**182**	**219**	**256**	**293**	**331**	**370**
	OTHER FINANCING SOURCES / (USES)															
17	Bond Proceeds (Line 53)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Sale of Capital Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Transfers In	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500
20	Transfers Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**Total Other Sources / (Uses)**	**3,500**	**3,500**	**3,500**	**3,500**	**3,500**	**3,500**	**3,500**	**3,500**	**3,500**	**3,500**	**3,500**	**3,500**	**3,500**	**3,500**	**3,500**
22	Prior Period Adjustments															
23	**Ending Cash Fund Balance**	**7,007**	**10,514**	**24,037**	**10,163**	**3,815**	**7,353**	**10,927**	**14,536**	**18,181**	**21,863**	**25,582**	**29,338**	**33,131**	**36,962**	**40,832**

CAPITAL PROJECTS & DEBT LEVY

	Capital Project Name	Department	Multiple Year?	Project First Year	Project Last Year	2017 Costs	2017 Budget	2018 Budget	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
									Projected									
24	Grandstand		No	2017		27,809	27,809	-	-	-	-	-	-	-	-	-	-	-
25	Dugouts		No	2018		12,000	-	12,240	-	-	-	-	-	-	-	-	-	-
26							-	-	-	-	-	-	-	-	-	-	-	-
27							-	-	-	-	-	-	-	-	-	-	-	-
28							-	-	-	-	-	-	-	-	-	-	-	-
51							-	-	-	-	-	-	-	-	-	-	-	-
52	**Total Capital Projects**					**39,809**	**27,809**	**12,240**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

	PROJECTED NEW DEBT TERMS	Per MA: Shelly Eldridge	As of Date: 9/20/2016											
53	Par Amount (Line 17)	-	-	-	-	-	-	-	-	-	-	-	-	-
54	Number of Years	5	5	5	5	5	5	5	5	5	5	5	5	5
55	Interest Rate	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
56	**New Debt Levy (See Page 2)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

CITY OF NEW GERMANY, MINNESOTA
Financial Management Plan
Public Works Equipment Fund
Fund 407

	Inflation Assumptions	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1	Revenue (Non-property tax)				3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
2	Interest Earnings				1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
3	Expenses				4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
4	CIP Inflation Factor				2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%

CASH FLOW ANALYSIS

	PUBLIC WORKS EQUIPMENT FUND	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
		Actual			Budget	Budget	Projected									
	REVENUE															
5	General Property Tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Intergovernmental	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Charges for Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Interest Earnings	8	13	38	332	379	483	587	693	800	908	1,017	1,127	1,239	1,351	1,465
9	Contributions & Donations	0	0	0	0	0	0									
10	Miscellaneous Revenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**Total Revenue**	**8**	**13**	**38**	**332**	**379**	**483**	**587**	**693**	**800**	**908**	**1,017**	**1,127**	**1,239**	**1,351**	**1,465**
	EXPENSES															
12	Total Current	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Total Capital Projects (Line 52)	0	0	0	9,253	0	0	0	0	0	0	0	0	0	0	0
14	Bond Issuance Costs	0	0		0											
15	**Total Expenses**	**0**	**0**	**0**	**9,253**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
16	**Revenues Over / (Under) Expenses**	**8**	**13**	**38**	**(8,921)**	**379**	**483**	**587**	**693**	**800**	**908**	**1,017**	**1,127**	**1,239**	**1,351**	**1,465**
	OTHER FINANCING SOURCES / (USES)															
17	Bond Proceeds (Line 53)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Sale of Capital Assets	0	0	0	3,600	0	0	0	0	0	0	0	0	0	0	0
19	Transfers In	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
20	Transfers Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**Total Other Sources / (Uses)**	**10,000**	**10,000**	**10,000**	**13,600**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**
22	Prior Period Adjustments															
23	**Ending Cash Fund Balance**	**13,151**	**23,164**	**33,202**	**37,881**	**48,260**	**58,743**	**69,330**	**80,023**	**90,823**	**101,731**	**112,748**	**123,875**	**135,114**	**146,465**	**157,930**

CAPITAL PROJECTS & DEBT LEVY

	Capital Project Name	Department	Multiple Year?	Project First Year	Project Last Year	2017 Costs	2017 Budget	2018 Budget	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
									Projected									
24	Melrose Bobcat	Public Works	No				-	-	-	-	-	-	-	-	-	-	-	-
25	1992 Cat Payloader	Public Works	No				-	-	-	-	-	-	-	-	-	-	-	-
26	1994 Ford F350 Dump truck	Public Works	No	2019			-	-	-	-	-	-	-	-	-	-	-	-
27	2009 Ferris Lawnmower	Public Works	No	2017		9,253	9,253	-	-	-	-	-	-	-	-	-	-	-
28	Bobcat attachments	Public Works	No				-	-	-	-	-	-	-	-	-	-	-	-
51							-	-	-	-	-	-	-	-	-	-	-	-
52	**Total Capital Projects**					**9,253**	**9,253**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	PROJECTED NEW DEBT TERMS						Per MA: Shelly Eldridge		As of Date: 9/20/2016									
53	Par Amount (Line 17)						-	-	-	-	-	-	-	-	-	-	-	-
54	Number of Years						5	5	5	5	5	5	5	5	5	5	5	5
55	Interest Rate						4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
56	**New Debt Levy (See Page 2)**						**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

CITY OF NEW GERMANY, MINNESOTA
Financial Management Plan
Capital Improvement - Other Fund
Funds 402 & 409

	Inflation Assumptions	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1	Revenue (Non-property tax)				3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
2	Interest Earnings				1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
3	Expenses				4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
4	CIP Inflation Factor				2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%

CASH FLOW ANALYSIS

	CAPITAL IMPROVEMENT - OTHER	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
		Actual			Budget	Budget	Projected									
	REVENUE															
5	General Property Tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Intergovernmental	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Charges for Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Interest Earnings	4	8	18	152	161	156	175	194	223	295	368	441	516	591	667
9	Contributions & Donations	0	0	0	0	0	0									
10	Miscellaneous Revenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	**Total Revenue**	**4**	**8**	**18**	**152**	**161**	**156**	**175**	**194**	**223**	**295**	**368**	**441**	**516**	**591**	**667**
	EXPENSES															
12	Total Current	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Total Capital Projects (Line 52)	0	0	3,860	6,269	7,650	5,202	5,306	4,330	0	0	0	0	0	0	0
14	Bond Issuance Costs	0	0	0	0											
15	**Total Expenses**	**0**	**0**	**3,860**	**6,269**	**7,650**	**5,202**	**5,306**	**4,330**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
16	**Revenues Over / (Under) Expenses**	**4**	**8**	**(3,842)**	**(6,117)**	**(7,489)**	**(5,046)**	**(5,131)**	**(4,136)**	**223**	**295**	**368**	**441**	**516**	**591**	**667**
	OTHER FINANCING SOURCES / (USES)															
17	Bond Proceeds (Line 53)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	Sale of Capital Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Transfers In	5,500	5,500	6,500	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
20	Transfers Out	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	**Total Other Sources / (Uses)**	**5,500**	**5,500**	**6,500**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**
22	Prior Period Adjustments															
23	**Ending Cash Fund Balance**	**7,005**	**12,513**	**15,171**	**16,054**	**15,565**	**17,519**	**19,388**	**22,252**	**29,475**	**36,770**	**44,138**	**51,579**	**59,095**	**66,686**	**74,353**

CAPITAL PROJECTS & DEBT LEVY

	Capital Project Name	Department	Multiple Year?	Project First Year	Project Last Year	2017 Costs	2017 Budget	2018 Budget	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
									Projected									
24	Electricity to Poleshed		No	2017		2,450	2,450	-	-	-	-	-	-	-	-	-	-	-
25	Furnace		No	2017		3,819	3,819	-	-	-	-	-	-	-	-	-	-	-
26	A/C Units		No	2018		5,000	-	5,100	-	-	-	-	-	-	-	-	-	-
27	Election Equipment Upgrade		No	2018		2,500	-	2,550	-	-	-	-	-	-	-	-	-	-
28	A/C Units		No	2019		5,000	-	-	5,202	-	-	-	-	-	-	-	-	-
29	A/C Units		No	2020		5,000	-	-	-	5,306	-	-	-	-	-	-	-	-
30	Furnace		No	2021		4,000	-	-	-	-	4,330	-	-	-	-	-	-	-
51							-	-	-	-	-	-	-	-	-	-	-	-
52	**Total Capital Projects**					**27,769**	**6,269**	**7,650**	**5,202**	**5,306**	**4,330**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

PROJECTED NEW DEBT TERMS — Per MA: Shelly Eldridge — As of Date: 9/20/2016

		2017 Budget	2018 Budget	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
53	Par Amount (Line 17)	-	-	-	-	-	-	-	-	-	-	-	-
54	Number of Years	5	5	5	5	5	5	5	5	5	5	5	5
55	Interest Rate	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
56	**New Debt Levy (See Page 2)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

CITY OF NEW GERMANY, MINNESOTA
Financial Management Plan
Fire Department Capital Fund
Fund 413

	Inflation Assumptions	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1	Revenue (Non-property tax)				3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
2	Interest Earnings				1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
3	Expenses				4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
4	CIP Inflation Factor				2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%

CASH FLOW ANALYSIS

	FIRE DEPARTMENT CAPITAL FUND	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
		Actual			Budget	Budget	Projected									
	REVENUE															
5	General Property Tax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	Intergovernmental	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Charges for Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Interest Earnings	0	0	10	138	269	292	318	269	386	490	(235)	(68)	163	100	17
9	Contributions & Donations	0	0	0	0	0	0									
10	Miscellaneous Revenue	0	0	9,600	0	0	0	0	0	0	0	0	0	0	0	0
11	**Total Revenue**	**0**	**0**	**9,610**	**138**	**269**	**292**	**318**	**269**	**386**	**490**	**(235)**	**(68)**	**163**	**100**	**17**
	EXPENSES															
12	Total Current	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Total Capital Projects (Line 52)	0	0	0	7,014	136,594	0	0	0	0	281,541	0	0	0	0	0
14	Bond Issuance Costs	0	0	0	0											
15	**Total Expenses**	**0**	**0**	**0**	**7,014**	**136,594**	**0**	**0**	**0**	**0**	**281,541**	**0**	**0**	**0**	**0**	**0**
16	**Revenues Over / (Under) Expenses**	**0**	**0**	**9,610**	**(6,876)**	**(136,325)**	**292**	**318**	**269**	**386**	**(281,051)**	**(235)**	**(68)**	**163**	**100**	**17**
	OTHER FINANCING SOURCES / (USES)															
17	Bond Proceeds (Line 53)	0	0	0	0	130,000	0	0	0	0	200,000	0	0	0	0	0
18	Sale of Capital Assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	Transfers In	0	0	4,146	19,992	8,685	2,256	(5,176)	11,386	10,012	8,547	16,983	23,169	(6,502)	(8,375)	(10,359)
20	Transfers Out	0	0	(1)	0	0	0	0	0	0	0	0	0	0	0	0
21	**Total Other Sources / (Uses)**	**0**	**0**	**4,145**	**19,992**	**138,685**	**2,256**	**(5,176)**	**11,386**	**10,012**	**208,547**	**16,983**	**23,169**	**(6,502)**	**(8,375)**	**(10,359)**
22	Prior Period Adjustments															
23	**Ending Cash Fund Balance**	**0**	**0**	**13,755**	**26,871**	**29,230**	**31,778**	**26,920**	**38,575**	**48,973**	**(23,531)**	**(6,783)**	**16,318**	**9,979**	**1,703**	**(8,639)**

CAPITAL PROJECTS & DEBT LEVY

	Capital Project Name	Useful Life	Multiple Year?	Project First Year	Project Last Year	2017 Costs	2017 Budget	2018 Budget	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
									Projected									
24	1989 GMC Grassrig Fire Truck	10 years	No				-	-	-	-	-	-	-	-	-	-	-	-
25	1994 Ford Tanker Fire Truck	10 years	No	2023		250,000	-	-	-	-	-	-	281,541	-	-	-	-	-
26	2000 International Rescue Truck	10 years	No				-	-	-	-	-	-	-	-	-	-	-	-
27	2004 Kenworth Pumper Truck	10 years	No				-	-	-	-	-	-	-	-	-	-	-	-
28	2010 International Pumper Truck	10 years	No				-	-	-	-	-	-	-	-	-	-	-	-
29	2004 Ford Econoline Van	10 years	No				-	-	-	-	-	-	-	-	-	-	-	-
30	2010 Triton 12x2	10 years	No				-	-	-	-	-	-	-	-	-	-	-	-
31	2011 Polaris 6x6	10 years	No				-	-	-	-	-	-	-	-	-	-	-	-
32	16 SCBA's		No	2018		133,916	-	136,594	-	-	-	-	-	-	-	-	-	-
33	Infrared Cameras		No	2017		7,014	7,014	-	-	-	-	-	-	-	-	-	-	-
51							-	-	-	-	-	-	-	-	-	-	-	-
52	**Total Capital Projects**					**390,930**	**7,014**	**136,594**	**-**	**-**	**-**	**-**	**281,541**	**-**	**-**	**-**	**-**	**-**
	PROJECTED NEW DEBT TERMS						Per MA: Shelly Eldridge		As of Date: 9/20/2016									
53	Par Amount (Line 17)						-	130,000	-	-	-	-	200,000	-	-	-	-	-
54	Number of Years						5	5	5	5	5	5	10	10	10	10	10	10
55	Interest Rate						3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
56	**New Lease Payments (See Page 1, Lines 22 & 23)**						**0**	**0**	**28,386**	**28,386**	**28,386**	**28,386**	**28,386**	**23,446**	**23,446**	**23,446**	**23,446**	**23,446**

** Current Repayment Allocation of 29% / 34% / 37% **

CITY OF NEW GERMANY, MINNESOTA

Bonded Debt: **$1,660,000 G.O. Improvement Bonds, Series 2009A**
(Net of 2013C partial refunding)

Fund Number: 301
Interest Rate Range: 3.000% - 5.125%
Callable: 2/1/2018
Final Payment: 2/1/2031

Assumptions:	
Investment Interest Rate:	1.00%
Other Disbursements (% of Investment Earnings)	1.00%

2014 TLE Asmts transferred to 2013C Bond Fund

	Revenues							Expenses						
													29%	
Collect Year	Fund Balance 1-Jan	Property Taxes	Special Assess	Other Receipts	Transfer In	Investment Interest	Total Projected Receipts	Debt Payments	Other Disbursements	Total Projected Disbursements	Fund Balance 31-Dec	Bond Balance	Principal	Interest
2013											39,262	158,050		
2014	39,262	18,937	33,385			14	52,336	36,388	300	36,688	54,910	149,350	8,700	7,361
2015	54,910	18,314	5,175			14	23,503	27,554	28,008	55,562	22,852	140,650	8,700	18,854
2016	22,852	8,083	17,324			18	25,425	28,457	466	28,923	**19,353**	133,400	7,250	21,207
2017	19,353	13,000	4,873			194	18,066	23,474	261	23,735	13,685	126,150	7,250	16,224
2018	13,685	13,000	4,721			137	17,858	19,466	1,075	20,541	11,002	117,450	8,700	10,766
2019	11,002	12,000	4,570			110	16,680	14,335	1,945	16,280	11,402	108,750	8,700	5,635
2020	11,402	12,000	4,418			114	16,532	15,361	1,075	16,436	11,498	98,600	10,150	5,211
2021	11,498	12,000	4,267			115	16,382	14,879	1,075	15,954	11,926	88,450	10,150	4,729
2022	11,926	11,000	4,115			119	15,235	14,371	1,075	15,446	11,715	78,300	10,150	4,221
2023	11,715	11,000	3,964			117	15,081	13,864	1,075	14,939	11,857	68,150	10,150	3,714
2024	11,857	11,000	3,813			119	14,931	11,943	1,075	13,018	13,771	59,450	8,700	3,243
2025	13,771	10,000	3,661			138	13,799	11,508	1,075	12,583	14,987	50,750	8,700	2,808
2026	14,987	10,000	3,510			150	13,660	11,073	1,075	12,148	16,500	42,050	8,700	2,373
2027	16,500	10,000	3,358			165	13,523	10,632	1,075	11,707	18,316	33,350	8,700	1,932
2028	18,316	9,000	3,207			183	12,390	11,599	1,075	12,674	18,032	23,200	10,150	1,449
2029	18,032	9,000	3,056			180	12,236	11,079	1,075	12,154	18,114	13,050	10,150	929
2030	18,114	9,000	2,904			181	12,085	10,559	1,075	11,634	18,566	2,900	10,150	409
2031	18,566	1,000	-			186	1,186	2,974	1,075	4,049	15,702	0	2,900	74

Notes: *"Other Disbursements" includes fiscal agent fees, continuing disclosure, and post-issuance compliance.*

EHLERS

** Current Repayment Allocation of 29% / 34% / 37% **

CITY OF NEW GERMANY, MINNESOTA

Bonded Debt: **$1,090,000 G.O. Refunding Bonds, 2013C**
** Refunding Portion of the 2009A Bonds Only **

Fund Number: **302**
Interest Rate Range: 3.000% - 4.375%
Callable: 2/1/2022
Final Payment: 2/1/2035

Assumptions:	
Investment Interest Rate:	1.00%
Other Disbursements (% of Investment Earnings)	1.00%

	Revenues							Expenses						
Collect Year	Fund Balance 1-Jan	Property Taxes	Special Assess	Other Receipts	Transfer In	Investment Interest	Total Projected Receipts	Debt Payments	Other Disbursements	Total Projected Disbursements	Fund Balance 31-Dec	Bond Balance	29% Principal	29% Interest
2013											-	-		
2014	-	-				-	-	-	-	-	-	316,100	-	-
2015	-	-	26,940		44,505	23	71,468	12,552	230	12,782	58,686	316,100	-	12,552
2016	58,686	16,000	20,299			95	36,394	12,552	390	12,942	**82,139**	316,100	-	12,552
2017	82,139	16,000	19,215			821	36,036	23,978	390	24,368	93,807	304,500	11,600	12,378
2018	93,807	16,000	18,618			938	35,556	23,630	1,440	25,070	104,293	292,900	11,600	12,030
2019	104,293	16,000	4,369			1,043	21,412	24,710	390	25,100	100,605	279,850	13,050	11,660
2020	100,605	16,000	4,224			1,006	21,230	24,253	390	24,643	97,192	266,800	13,050	11,203
2021	97,192	16,000	4,079			972	21,051	23,731	390	24,121	94,122	253,750	13,050	10,681
2022	94,122	16,000	3,934			941	20,876	23,209	390	23,599	91,398	240,700	13,050	10,159
2023	91,398	16,000	3,790			914	20,704	24,108	390	24,498	87,604	226,200	14,500	9,608
2024	87,604	16,000	3,645			876	20,521	23,528	390	23,918	84,207	211,700	14,500	9,028
2025	84,207	16,000	3,500			842	20,342	24,369	390	24,759	79,790	195,750	15,950	8,419
2026	79,790	16,000	3,355			798	20,153	23,731	390	24,121	75,822	179,800	15,950	7,781
2027	75,822	16,000	3,211			758	19,969	24,514	390	24,904	70,887	162,400	17,400	7,114
2028	70,887	16,000	3,066			709	19,775	23,818	390	24,208	66,454	145,000	17,400	6,418
2029	66,454	16,000	2,921			665	19,586	24,543	390	24,933	61,106	126,150	18,850	5,693
2030	61,106	16,000	2,776			611	19,388	23,777	390	24,167	56,327	107,300	18,850	4,927
2031	56,327	16,000	0			563	16,563	24,420	390	24,810	48,080	87,000	20,300	4,120
2032	48,080	16,000	0			481	16,481	23,582	390	23,972	40,588	66,700	20,300	3,282
2033	40,588	16,000	0			406	16,406	24,165	390	24,555	32,439	44,950	21,750	2,415
2034	32,439	16,000	0			324	16,324	23,241	390	23,631	25,133	23,200	21,750	1,491
2035	25,133	16,000	0			251	16,251	23,708	390	24,098	17,287	0	23,200	508

Reduced for 11 Non-lake lots

Reduced for 25 lake lots

$28,008: 2014Transferred TLE Asmts from Fund 301

$16,497: Transferred from Fund 400.

Notes: *"Other Disbursements" includes fiscal agent fees, continuing disclosure, and post-issuance compliance.*

Special Assessment Amortization

Project **Trophy Lakes Estates** County Code: SA 551101 *

* Note: The 3 BFE parcels have a separate asmt code

Intial Amt 998,232.40
First Year 2011

Years 20
Interest 5.50%

Beginning Balance	Prin	Interest	Less: 25 Lake Parcels	Less: 11 Non-Lake Parcels	898,409.14	100% Total	29% Total
2013	49,911.62	49,412.50		Bank Conveys Lots to City for P2016	848,497.52	99,324.12	**28,803.99**
2014	49,911.62	46,667.36	Bank Pays Asmts thru P2018		798,585.90	96,578.98	**28,007.90**
2015	49,911.62	43,922.22			748,674.28	93,833.84	**27,211.81**
2016	49,911.62	41,177.09		(22,772.18)	698,762.66	68,316.53	**19,811.79**
2017	49,911.62	38,431.95		(22,085.90)	648,851.04	66,257.67	**19,214.72**
2018	49,911.62	35,686.81		(21,399.61)	598,939.42	64,198.82	**18,617.66**
2019	49,911.62	32,941.67	(47,075.74)	(20,713.33)	549,027.80	15,064.22	**4,368.62**
2020	49,911.62	30,196.53	(45,516.00)	(20,027.04)	499,116.18	14,565.11	**4,223.88**
2021	49,911.62	27,451.39	(43,956.25)	(19,340.75)	449,204.56	14,066.01	**4,079.14**
2022	49,911.62	24,706.25	(42,396.51)	(18,654.46)	399,292.94	13,566.90	**3,934.40**
2023	49,911.62	21,961.11	(40,836.77)	(17,968.18)	349,381.32	13,067.78	**3,789.66**
2024	49,911.62	19,215.97	(39,277.03)	(17,281.89)	299,469.70	12,568.67	**3,644.91**
2025	49,911.62	16,470.83	(37,717.30)	(16,595.61)	249,558.08	12,069.54	**3,500.17**
2026	49,911.62	13,725.69	(36,157.56)	(15,909.32)	199,646.46	11,570.43	**3,355.42**
2027	49,911.62	10,980.56	(34,597.82)	(15,223.04)	149,734.84	11,071.32	**3,210.68**
2028	49,911.62	8,235.42	(33,038.08)	(14,536.75)	99,823.22	10,572.21	**3,065.94**
2029	49,911.62	5,490.28	(31,478.35)	(13,850.47)	49,911.60	10,073.08	**2,921.19**
2030	49,911.60	2,745.14	(29,918.61)	(13,164.18)	0.00	9,573.95	**2,776.45**
2031					0.00	-	**-**
2032					0.00	-	**-**
2033					0.00	-	**-**
2034		-			0.00	-	**-**
2035		-			0.00	-	**-**