CITY OF NORTH ST. PAUL
PLANNING COMMISSION
REGULAR MEETING AGENDA
THURSDAY, MAY 3, 2018
6:15 PM

North St. Paul City Hall – Council Chambers
2400 Margaret Street

I. CALL TO ORDER

II. ROLL CALL

COMMISSION
Elaine Barton, Commission Chair
Trisha Hamm, Commission Vice-Chair
Tom Sonnek, Commission City Council Liaison
Chris Bathurst, Commissioner
Rick Gelbmann, Commissioner
Michael Stahlmann, Commissioner
John Wahl, Commissioner
Allan Worm, Commissioner

STAFF
Erin Perdu, City Planner
Karin Derauf, Commission Secretary

III. ADOPT AGENDA

IV. APPROVAL OF MINUTES

Approve the April 5, 2018 regular meeting minutes.

V. MEETING OPEN TO THE PUBLIC

Note: This is a courtesy extended to persons wishing to address the Commission concerning issues that are not on the agenda. This discussion will be limited to 15 minutes.

VI. PUBLIC HEARINGS

A. 2040 North St. Paul Comprehensive Plan

VII. COMMISSION BUSINESS ACTION ITEMS & RECOMMENDATIONS

VIII. REPORTS FROM STAFF

IX. REPORTS FROM COMMISSIONERS

Update from City Council Liaison

X. ADJOURNMENT

The next regularly scheduled Planning Commission Meeting is Thursday, June 7, 2018 at 6:15 p.m.

CITY OF NORTH ST. PAUL
PLANNING COMMISSION
RREGULAR MEETING MINUTES
THURSDAY, APRIL 5, 2018
6:15 P.M.

North St. Paul City Hall – Council Chambers
2400 Margaret Street

I. CALL TO ORDER

Chair Barton called the meeting to order at 6:18 p.m.

II. ROLL CALL

COMMISSION
Elaine Barton, Commission Chair
Trisha Hamm, CommissionVice-Chair
Tom Sonnek, Commission City Council Liaison
Chris Bathurst, Commissioner ABSENT
Michael Stahlmann, Commissioner
Rick Gelbmann, Commissioner
John Wahl, Commissioner
Allan Worm, Commissioner

STAFF
Erin Perdu, City Planner
Karin Derauf, Commission Secretary

III. ADOPT AGENDA

Motion to adopt agenda by Commissioner Stahlmann, and seconded by Commissioner Gelbmann, with all present voting aye (6-0). Motion carried to adopt the April 5, 2018 Agenda.

IV. APPROVAL OF MINUTES

Motion to approve March 1, 2018 Minutes by Commissioner Worm, and seconded by Vice Chair Hamm, with all present voting aye (6-0). Motion carried to approve the April 5, 2018 regular meeting minutes with the following changes: at the top of page 2, from, "…it is conducive to have the Planning Commission review the next CIP as there will be some changes for THE 2019 CIP that may impact the Comprehensive Plan", to, "…it is conducive to have the Planning Commission review the next CIP as there will be some changes for the 2019 CIP that may be impacted by the Comprehensive Plan".

V. MEETING OPEN TO THE PUBLIC

None

VI. PUBLIC HEARINGS

None

VII. COMMISSION BUSINESS ACTION ITEMS & RECOMMENDATIONS

A. Draft Comprehensive Plan Review

City Planner, Erin Perdu, introduced the 4 chapters for review, which included Chapter 6 - Economic Development, Chapter 7 - Downtown, Chapter 9 – Resiliency, and Chapter 15 – Implementation. Thorough review of these chapters was followed by brief review of the additional chapters for final commentary and changes prior to the City Council Workshop meeting and the Public Hearing. The Steering Committee reviewed the Comprehensive Plan as a whole and gave their final comments and suggestions that were incorporated into the document. This version of the document will be reviewed by the City Council at their workshop on Tuesday, April 10th as well. The draft will be completed by next month and there will be a Public Hearing on May 3, 2018 at the Planning Commission meeting.

Chapter 6 – Economic Development

Planner Perdu gave an introduction about the Economic Development chapter and stated that the chapter has been reviewed and vetted by the EDA. Their comments have already been incorporated into this chapter. The chapter begins with an economic snapshot of North St. Paul and gives comparisons of North St. Paul versus the surrounding area and to the state as a whole. Starting on page 16 of the chapter, the specifics of redevelopment begin and that becomes the primary focus of the goals and implementations regarding economic development.

Chair Barton inquired about the table on page 13 in relation to the graph on page 14. They seem to be providing the same information. Planner Perdu indicated that they are providing the same general information, however, it is being displayed in a different form. Council Liaison Sonnek stated he appreciates the representation of both of these forms as it helps to show any major changes or trends. Planner Perdu will try to get both graphic displays on the same page.

Commissioner Worm raised a question regarding table 6-2 on page 2 of the chapter regarding the final column of the Total Tax Rate. This appears to be just the total rates across the table added together. Planner Perdu will follow-up with the economic development specialist that prepared this chapter to find out what the reasoning of the final column is for and whether or not it is necessary. The paragraph following the table will also be reviewed and rewritten for better comprehension of what the table is trying to convey.

Attention was brought back to the redevelopment districts and Planner Perdu discussed the Funding Assistance tables on pages 18 and 19, indicating that the City already uses many of these tools. She also referenced the four primary economic goals at the end of the chapter and how these tools and tasks that will aim to accomplish the goals.

Commissioner Gelbmann asked a question regarding page 13 and the final sentence in the paragraph and the projection of permits that will be issued annually. Commissioner Gelbmann wanted to know if the difference between the average new permits in the past matches the expectation for additional household permits in the future.

Commissioner Worm inquired as to whether or not there was an expected time frame that older homes will be torn down and new builds will begin happening in the City to account for the projection of permits. Planner Perdu stated that there was some discussion at the Steering Committee regarding this and speculation on the idea of North St. Paul becoming a "tear down and rebuild" community, and whether or not it would be a threat to the existing affordable housing. The thought is that perhaps in the distant future this may become an issue; however, there has not been any specific evidence forthcoming. Planner Perdu stated this type of thing generally comes into play when there is a higher demand on any particular area due to the desirable location. This is recognized and accounted for in the Housing chapter of the Comprehensive Plan, should this arise in North St. Paul.

Chair Barton would like the final paragraph of the text on page 13 eliminated rather than trying to project the number of per new dwelling permits annually. Planner Perdu agreed that this needs to either be eliminated or clarified and will follow up with the economic development specialist for that portion of the text.

Council Liaison Sonnek inquired about the Goals and Tasks section of the chapter, goal number one, task three, regarding marketing and branding strategies. He indicated that the City has already rebranded everything with the new Snowman logo, so he would like to see this goal more heavily focused on marketing.

Chair Barton made comment regarding page 17 and the descriptions of each district in terms of the unique "characteristics" of each section. A better definition of this page would include "opportunities" of each district rather than the characteristics.

Chapter 7 – Downtown

Planner Perdu indicated that this is a smaller chapter as there is also a Downtown Master Plan that is being written. This particular chapter looks at the highlights of the public engagement meetings that were held. The middle section of the chapter is not necessarily new information but comes from the Living Streets Plan, the Redevelopment Master Plan, the Downtown Design Manual, etc., and is a compilation of all these documents. Finally, the final part of the chapter includes some concept design graphics indicating a depiction of what the City could potentially look like.

Commissioner Worm noted figure 7-3 and inquired as to whether or not we would have curb bump-outs as shown in the graphic. Planner Perdu stated that it is part of the design, however, not necessary. This design accomplishes a couple objectives, for example, slows traffic, directs traffic, narrows the areas for pedestrian crossing, and extends the angle parking closer to the intersection. She also pointed out that this is not the end design, just a concept for ideas.

There was a discussion on parking and Planner Perdu pointed out that the Downtown Master Plan will be the key document for the Downtown area. Council Liaison Sonnek indicated that the consensus is for keeping the angled parking in this area because approximately 30-40% of the Downtown parking would have to be forfeited if parallel parking was put in its place. This diminishes state funding for redevelopment, however, North St. Paul business owners and residents have expressed great concern over losing the angled parking and are not willing to give it up. It is also noted that it adds to the "charm" of Downtown North St. Paul.

Commissioner Gelbmann referenced page eight under the Policies section, Transportation bullet. He commented on barriers from Polar Ridge to the Library and would like something more than the general statement given in this section. He would like to see more specific examples of pedestrian and bike links for transportation and recreational use added to the text.

Chapter 9 – Resiliency

Planner Perdu opened the topic of resiliency by stating that the text of this chapter is indicating resilience to climate change. The topic is regarding environmental and climate resilience. This chapter has four themes pertaining to a healthy community theme, energy and renewables theme, environmental assets and infrastructure theme (natural features), and a brief theme of economy and society in regards to the climate change resiliency and how to protect communities, policy decisions, etc. This chapter has been reviewed by the EAC, staff, and the Steering Committee.

Chair Barton asked about the table 9-1 on page 5 and questioned the term "low-income households" in the Residential description of the table. She feels it should just state "households". Erin will follow up with this term and make necessary changes. Education campaigns in this section should be targeted at "all" households.

In the same table, Chair Barton indicated that the Renewable Energy description use the term "explore" and should be changed to "review", as the term "explore" makes it seem like there is not a solar ordinance in place.

Chair Barton also indicated that the addition of the EAC's importance to the implementation and strategies of the goals in this chapter should be noted and added to the text in the Goals and Strategies section on page(s) 12 and 13.

Chapter 15 – Implementation

Planner Perdu introduced this chapter and indicated that the culmination of all the chapters shows up in the final Implementation chapter in the form of a matrix as shown on pages 3 through 12. She also indicated that all the text in the matrix is directly from the chapters. Chair Barton pointed out that Economic Development and Parks are not showing in the matrix. Planner Perdu will make sure the pages are reformatted and those two chapters are added.

Commissioner Gelbmann also indicated that some definition of the time-frames indicated by the length of goals. For example, an X in any given location on the matrix indicates an endpoint or a completion date, eg., an X in the short term goal column means an ending point of 5 years from commencement of the particular project. This needs to be defined in the text prior to the matrix. Also, it would be helpful to show breaks or separate tables for each chapter. Commissioner Stahlmann would like to see this in the form of a bar graph rather than using X's in a matrix format.

Commissioner Gelbmann referred to page 9 in the Resiliency section and would like to see a change on the 14th item in the list regarding the prioritization of the removal of invasive plant species. It indicates removal of these from "open spaces" and he would like the addition of "waters" included in this goal.

He also referred the Surface Water section on page 11. Item number 9 also needs to include "inflows" as well as outflows. This should include any water flowing into Silver Lake as well.

He indicated that in the Water Supply section on page 10, there should be some form a goal regarding distribution water in the event of an emergency, for example, connection to an adjacent city like Oakdale. Perhaps a goal/plan like this would eliminate the need for distribution of water bottles. What would the cost be for connection to Oakdale, etc? This would need to be evaluated or if it appears in another chapter, than it should be referenced to that chapter.

Review of other chapters

Chair Barton pointed out Chapter 2, page 1, final sentence of the page it states "easy transit to both Downtowns is desired". There is only one Downtown. This is an addition from one of the Community Café meetings. Planner Perdu will get clarification as to what the text should read.

Commissioner Stahlmann commented on the Park map in Chapter 10. He would like the school locations to be included on the map. Chair Barton pointed out that there is another map in the Transportation Chapter, Chapter 8, page 28; it includes schools so the information can be readily transferred to the Park map in Chapter 10.

Commissioner Worm commented on Housing Chapter 5, table 5-1 that shows the total housing units which are vacant. His question was, "does North St. Paul really have 208 vacant houses"? Planner Perdu clarified that this number is total housing units, which also includes apartments, duplexes, etc.

Chair Barton mentioned that the Transportation Chapter 8, among other chapters, should have a direct reference to ADA compliance. She stated that she will send her comments to Planner Perdu via email directly.

Chair Barton referenced the Parks chapters and noted that there is no information or text relating to programs or activities that are available at the parks. Planner Perdu stated she would talk to Debra Gustafson regarding more discussion in the text about various offerings at the North St. Paul parks.

Commissioner Gelbmann mentioned the Transportation Chapter 8, page 8, paragraph 2, sentence 1; He commented that Highway 36 also intersects Century Avenue. This paragraph only indicates that McKnight Road intersection with Highway 36. Century Avenue should be added to the text as an intersection as well.

Also in Chapter 8, page 19, the last section of the page, first bullet, second sub-bullet, where it references a "south bound left-turn lane at 17th Avenue". Commissioner Gelbmann asked if the City looking to add a left turn lane into Oakdale at this intersection. Planner Perdu will follow up on this.

Commissioner Gelbmann next referenced the Transportation Chapter 8, page 24, Table 5 regarding TAZ (Transportation Analysis Zone). According to the table it appears as though there is no employment change in section 1826 from 2010 to 2040. The question Commissioner Gelbmann asked is, "where do the figures in the table come from"? He also asked, "is or has consideration of these figures captured the very recent current development thereby altering the employment figures; for example has Window World or Suite Living been account for"?

Planner Perdu referenced the employment figures shown in the Future Land Use Map in Chapter 4, and stated that numbers are not likely to change as there is not a significant change in land use in North St. Paul in terms of development.

Commissioner Gelbmann also commented on page 25 regarding the roadway capacities. There is no mention of the Stillwater Bridge and its impact on the roadway capacity thresholds. Planner Perdu referred to the map on page 23 indicating that the forecasted traffic count is expected to increase from 38,000 to 51,650. Planner Perdu will further verify these numbers.

On page 36, in terms of freight, Commissioner Gelbmann pointed out that there is a FedEx facility and wonders how much freight traffic will increase on 36. Is this worthy of mention in the Freight section in the Transportation Chapter? Planner Perdue will also look into this in terms of traffic impact on Highway 36.

Commissioner Gelbmann next commented on the goals in Chapter 2 in regards to the Transportation Chapter and the Intersection of Highway 36 and Highway 120 as discussed on page 46 of Chapter 8. There needs to be more information regarding the improvements of this intersection, not just for safety of the intersection, but also for accessibility to the City.

Chair Barton mentioned that in the Transportation Chapter 8, page 40, at the corner of Charles St. N., and 17th Ave. E., the map indicates that there is a bus stop at this location, however, there is no bus route shown on the map through here. Planner Perdu will follow up on this map and review the routes and bus stop locations.

Chair Barton next discussed Community Profile Chapter 3, first paragraph, and that this seems to have conflicting information regarding the percentage of English speakers in 2009 versus today. Planner Perdu indicated that the information comes from the Census Bureau and that the final sentence appears incorrect and should say “decrease” in diversity rather than “increase”. Planner Perdu will follow up with this information and change and/or remove the final sentence in this paragraph.

Commissioner Gelbmann referenced Parks Chapter 10, page 10, number 1 and he would like to see another bullet point in this section regarding chloride infiltration in relation to road salts as it is degrading water bodies. Planner Perdu will follow up with a sentence regarding road salts in this section.

Chair Barton moved on to Land Use Chapter 4, page 23, at the very bottom at bullet point titled connections. The last sentence of this paragraph seems to be missing language as it is not a complete thought with what is being connected in terms of land uses, amenities, etc. Planner Perdu will review this paragraph and complete the information.

Commissioner Stahlmann mentioned Economic Development Chapter 6, page 9, table 6-8 would be more helpful if there was a total column included in the table.

Chair Barton commented on Parks Chapter 10, the table on page 3 listing acreage doesn’t match the same acreage in the narrative. Planner Perdu indicated that the parks table comes from the Metropolitan Council; however, she will have the information checked to ensure accuracy.

Also in Parks Chapter 10, page 3, table 8-1, in the City Wide section and the Neighborhood and City Wide section, there was discussion on the Urban Ecology Center as “special purpose” and the Environmental Learning Center as “open spaces”. Chair Barton wanted to know what the

distinction between these two facilities is? Chair Barton stated that these also appear in the Resiliency Chapter 9, page 2, under "Lakes, Streams, and Wetlands" and indicates that both the Urban Ecology Center and the Environmental Learning Center are described as wetlands in this chapter. Planner Perdu will follow up and get better clarification as they are described in the table. Her current interpretation is that they are described this way because they were determined to have different functions, thus the different classifications. However, she cannot speak directly to the classifications and that the table was taken from the 2030 Comprehensive Plan, prior to her work with the City of North St. Paul.

Chair Barton referenced the Water Supply Chapter 12, page 16, number 2, bullet 2, at the end of the paragraph where it states "…consider applying for a MCES Water Efficiency Grant in 2017…". Planner Perdu indicated that language can be included in the text that reflects the information was taken directly from an approved document prior to 2017, however, this information is being included in the Comprehensive Plan overall as part of the planning process.

A discussion revolved around the Map in Chapter 10, page 9. Planner Perdu indicated that she will follow up and ensure the Map in Chapter 10 is the same as figure 7 on page 28 in Chapter 8 as it pertains to the status of Margaret Street and existing sidewalks.

Commissioner Gelbmann, mentioned the Water Supply Chapter 12, page 12, Table 3 regarding the top users of water. There is nothing regarding reduction of use in the narrative portion of the text. This should be included perhaps indicating some education for high volume users. Planner Perdu made note of this and will review the table.

VIII. REPORTS FROM STAFF

None

IX. REPORTS FROM COMMISSIONERS

Update from City Council Liaison Tom Sonnek

City Council Liaison, Tom Sonnek, gave an update on the status of Window World's zoning applications in regards to City Council approval. The City Council approved their applications with the condition that the owners of Window World work in conjunction with the City regarding water run-off mitigation on the west side of the Window World property.

There have been audio issues in the Council Chambers room in regards to the Planning Commission transcription recordings where the overhead speakers "buzz" loudly for a short varied length of time and then stop. This transfers to the microphone jack in the recorder. The audio issue has been identified as cell phone interference.

Council Liaison Sonnek gave an update on the status of the White Bear Lake Ruling. The Judge will not stay the ruling after appeal from the DNR. This may have a potentially large impact on the City of North St. Paul. Many cities in the area have appealed to the DNR regarding permitting pertaining to the ruling. There are three things that North St. Paul has appealed to the DNR, which include an irrigation ban, plan for surface water runoff, and residential water usage at a cap of 75 gallons a day. The DNR came back with their ruling and denied a portion of the appeal concerning a plan for surface water runoff. This means that the City will need to move

forward and come up with a plan for surface water runoff at this time. This may change in the future.

Council Liaison Sonnek briefly discussed that the City has offered to mitigate the cost for Suite Living due to soil issues. The quality of the soil is acceptable, however, the ability to build on the soil is in question as it is considered "soft". The City is working with Suite Living to resolve this and continue on with the sale of the property.

X. ADJOURNMENT

There being no further business, motion to adjourn by Commissioner Stahlmann, and seconded by Commissioner Gelbmann, with all present voting aye (6-0). Motion carried to adjourn the meeting at 9:00 p.m.

The next regularly scheduled Planning Commission Meeting is Thursday, May 3, 2018 at 6:15 p.m.

Members, please notify any planned absences to:

Karin Derauf
Planning Commission Administrative Assistant
651-747-2400
karin.derauf@northstpaul.org

Agenda Information Memorandum
North St. Paul Planning Commission
April 26, 2018

FROM THE OFFICE OF THE CITY PLANNER

Agenda placement: Public Hearings

Subject: 2040 North St. Paul Comprehensive Plan

To: Planning Commission Members

Background/Facts:

The 2040 North St. Paul Comprehensive Plan is now ready for public hearing and recommendation to the City Council for adjacent community review. Since your April Planning Commission meeting where the draft plan was reviewed in its entirety, your comments have been incorporated into the draft. Also, the City Council reviewed the draft plan at a special workshop on April 10th and provided additional comments that were incorporated into the draft.

Next steps for the Comprehensive Plan are:

- Recommendation to the City Council from the Planning Commission (May 3, 2018)
- Approval from City Council for distribution to adjacent communities for review (May 15, 2018)
- Adjacent Community Review Period: up to 6 months.
- Submittal to Metropolitan Council: after adjacent community comments are received and reviewed by the City
- Final adoption of the Plan by the City: after review and comment by the Metropolitan Council

Recommendation: It is recommended the Planning Commission make a motion to recommend that the City Council approve the 2040 North St. Paul Comprehensive Plan for adjacent community review.

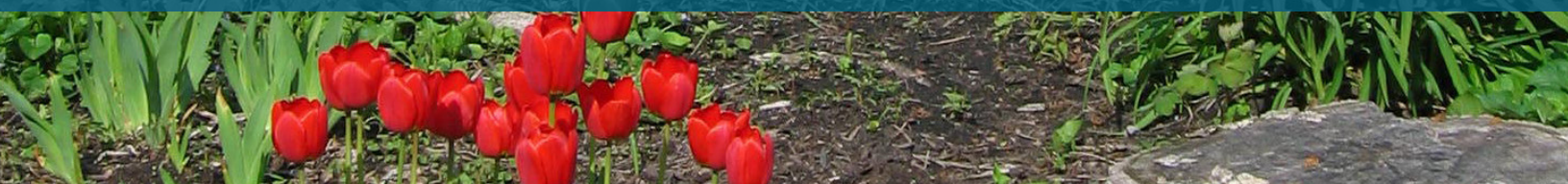
Attachments:
2040 North St. Paul Comprehensive Plan Draft for Public Hearing

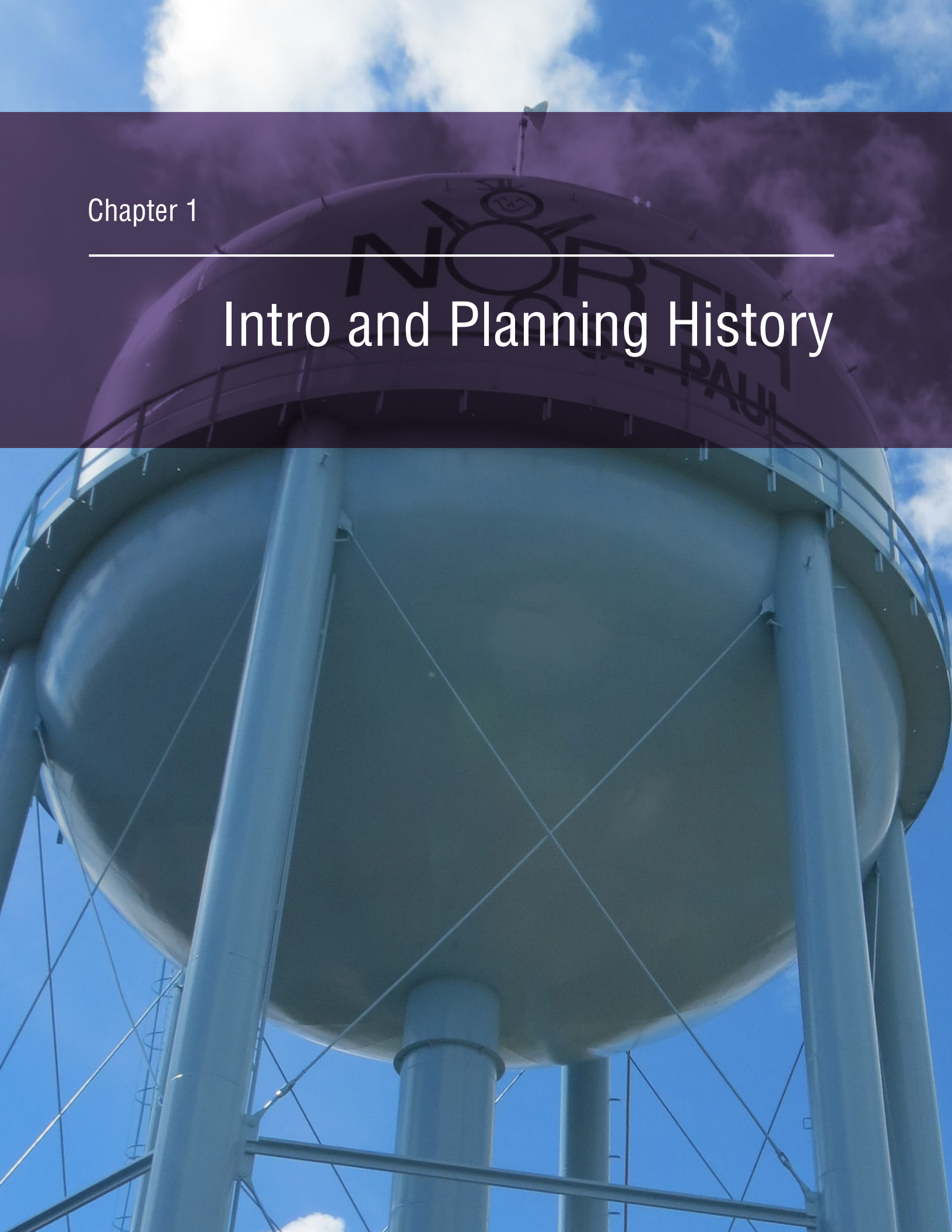
Respectfully submitted,

Erin N. Perdu, AICP
Senior City Planner

NORTH
ST.PAUL
extraordinary.

NORTH ST. PAUL
COMPREHENSIVE PLAN 2040





Chapter 1

Intro and Planning History

CHAPTER 1: INTRODUCTION

PURPOSE OF THE PLAN

The 2040 Comprehensive Plan (Plan) provides an opportunity to establish a vision for how North St. Paul will evolve over the coming decades. The Plan is intended to reflect the desires of the entire community. It analyzes and then directs action on various topics related to development including land use, housing and neighborhoods, economic development, active living, the downtown, transportation, utilities and parks among others. This Plan aims to build off the goals and policies identified the 2030 Comprehensive Plan, the City's Strategic Plan and previous planning efforts so that momentum may be continued.

Minnesota Statute requires that cities within the seven-county Metropolitan Area update their comprehensive plans every 10 years. Comprehensive plans are reviewed by the Metropolitan Council, which is responsible for managing and planning for the growth of the Twin Cities region. The purpose of the update is to ensure that local plans are consistent with regional forecasts and policy plans prepared by the Metropolitan Council. In addition, regularly updating the Comprehensive Plan allows for communities to adjust their goals based on emerging trends and changing demographic needs. For this planning cycle, the regional *ThriveMSP 2040* plan provides overarching regional planning goals and outlines both required and suggested local plan elements.

A comprehensive plan is a critical future-oriented document, but it does not ensure any change by itself. A comprehensive plan becomes the basis by which elected officials, commission members, city staff and other stakeholders make informed decisions related to official controls, such as the zoning and subdivision ordinance, as well as guide future investment through the capital improvement plan. As such, it is an important document in shaping the city's future and should be referenced regularly.

HOW TO USE THE PLAN

The Plan is meant to be a living document, grounded in real challenges and opportunities. It is meant to be revisited often and revised as conditions change.

The City will use the continuous input of the public, whether through formal or informal means to make sure that the vision, goals and policies are still relevant.

Based on the priorities voiced in public input; demographic, physical, social and economic changes affecting the City; and the requirements of the Metropolitan Council, the Plan is divided into the following chapters:

2 – Vision, Goals and Decisions

3 – Community Profile

4 – Land Use

5 – Housing

6 – Economic Development

7 – Downtown

8 – Transportation

9 – Resiliency

10- Parks

11 – Surface Water

12 – Water Supple

13 – Sewer

14 - Electric

15 – Implementation

Each chapter includes an overview of the existing conditions related to the topic, related goals, a summary of "what we heard" from the public including common themes and action items.

The Community Profile chapter provides detailed background information regarding demographics, housing, economy, environment, transportation and land use for the City of North St. Paul, Ramsey County and in some cases comparable cities. This information can be used in the context of land use and development decisions, as well as a stand-alone document.

Traditionally, city leaders refer to the Comprehensive Plan when making decisions that affect the quality of life for all residents: deciding what uses should be allowed on a parcel of land; allocating resources for infrastructure investments; preserving and improving parks, open spaces and trail connections. Appointed and elected officials also use the City's Comprehensive Plan as a guide when making decisions with limited resources about land use, housing, transportation, equity, quality of life and sustainability.

THRIVE 2040 OUTCOMES

The Metropolitan Council developed Thrive 2040 Outcomes as "lenses" through which we may view the city's future. Each chapter of the Plan works to achieve a balance between the following Thrive 2040 Outcomes:

1. Stewardship: responsible management of natural and financial resources and making strategic investments in the future.
2. Prosperity: investing in infrastructure and amenities that attract and retain successful businesses, a talented workforce and, consequently, wealth.
3. Equity: connecting all residents to opportunity. This includes viable housing, transportation and recreation opportunities.
4. Livability: creating and renewing vibrant places and underlying infrastructure that build community identity; investing in parks and affordable housing; and collaborating with neighbors.
5. Sustainability: protecting regional vitality for generations to come. This includes promoting wise use of water; climate change mitigation, adaptation and resilience efforts.

PLANNING HISTORY

The 2040 Comprehensive Plan builds on the work completed by previous planning efforts. Recent influential planning efforts for North St. Paul are described in the section that follows.

North St. Paul Strategic Plan

In 2013 (and updated in 2017), the City of North St. Paul began an effort to establish a consensus-based direction for the City in order to actively pursue implementation strategies to achieve that direction. The process engaged City staff, department heads and City Council members. The Strategic Plan identifies

six major themes and translates them into measurable strategies, goals and action steps. The Strategic Plan is a means for the City Council to ensure that resources are applied in an optimal manner.

2030 Comprehensive Plan

The 2030 Comprehensive Plan casts the city's vision for overall development and covers various topics including:

- Residential
- Transportation
- Housing and Neighborhoods
- Economic Development
- Community Facilities
- Parks, Open Space and Trails
- Utilities

Goals and policies contained in each chapter provide a framework for how the vision of the 2030 Comprehensive Plan can be achieved. As part of the 2040 Comprehensive Plan update, many of the goals and strategies from the 2030 Comprehensive Plan were analyzed and incorporated or amended as applicable so that momentum may be continued. The 2030 Comprehensive Plan was adopted by the City Council on October 21, 2008.

Redevelopment Master Plan

Because the City of North St. Paul is fully developed, renewal and redevelopment is a key focus. The Redevelopment Master Plan (2012) seeks to identify ways to improve the connection between potential redevelopment sites, downtown North Saint Paul, the Gateway Trail, regional transit systems and community facilities. The approach taken included defining the context of potential redevelopment sites, understand the desired outcomes and exploring the possibilities for these sites. The redevelopment planning process plays an important role in explaining and defining the future so residents, businesses and developers know how the area around them is anticipated to evolve.

The Redevelopment Master Plan has a strong focus on the downtown area, which is the traditional commercial hub of North St. Paul. The Plan recognizes that revitalization focuses on redevelopment, reuse of land, encouraging denser development and creatively fitting new pieces into the existing fabric of the community.

Living Streets Plan

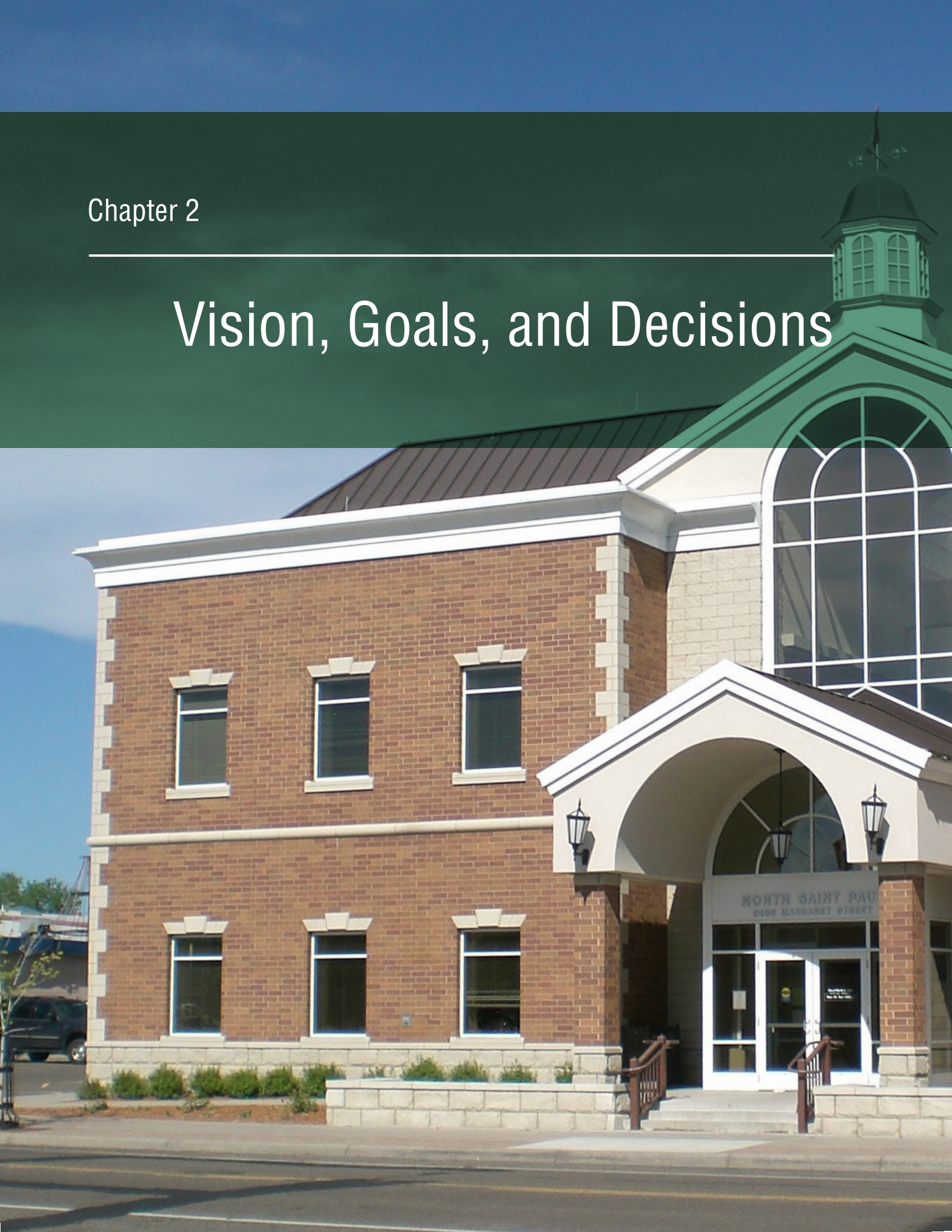
The Living Streets Plan (2011) was created in partnership with the Ramsey-Washington Metro Watershed District to attempt to address the water quality problems facing North St. Paul. The name "living streets" was chosen because it connotes a street where people are active and nature is incorporated. The Living Streets Plan seeks to create streets where all types of transportation are safely accommodated. Additionally, emphasis is placed on using the streets and right of way as a means of impacting the environment positively. Recommendations of the Living Streets Plan include stormwater management practices within the public right of way, bike and pedestrian safety improvements, traffic calming, non-motorized connectivity and urban forestry.

Downtown Design Manual

The Downtown Design Manual (2005, update forthcoming in 2017-2018) was created to illustrate portions of the North St. Paul Code of Ordinances and to clearly depict the desired built environment within the North St. Paul Downtown District. It also was developed to communicate, facilitate, educate, guide and inform the reader about the design review process and regulations contained within the North St. Paul Code of Ordinance. The Manual also provides business owners and potential developers tangible design ideas that can be applied in North St. Paul's downtown to improve the potential for economic viability and make the commercial district a welcoming atmosphere for pedestrians. The Manual is used by the City's Design Review Commission to review projects within the Downtown Mixed Use district. It is also used by staff to work with business owners and developers to provide predictability as to the look and feel of the Downtown.

Chapter 2

Vision, Goals, and Decisions



Chapter 2: Vision, Goals and Decisions

Guiding Decision Making

The City of North St. Paul's elected and appointed officials use this Plan as a guide when making decisions about not only land use, but housing, transportation, infrastructure and overall quality of life. More than just a Comprehensive Plan, the vision, goals and measurable outcomes presented here lead the overarching policy for the City.

The vision, goals and objectives described in this Chapter are based on previous planning efforts, input from the general public through the Community Cafes held during the Planning Process, online forums, as well as guidance from City officials.

What we Heard

Community Cafés and Online Surveys

Six community café events were held to solicit feedback from community members on what they wanted the Plan to prioritize. Survey questions were also posted online with the mySidewalk website. Some citizens chose to respond to these online posts. While feedback was solicited through various methods, common themes emerged from the engagement effort and those themes are summarized below.

Community Café 1: Development and Redevelopment

- Preserve and invest in existing recreational spaces, parks and lakes.
- North St. Paul needs new multifamily housing within walking distance of popular destinations to support commercial activity.
- Commercial activity itself should be clustered so that the businesses can feed off each other.
- Transit is important. The City should focus on accessibility and explore new modes. Easy transit to both Minneapolis and St. Paul downtowns is desired.

Community Café 2: Housing and Neighborhoods

- Parks, open spaces and trails draw people to neighborhoods. Parks should include quality community spaces while bike infrastructure and racks should be increased to spur an increase in trail usage
- Residents appreciate the character of the city and its small-town feel. How can this character be leveraged to attract young families?
- There should be different types of housing, including town homes and new rental buildings, to cater to seniors looking to downsize, and young people looking to live small.
- Focus on high quality infrastructure. The city should balance its investments and also focus on things like schools, public transportation and commercial development.

Community Café 3: Housing and Neighborhoods

- Sidewalks need to be more prevalent and connected to each other. Walking trails around the parks and lakes are a great idea.
- Housing is not available at all price points or styles.
- Older houses are showing signs of age, while new housing is not being constructed in styles that are appealing to younger people.
- There should be a purposeful vision for how to house and transport seniors who may not be able to drive. They are currently isolated.

Community Café 4: Business and the Economy

- The downtown area needs a variety of business types, including family-friendly restaurants and activities.
- The city should capitalize off its proximity to Century College, drawing students into the area.
- North St. Paul should brand itself by promoting the historic walking tour, supporting volunteerism and exploring public art. Overall marketing of the city should be a priority.
- The car show is a beloved staple of the community and should be continued.

Community Café 5: Active and Sustainable Living

- Key destinations within the City, like schools, churches, parks and the downtown should be connected with sidewalks or trails. That includes creating connections from the Gateway Trail.
- A park or activity space is needed downtown.
- The City should be more walkable. Overall the City should focus on creating better walking and biking connections between destinations; there are too many places where sidewalks end abruptly.
- Water quality (including Silver Lake), keeping the water source local and encouraging solar energy are important sustainability priorities.

Online Responses

- The downtown needs a better variety of businesses, including more restaurant destinations.
- Both young and old people need to be provided for.
- Future development should be purposeful and promote economic growth.

VISION

The North St. Paul *Strategic Plan: 2015-2020* developed a vision for the City, building from the foundation laid by the 2030 Comprehensive Plan. The primary objective of the North St. Paul City Council and staff is to establish a consensus-based direction for the City and then actively pursue implementation of strategies to achieve that direction. The Strategic Plan and Comprehensive Plan will work together to support that initiative. They are both tools for city leaders to identify priorities, programs and services, and assimilate them into common elements (strategies and goals) by organizing them into one document that serves as a valuable resource and guide for the future. These plans are a means for the City Council to ensure that resources are applied in an optimal manner.

VISION

North St. Paul is your favorite small town. We promote community stewardship through an involved and informed citizenry. We preserve neighborhood value with diverse and maintained housing and active neighbors. The city engages in creative placemaking that fosters an environment of economic and employment opportunity. North St. Paul builds systems that connect people to places and promote active lifestyles.

GOALS

The following goals will inform the Comprehensive Plan. North St. Paul strives to take a fair and balanced approach to planning, while being cognizant of the needs and desires of its citizens. These goals show that the City acknowledges the diverse aspects that make North St. Paul a desirable place to live and work, and that the City is committed to building on its strengths and identifying areas with more room for growth. Note that additional detail on strategies and implementation of these goals will be developed in the following chapters of the Plan.

When making decisions, North St. Paul leaders will ask if the option chosen furthers at least one, if not several, of the goals below, while not damaging the others. Measures are also included here so that the City can determine if progress is being made toward these goals.

Goal	Questions	Measures
Community engagement & communication: Promote community stewardship through an involved and informed citizenry	Does this action help communicate with everyone in the community? Were all members of the community told about deliberation of this action in an accessible way? How will the results of this action be shared with the community in an accessible way? Is communication infrastructure maintained and enhanced? Is the City maintaining relationships to communicate to groups throughout the City?	o Number and diversity of attendees at City and community events to improve interaction with the community. o Continued change in demographics of community, supporting and enhancing cultural differences. o Integration of cultural diversity into community events o Increase in the quality and accessibility of information made available to the community. o Community awards programs and volunteer appreciation events. o Number of community-based educational programs for youth, students and adults o Citizen feedback regarding level and quality of services delivered

Goal	Questions	Measures
Residential Character & Neighborhoods: Enhance neighborhood value with quality housing options and types at all price points. Improve the quality and mix of the City's housing so that there is a wide variety of housing available for people of all incomes, ages, cultures and abilities. Consider new forms of housing where redevelopment is necessary. Revitalize and enhance the quality of the housing stock so that it is attractive and appropriate for new buyers.	Does this action preserve, improve and/or create viable, safe, affordable homes? Does this action preserve/create variety in housing products in terms of size (square footage and/or # of bedrooms) and ownership/rental type? Will this action result in the continued maintenance and care of existing residences? Do residents, especially young adults and seniors, have the ability and/or resources to maintain their homes? Will this action preserve or create housing that is needed?	o Participation in education, engagement and home preservation initiatives. o Number of permits issued for housing repair and renovation o Number of permits issued for the construction of townhomes, multifamily homes and apartment buildings. o Continuance of the City's GreenStep Cities designation. o Ordinance amendments to allow new types of housing and/or a mix of housing densities. o Number of blighted, aging or outdated homes removed or renovated.

Goal	Questions	Measures
Business & Economic Development: Possess a progressive image for redevelopment while maintaining a sense of the community heritage. Engage in creative placemaking that fosters an environment of economic and employment opportunity so that residents can work, shop and play near their homes. Foster a strong and diverse business base with planned and organized growth, timely allocation of resources and investment of public dollars.	Does this action welcome new business to the City? Will this action contribute to the unique sense of place that is North St. Paul? Does this action allow for or encourage a new type of business or development to occur that is different or complimentary to what the City has already? Will this action create employment opportunities for "good jobs" (i.e. jobs with livable wages, benefits and steady hours) for North St. Paul residents?	o Creation of a community marketing strategy. o An increase in density/intensity for residential, office, commercial, entertainment and industrial uses in areas identified in the future land use plan. o Growth in and diversity of the city's tax base. o Redevelopment of the Anchor Block site, the Commerce Park site and other key sites identified in the Redevelopment Master Plan o Reduction in unemployment o Increase in average wages

Goal	Questions	Measures
Downtown: Establish and implement a Downtown Improvement Plan that enhances the character of the downtown as a distinctive place that embodies the heritage of the community.	Does this action increase the diversity in the business mix of the downtown? Does this action compliment or enhance the historic character of the downtown? Will this action create places for people to gather downtown? Will this action increase activity downtown?	o Completion and implementation of the Downtown Master Plan o Adoption of revised Downtown Design Manual o Creation of a downtown marketing strategy o An increase in the mix of uses in downtown o Increase in residential density adjacent to downtown o Improvement of public gathering spaces downtown o Connections between downtown and the Gateway Trail

Goal	Questions	Measures
Transportation: Achieve a functional, aesthetic and balanced system which includes pedestrian friendly sidewalks and trails, local streets, collectors, arterials, a freeway and transit.	Does this action increase non-motorized connections? Will this action make key destinations more accessible for residents and visitors? Will this action increase transportation options for those who live, work or visit North St. Paul? Does this action enhance the walkability of the City?	o Reduction in sidewalk gaps throughout the city o Incorporation of pedestrian and bicycle amenities in street reconstruction projects o Measurement of stormwater runoff rate from roads and yards o Transit ridership statistics for trips originating or ending in North St. Paul o Number of upgraded transit shelters constructed o Commute mode share for trips originating or ending in North St. Paul o New connections to the Gateway Trail o Increase in ADA compliant pedestrian routes

Goal	Questions	Measures
Urban Design: Enhance community character through visual design and functionality of the public realm. Develop themes, prepare plans and implement plans which will enhance and improve the image and livability of the City in Downtown, Highway 36 Corridor and in each of the City's residential neighborhoods.	Does this action contribute to North St. Paul's sense of place? Does this action improve North St. Paul's image? Does this action improve the appearance and condition of North St. Paul's neighborhoods?	o Incorporation of design standards and enhancements at key entry points into the city o Use of innovative and creative street design o Use of cohesive street design throughout the community o Feet of utilities moved underground o Implementation of design standards for downtown development and residential development

Goal	Questions	Measures
Parks, Open Space and Trails: Enhance and expand the parks, trails and open space system to ensure that all have access to quality community facilities.	Will this action preserve important natural features? Will this action connect existing parks and open spaces? Does this action improve or preserve access to North St. Paul's parks and open spaces?	o Usage of parks and trails by community members of all ages, income levels, abilities, races and national origins o Number of new parks created o Amount of open space and trail in the Highway 36 Corridor o Establishment of new trails connect schools, parks, commercial areas and downtown o Connections to the Gateway Trail o Number of facilities in compliance with ADA requirements

Goal	Questions	Measures
Resilience and the Environment: Protect and enhance the lakes, wetlands, woods and wildlife and promote actions, practices and developments which will sustain the environment. Become more resilient to climate change through climate change mitigation and adaptation.	Does this action preserve significant natural resources or habitats? Will this action reward or encourage alternative energy? Will this action improve or preserve surface water quality? Does this action help protect North St. Paul residents against the effects of climate change?	o City solar and wind energy capacity o Measurements of pollutants in natural drainageways o City recycling rate o Percentage of total impervious surface in the City o Trends in greenhouse gas emissions o Implementation of an emergency preparedness plan for severe weather events including prolonged heatwaves, with particular attention to vulnerable populations.

Chapter 3

Community Profile

Chapter 3: Community Profile

Community Context

This section of the comprehensive plan provides a picture of the community as it exists today. Looking at the current demographic, social, physical and economic characteristics is an important step in planning for the future. Achieving the desired community vision starts with an understanding of the existing conditions and emerging trends. This section can also be used to help inform daily decision-making and policy by staff and elected officials by providing a clear understanding of the community. The chapters that follow will build on this understanding of who and what is here now to create a vision for who and what North St. Paul will be in 2040.

History of North Saint Paul

Henry Anson Castle settled in St. Paul in 1868. He was a former Civil War officer, lawyer, state legislator and the owner/editor of the St. Paul Dispatch Newspaper. In 1872 he purchased 520 acres of farmland Northeast of St. Paul and by 1884 had accumulated 1200 acres of land south and east of Silver Lake. His development venture got a tremendous boost in 1885 when the Wisconsin Central Railroad ran their eastbound line through the center of his new town site. Two years later, construction of the City began in earnest as factories, homes, churches and businesses began to spring up. A financial panic in 1893 dampened the development fervor for many City businesses for a period. But, Castle's extraordinary small town in a big City survived. What first was a small industrial village now stands as a first-ring suburb with an area of 3.1 square miles, a quaint and cohesive historic downtown. The City celebrated 130 years of history in 2017. The town continues to look to the future and provide a great quality of life to its residents.

The Land

Existing Land Use

Existing land use can be thought of as what exists on the ground at the present time, regardless what has been planned or what zoning regulations exist. The most accurate depiction of what land uses currently exist in North St. Paul

comes from the 2016 existing land use inventory from the Metropolitan Council (and checked by City Staff), which provides current land use types by acreage. MAP 3-1 shows the existing land use in the North St. Paul.

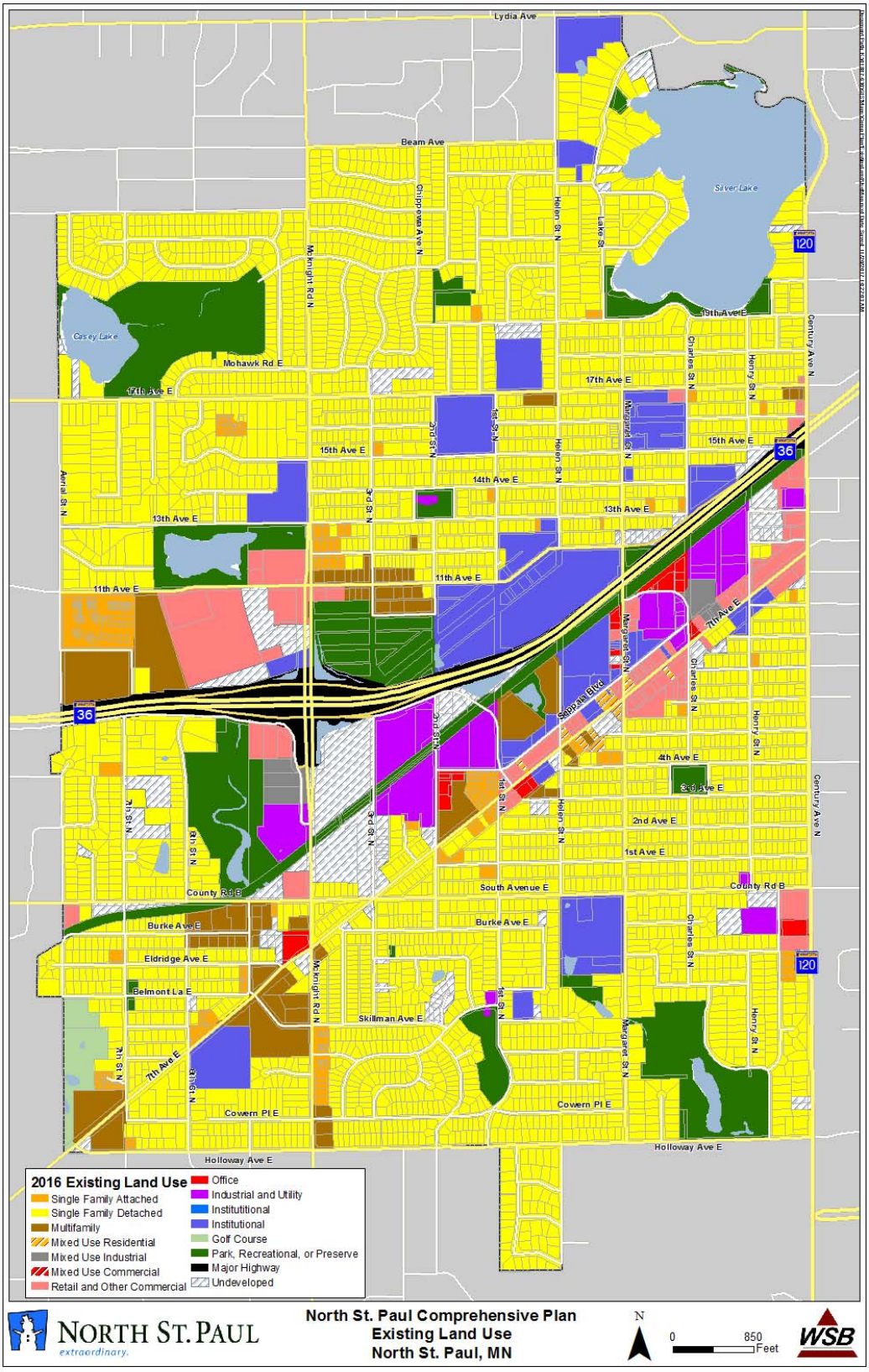
Existing land use types, total acreage and percent of total acreage are shown in the table below. As a fully-developed inner-ring suburb community, very little of the City's land remains undeveloped. As illustrated by the table below as well as MAP 3-1, the predominant land use in the city (by area) is residential detached housing.

FIGURE 3-1 SOURCE: METROPOLITAN COUNCIL

Existing Land Use in North St. Paul
by total acreage and percent of total

Land Use Type	Acres	Percent
Single-family Detached	1,123	58%
Park, Recreational or Preserve	173	7%
Institutional	133	7%
Open Water	95	5%
Retail and other Commercial	71	4%
Industrial and Utility	50	3%
Multifamily	77	4%
Undeveloped Land	83	4%
Major Highway	52	3%
Single-family Attached	39	2%
Mixed Use Industrial	9	0%
Golf Course	10	1%
Office	10	1%
Mixed Use Residential	4	0%
Total	**1,927**	

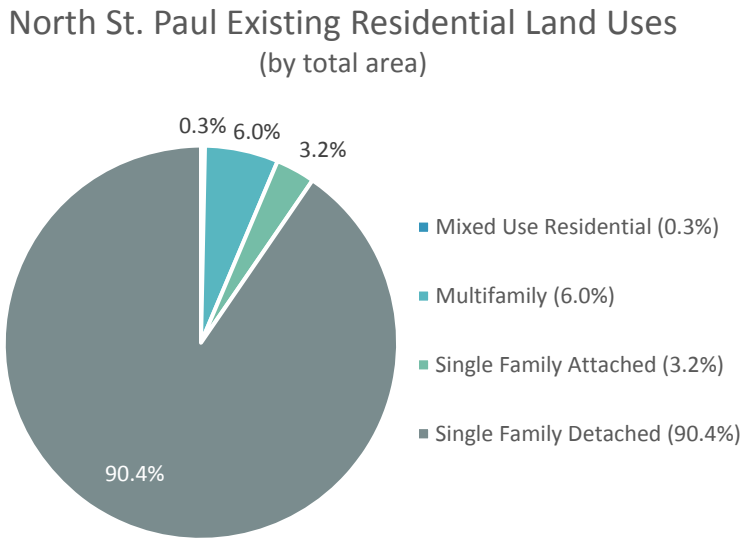
MAP 3-1 EXISTING LAND USE



Existing Residential Land Use

All residential land uses together make up 64 percent of North St. Paul's total land area. Fully 90 percent of this residential land is single-family detached homes,.

FIGURE 3-2. SOURCE: METROPOLITAN COUNCIL



Existing Commercial and Industrial Land Use

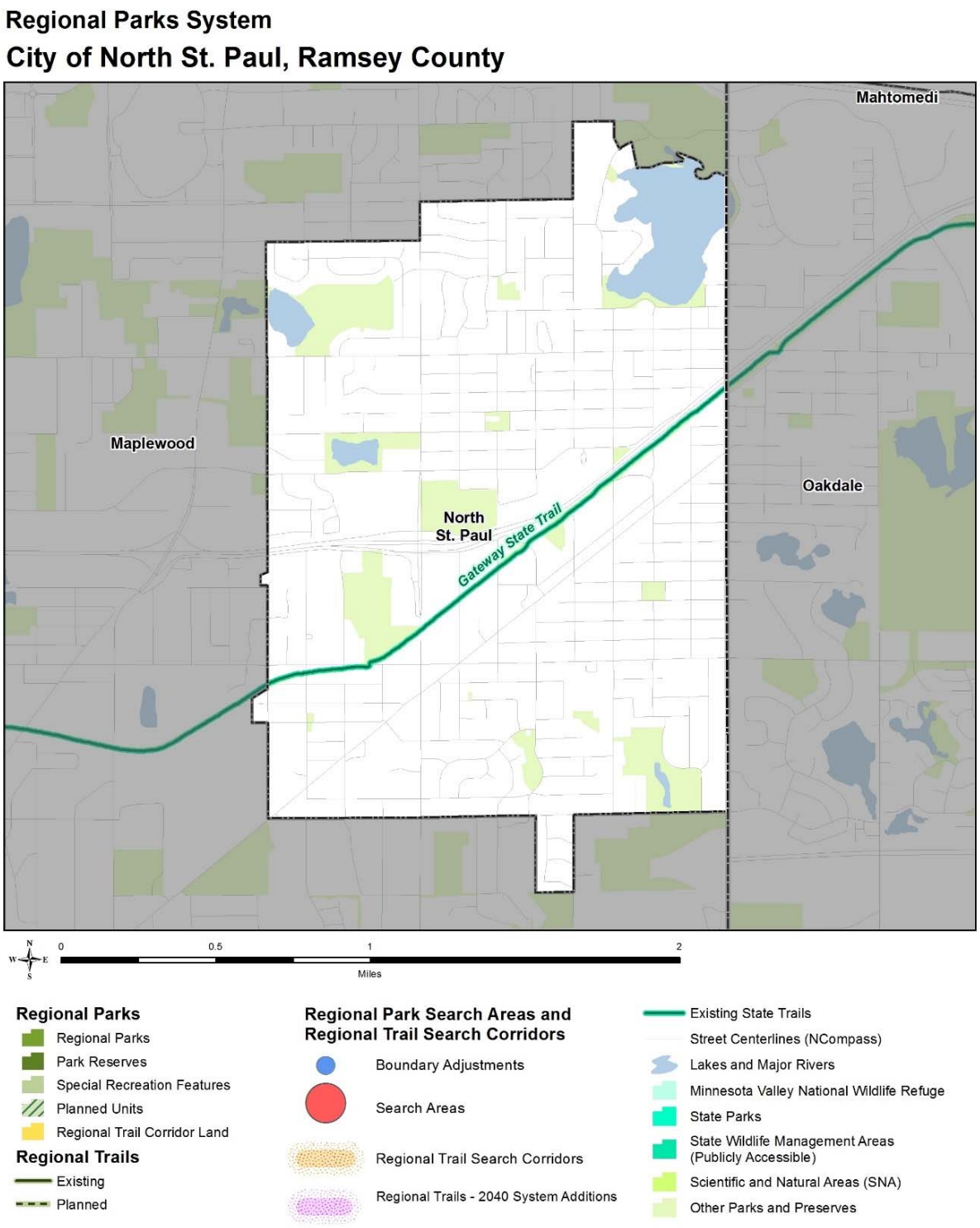
North St. Paul has a variety of commercial and industrial districts, and together they make up nine percent of North St. Paul's land area. Most of North St. Paul's industrial land is in the central and eastern portions of the City. Major commercial centers include:

- McKnight Rd N and MN-36
- 7th Avenue and MN-36
- 7th Avenue between Hwy 120 and McKnight Rd N

Existing Public Land Uses

Seven percent of North St. Paul's land area is made up of institutional land uses. These include civic buildings and City-owned land. An additional ten percent of North St. Paul is devoted to outdoor recreation or sport areas and open spaces that include parks. North St. Paul has a total of 12 parks (including two recreational lakes), three nature preserves and one regional facility (the Gateway State Trail).

MAP 3-2 REGIONAL PARKS SYSTEM

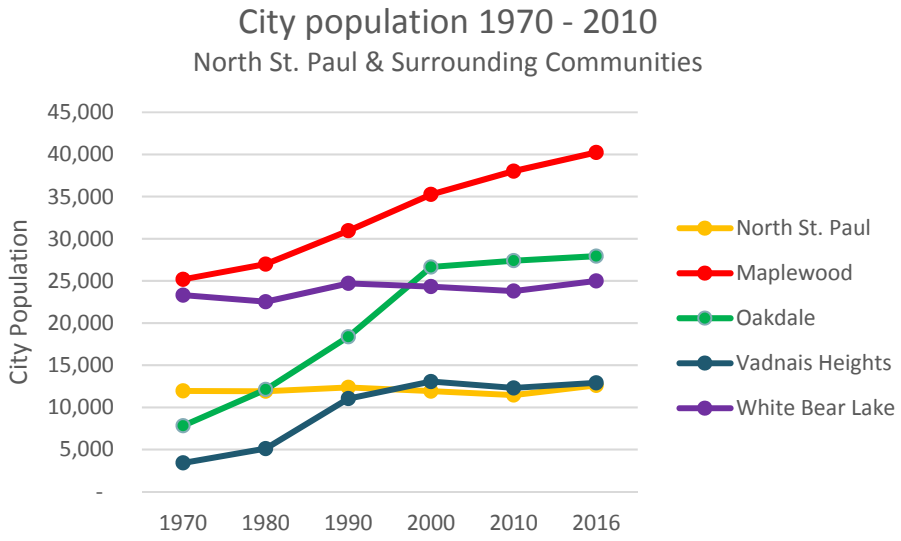


THE PEOPLE WHO LIVE HERE

Population

In 2015, North St. Paul's population was estimated at 11,966 people. The chart below shows Census population data for North St. Paul, indicating that North St. Paul has historically had a smaller population in comparison to most of its surrounding communities (FIGURE 3-3). After experiencing a slight increase in the 1980s, North St. Paul's population has remained fairly stable since 1990.

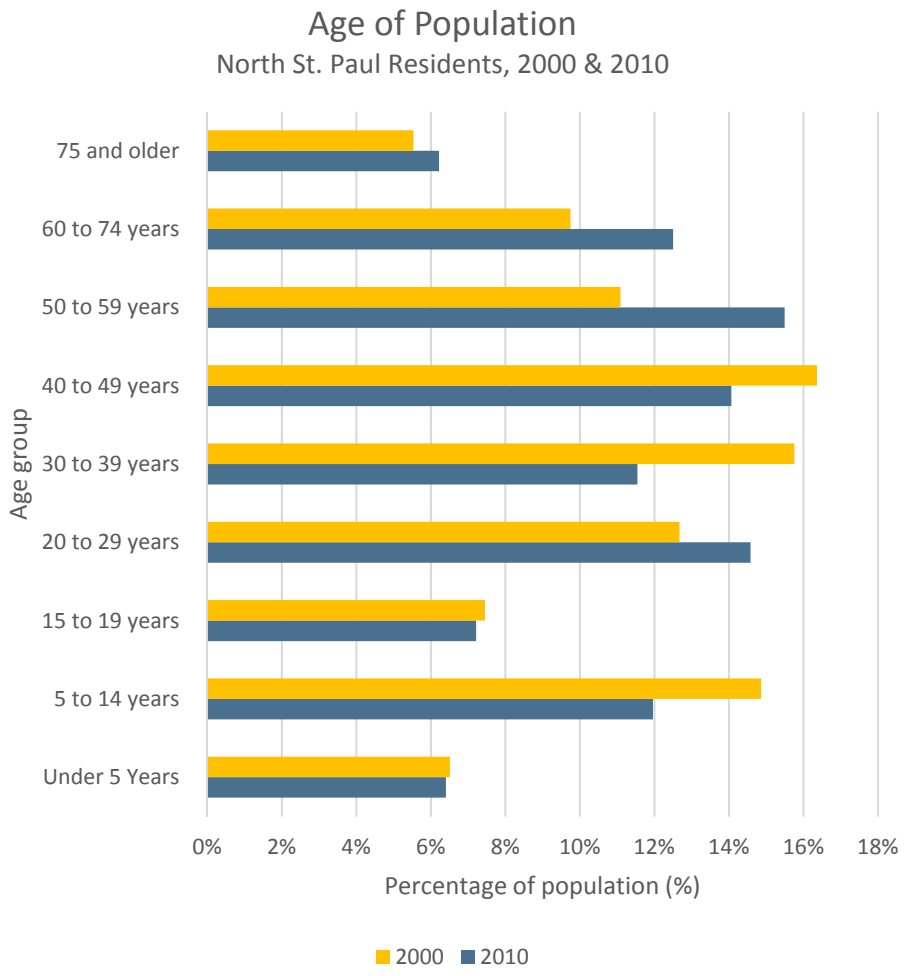
FIGURE 3-3. SOURCE: U.S. CENSUS 2010



Age demographics

Like many other communities around the country and the region, the population in North St. Paul is trending toward more aging adults, and that trend is expected to continue. The percent of the population within the 50-59, 60-74, and 75 and over age cohorts have all increased from 2000 to 2010. Providing adequate housing and services for residents of all ages has been and will continue to be a priority for the City of North St. Paul. As older residents age out of their homes, North St. Paul is seeing an increase in younger residents and families. FIGURE 3-4 below shows an increase in the percentage of residents in the 20 to 29 age group from 2000 to 2010. The median age in the City of North St. Paul in 2010 was about 37, a slight increase from 2000 when the median age was 35.5.

FIGURE 4. SOURCE: 2010 US CENSUS

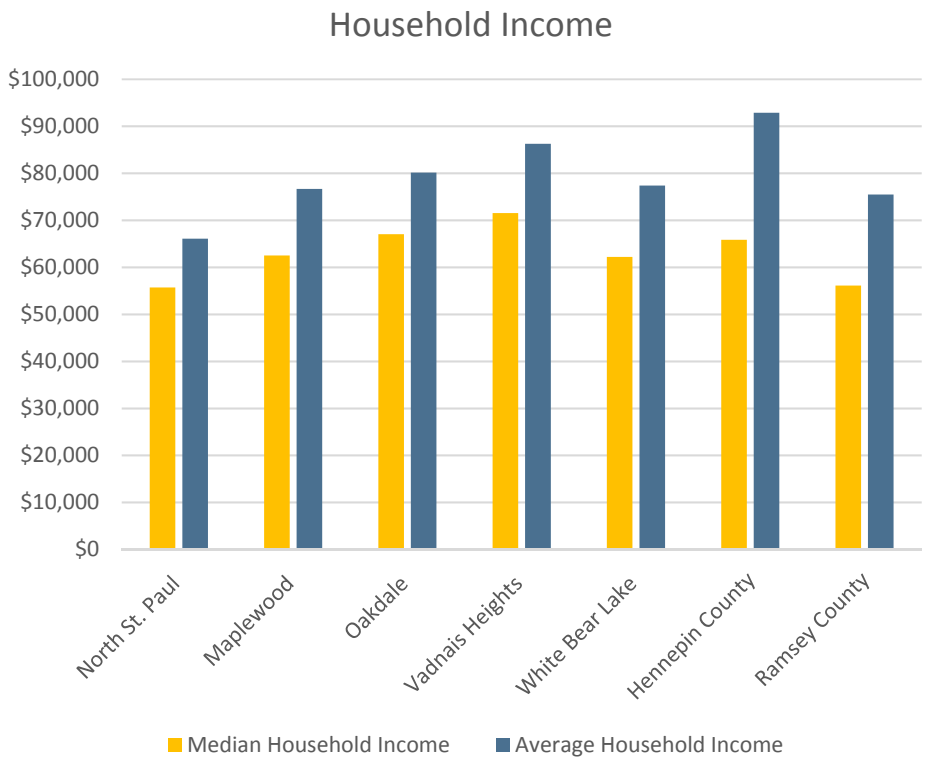


Household Income

The median and average household income in North St. Paul is generally consistent with other nearby communities as shown in FIGURE 3-5 below. Median household income is a relative measure of earnings that can be compared across communities, and represents the income level at which exactly half the households in the community are above and the other half below. Average household income is the total income of all households in the community divided by the number of households; as such, average income is more easily skewed by "income outliers" at either end of the income spectrum. Average household income is higher than median income for all cities shown in FIGURE 3-5, likely due to residents on the upper end of the income range who are earning significantly more than the typical resident. North St. Paul's median income is slightly higher when compared to Ramsey County and somewhat

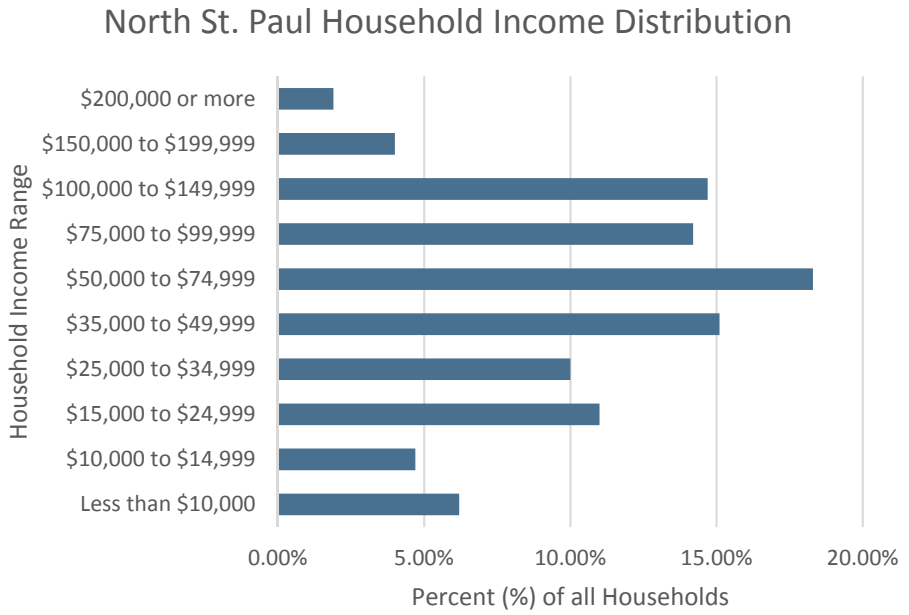
lower when compared with Hennepin County. North St. Paul's average income is lower than its nearby communities and Hennepin and Ramsey County's overall.

FIGURE 3-5. SOURCE: 2015 ACS 5-YEAR ESTIMATES



North St. Paul households have a wide range of annual incomes. The median household income is $55,708. Approximately 50 percent of households make between $50,000 and $150,000. About 39 percent of households make less than $50,000 while 11 percent of households make more than $150,000 (see FIGURE 6).

FIGURE 3-6. SOURCE: 2015 ACS 5-YEAR ESTIMATES



Poverty Rate

The percentage of North St. Paul residents living below the poverty level is 15.2 percent, which is a higher rate than many of its surrounding communities but lower than Ramsey County's overall poverty rate of 16.5 percent. The percentage of North St. Paul residents living below the poverty level has increased from a rate of 14.2 percent in 2012. This statistic will be important to the City in planning for services and an appropriate range of housing and transportation options.

Community	Below poverty (%)
North St. Paul	15.2%
Maplewood	9.6%
Oakdale	6.2%
Vadnais Heights	6.4%
White Bear Lake	7.2%
Hennepin County	12.5%
Ramsey County	16.5%

FIGURE 3-7. SOURCE: 2015 ACS 5-YEAR ESTIMATES

Free & Reduced Lunch

The North St. Paul-Maplewood-Oakdale Independent School District 622 provides free and reduced lunch for students that are below 185 percent of the poverty line. They track how many students are eligible for the program. Cowern Elementary School has the lowest percentage of students who participate in the program, while at Webster Elementary School, almost all students qualify for free and reduced lunch. If all the residents of North St. Paul were measured by the same standard, 81 percent of residents are below 185 percent of the poverty line and would therefore qualify for the free and reduced lunch program.

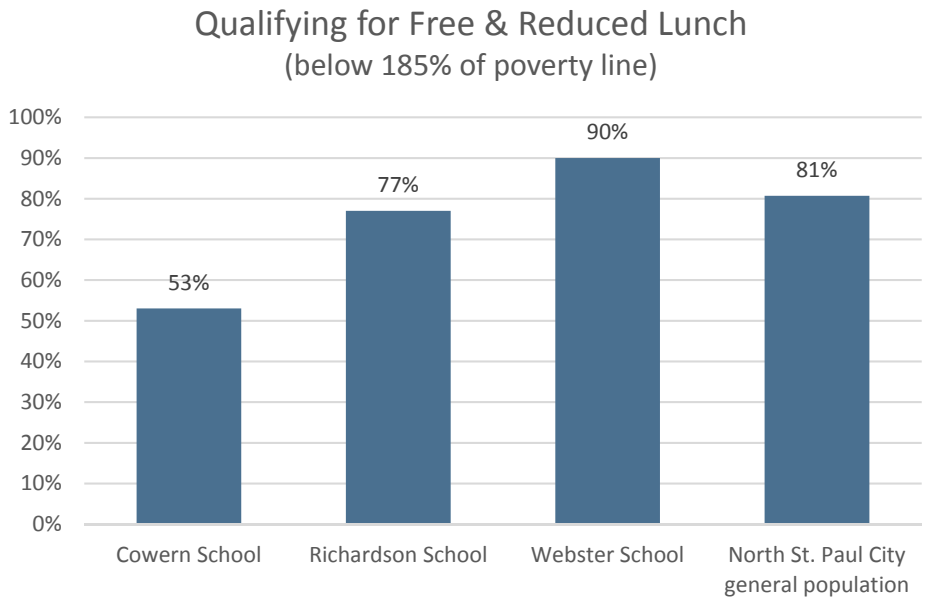


Figure 3-8. Source: School District 622 Data

Education

North St. Paul's population at present has fewer college graduates than in the past. In 2009, the percentage of North St. Paul residents with a bachelor's degree or higher was 32.1 percent. In 2015, that number has decreased to 22.2 percent (FIGURE 3-9). Maintaining a highly-educated workforce is just one component to attracting new employers to North St. Paul.

FIGURE 3-9. SOURCE: 2015 ACS 5-YEAR ESTIMATES

Educational Attainment of Population 25 Years & Older	Percentage
Total:	**8,339**
Less than high school graduate	8.9%
High school graduate (includes equivalency)	34.7%
Some college, no degree	23.5%
Associate's degree	10.6%
Bachelor's degree	16.4%
Graduate or professional degree	5.8%

Race

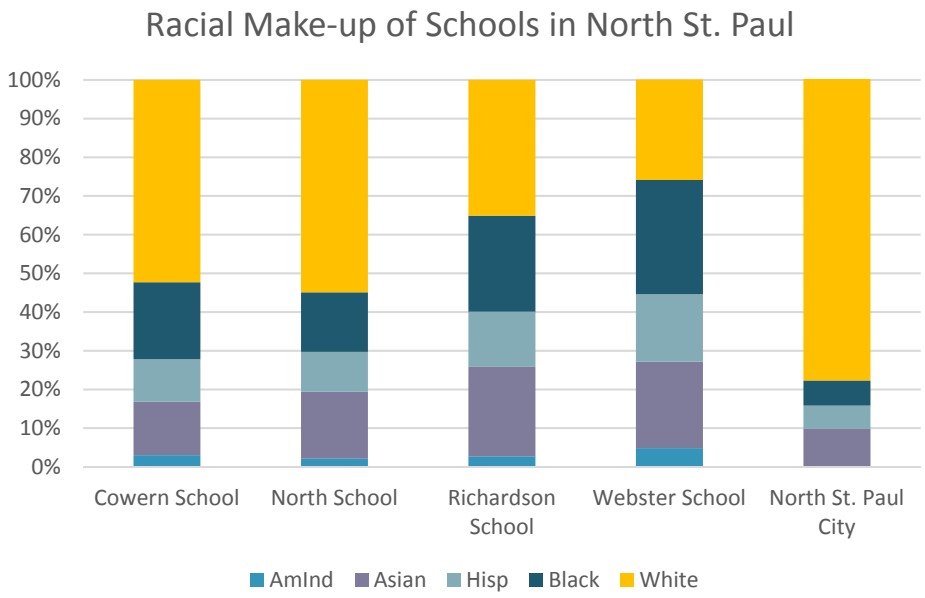
Similar to other nearby communities, North St. Paul is seeing an increase in racial diversity among its residents. From 2010 to 2015, the rate of non-white individuals in North St. Paul increased from 17.7 percent to 20.1 percent. It is anticipated that the number of non-white individuals in North St. Paul will continue to grow as a percentage of the overall population. Asian is the second largest racial ethnicity in North St. Paul after White at 9.9 percent.

FIGURE 3-10. SOURCE: 2010 US CENSUS

Racial Demographics		
	Population	**Percent**
White alone	9,558	79.9%
Black or African American alone	773	6.5%
American-Indian and Alaska Native alone	0	0.0%
Asian alone	1,186	9.9%
Native Hawaiian/Pac. Isl alone	0	0.0%
Some other race	94	0.8%
Two or more races	355	3.0%
	11,966	**100%**

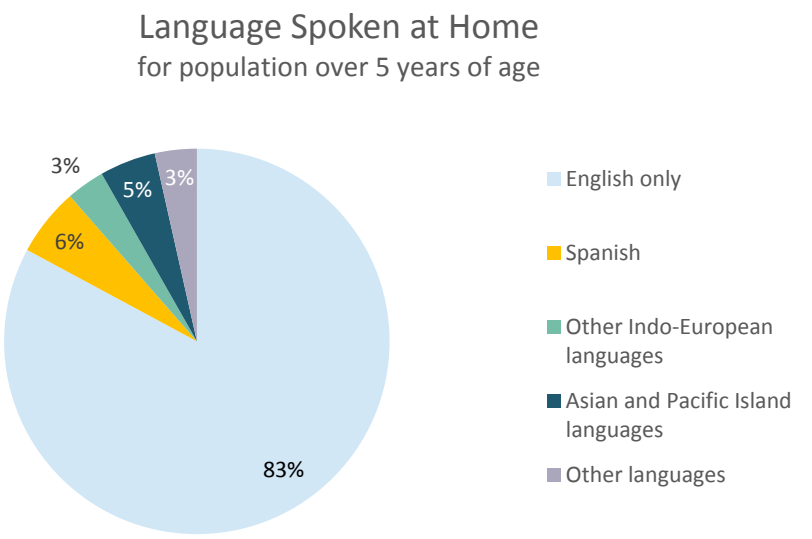
North St. Paul has four schools located within its City limits. They are Cowern Elementary School, North High School, Richardson Elementary School and Webster Elementary School. These schools are part of the North St. Paul-Maplewood-Oakdale Independent School District 622. None of the attendance areas for these schools fall entirely within North St. Paul City limits, but they pull large numbers of students from the City. The racial demographics of these schools is starkly different from the racial demographics of the City. For example, in 2016, North St. Paul was about 22 percent minority, while Webster Elementary School was 74 percent minority. Enrollment at the four schools is between 15 and 30 percent black, while North St. Paul is only seven percent black. North St. Paul's young population is increasingly racially diverse, which may suggest future, larger demographic changes for the City.

FIGURE 3-11. SOURCE: SCHOOL DISTRICT 622 DATA



The proportion of the population who speak a language other than English at home in North St. Paul is shrinking. In the year 2009, 80 percent of residents spoke only English at home; today, that rate is closer to 83 percent..

FIGURE 12: SOURCE: ACS 2011-2015 ESTIMATES



THE HOUSING LANDSCAPE

In 2015 there were approximately 5,009 housing units within the City of North St. Paul, made up of a variety of housing types. Housing is the dominant land use in North St. Paul, making up 64 percent of the area of the City.

Housing Unit Types

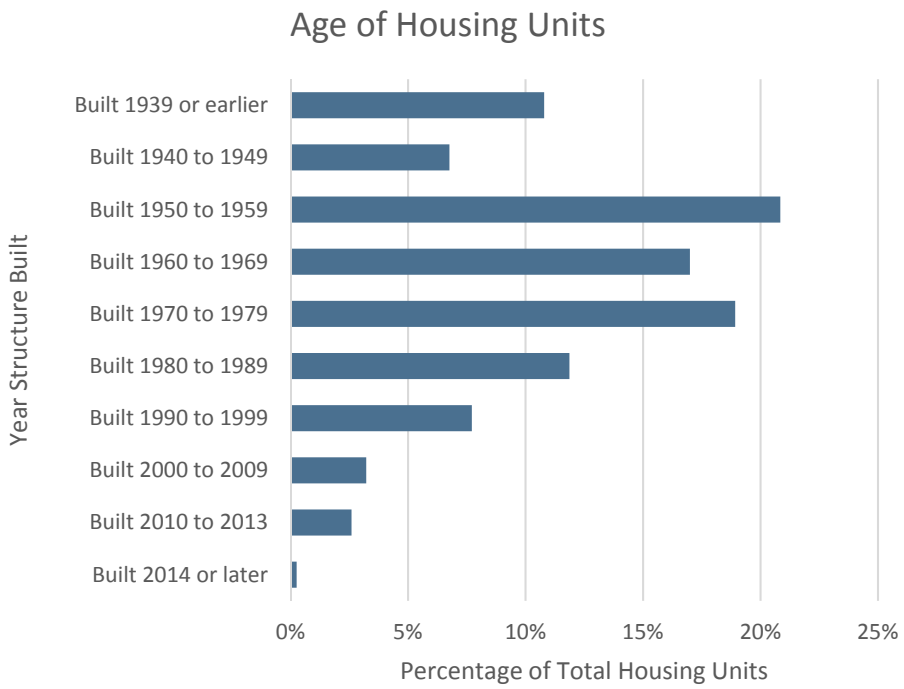
Single-family detached is by far the most dominant type of housing unit within the North St. Paul and requires the most land per household. 90 percent of the residential land area in North St. Paul is for single-family detached homes. As North St. Paul is a fully developed community, it is likely that most new housing units will come through redevelopment at increased housing densities.

FIGURE 13. SOURCE: METROPOLITAN COUNCIL

North St. Paul housing units by housing type		
	Units	**Percent**
Single-Family Detached	3,372	67.3%
Townhomes (single-family attached)	194	3.9%
Manufactured home	0	0.0%
Duplex and triplex and quad	216	4.3%
Multifamily (5 units or more)	1,227	24.5%
	5,009	**100%**

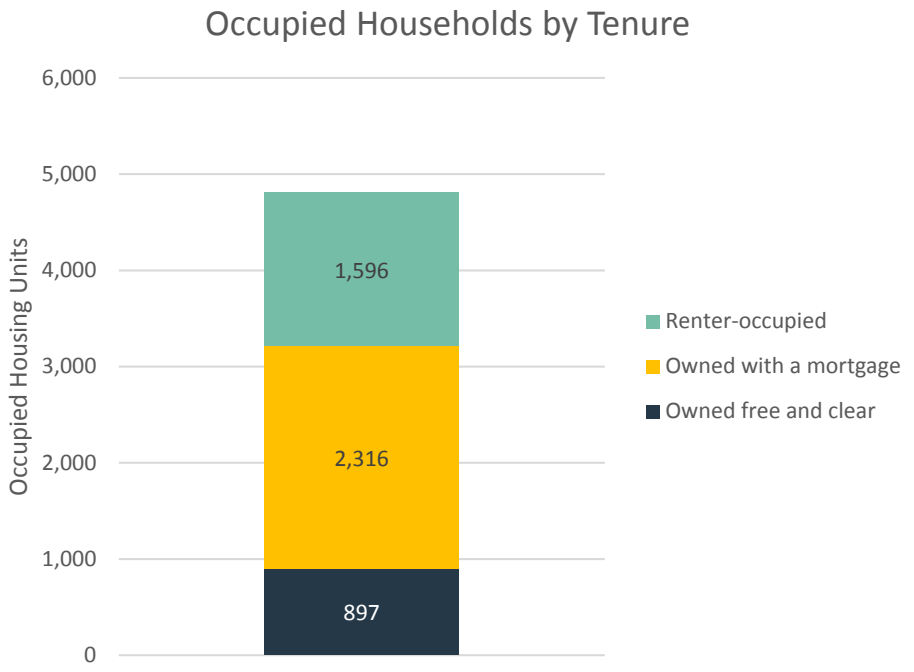
Maintaining a quality housing stock is essential to a healthy North St. Paul. As an inner-ring suburb, North St. Paul's housing stock is aging. Approximately 76 percent of housing units in North St. Paul were built prior to 1980. Since 2013 there have only been ten single-family detached homes built in North St. Paul.

FIGURE 14. SOURCE: 2015 ACS 5-YEAR ESTIMATES, METROPOLITAN COUNCIL RESIDENTIAL BUILDING PERMIT SURVEY



An estimated 33 percent of North St. Paul's housing units are occupied by renters; the remainder is owner-occupied.

FIGURE 15. DATA SOURCE: ACS 2015 ESTIMATES



The Economy

The Metropolitan Council estimates there were nearly 3,000 jobs in North St. Paul in 2016. Average annual wages were $41,412, which falls short of the Ramsey County average annual wage by about $17,000. This may be because the retail, health, and food services industries which are dominant in North St. Paul's job landscape tend to generate lower-wage positions. The Metropolitan Council's employment forecast predicts that North St. Paul will gain around 500 jobs by 2040.

FIGURE 16. SOURCE: QUARTERLY CENSUS OF EMPLOYMENT AND WAGES, MN DEED.

Industry	Employment Total
All Other Industries	1,644
Construction	354
Retail Trade	268
Other Services, Ex. Public Admin	144
Accommodation and Food Services	133
Finance and Insurance	110
Public Administration	107
Administrative and Waste Services	67
Arts, Entertainment, and Recreation	19
Real Estate and Rental and Leasing	11
Total	2,857

PAST AND FUTURE GROWTH

Forecasts for North St. Paul

The Metropolitan Council has developed growth forecasts for North St. Paul by decade, addressing the projected population, number of households and number of jobs.

The total population of the City of North St. Paul is expected to decline by 104 people by the year 2040, a very modest decrease for a City of its size. The population decrease will be balanced by growth in new households, which speaks to a declining household size in the coming decades in North St. Paul. The City may expect a growth of around 600 households and 500 new jobs over the next 25 years. This growth in households is anticipated in the City's development plans. As an inner-ring developed suburb, North St. Paul will accommodate growth and economic development largely through strategic redevelopment opportunities that allow for new or denser configurations of housing within the community.

North St. Paul forecast, 2015-2040 Source: 2010 U.S. Census & Metropolitan Council Forecasts			
Forecast Year	Population	Households	Employment
2015	12,104	4,807	2,857
2020	12,000	5,000	3,200
2030	11,900	5,200	3,350
2040	12,000	5,400	3,500
2015-2040 change	-104	+593	+643

FIGURE 17. SOURCE: METROPOLITAN COUNCIL FORECASTS

Chapter 4

Land Use

CHAPTER 4: LAND USE

One key purpose of a Comprehensive Plan is to incorporate forecasted population growth, housing needs, and development opportunities into land use decisions. The Future Land Use Map is the primary tool to accomplish this. Updating the city's land use plan offers North St. Paul the opportunity to anticipate the physical landscape and development patterns that will best meet the needs of the community. City officials can then make forward-thinking decisions that direct land use in a way that moves the city closer to the goals in Chapter 2.

As an inner-ring suburb community with a unique historic downtown, the land in North St. Paul is largely "built out". However, North St. Paul has a few high priority redevelopment sites that it has, and will continue to, focus on. When opportunities for redevelopment and change arise, the future land use plan offers targeted guidance on the specific redevelopment locations and land uses that will fit with the community's vision.

WHAT WE HEARD

Community Cafes

A series of Community Cafes were held with the purpose of providing city residents an opportunity to gather and provide input into the goals, priorities and policies of the comprehensive plan in a friendly and informal setting. Each café was topic-based, but the discussions were wide-ranging.

With regard to land use, development and redevelopment, common themes emerged which included:

- Improve/revitalize the downtown, including with mixed use development
- More housing in and near downtown, within walking distance of businesses
- Protect the existing industry in the city
- Improve/reinvest in existing multi-family properties (newer, higher quality rentals are needed)
- Townhomes are a missing housing type in the city
- There is a need to locate support services near senior and lower income housing

Citywide Goals

Several of the Citywide Goals established in Chapter 2 relate to the topic of land use, including:

- Enhance neighborhood value with quality housing options and types at all price points.
- Improve the quality and mix of the City's housing so that there is a wide variety of housing available for people of all incomes, ages, cultures and abilities. Consider new forms of housing where redevelopment is necessary.
- Engage in creative placemaking that fosters an environment of economic and employment opportunity so that residents can work, shop and play near their homes.

Existing Land Use

Existing land use information from the Metropolitan Council is shown in TABLE 4-1 and MAP 4-1. North St. Paul's largest land use category is its single-family detached neighborhoods which encompass nearly 60 percent of the land area of the city. Parks and Recreational areas, as well as Institutional lands (which include schools, City properties and churches) together account for approximately 16 percent of the city's land area. A more detailed discussion of the various land use categories follows.

TABLE 4-1: SOURCE: 2016 METROPOLITAN COUNCIL GENERALIZED LAND USE.

Existing Land Use in North St. Paul by total acreage and percent of total		
Land Use Type	**Acres**	**Percent**
Single Family Detached	1,123	58%
Park, Recreational or Preserve	173	9%
Institutional	133	7%
Open Water	95	5%
Undeveloped Land	83	4%
Multifamily	77	4%
Retail and Other Commercial	71	4%
Major Highway	52	3%
Industrial and Utility	50	3%
Single Family Attached	39	2%
Office	10	1%
Golf Course	10	1%
Mixed Use Industrial	9	0%
Mixed Use Residential	4	0%
Total	**1,927**	

Existing Residential Land Use

The primary land use type in North St. Paul is residential. Over two-thirds of the city's land is devoted to the combined residential uses of single family detached, single family attached, and multifamily housing. Attached and multi-family areas tend to be located near major shopping areas at McKnight and Hwy 36 and along major transportation corridors such as 7th and 11th Avenues. and County Road C.

Existing Commercial Land Use

While only encompassing four percent of its area, North St. Paul's retail/commercial areas are distinctive. The historic downtown area is located along Seventh Avenue East and forms the heart of the community. There is also retail development located in the community, including familiar/common chain retail and larger-footprint commercial outlets, along McKnight Avenue between Highway 36 and 11th Avenue East. Existing Industrial and Office Uses

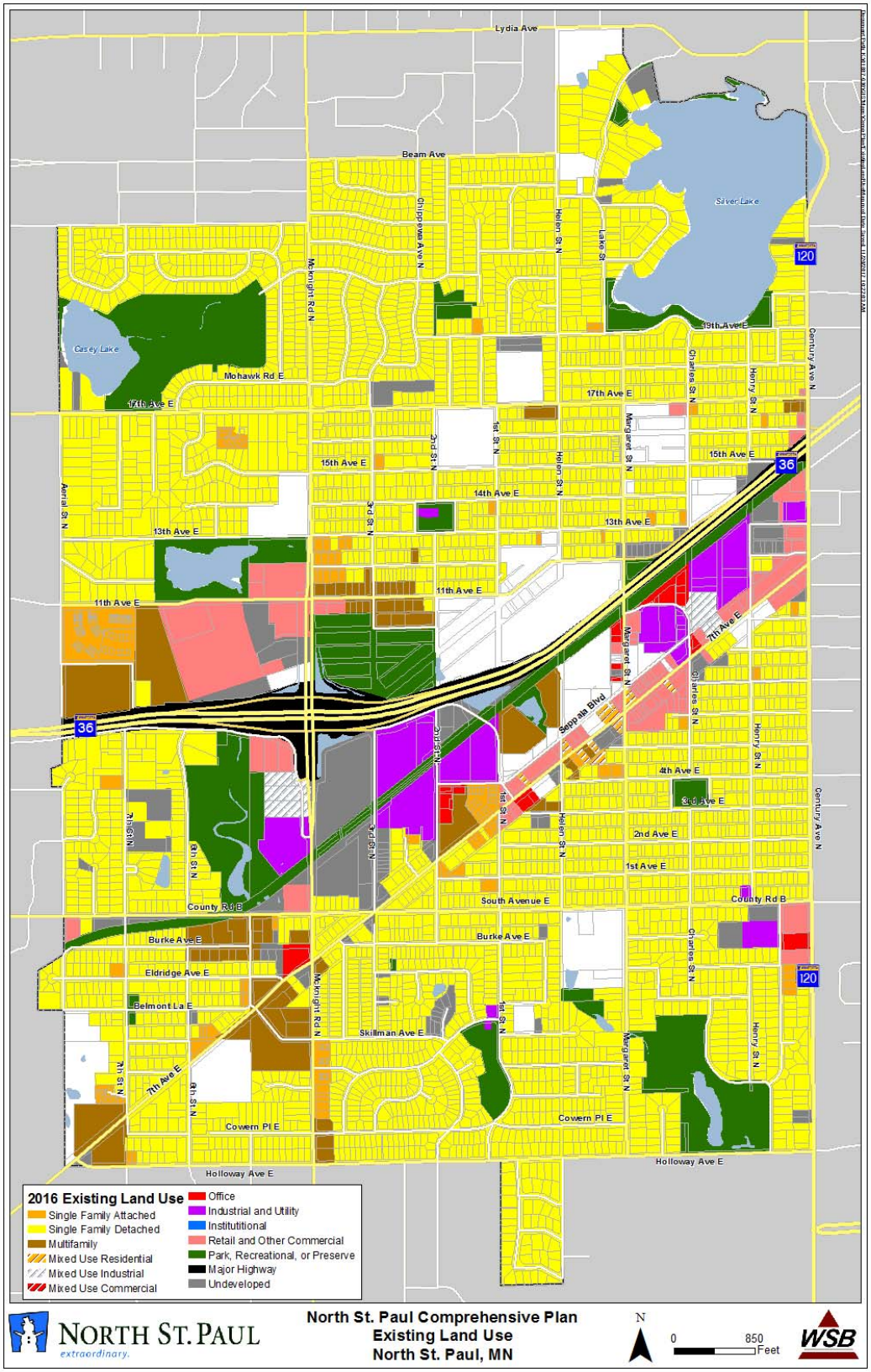
make up approximately four percent of North St. Paul's land area, with the largest industrial user being Schifsky & Sons asphalt plant on North St. Paul Drive and 3rd Street North.

Parks, Open Space and Natural Features

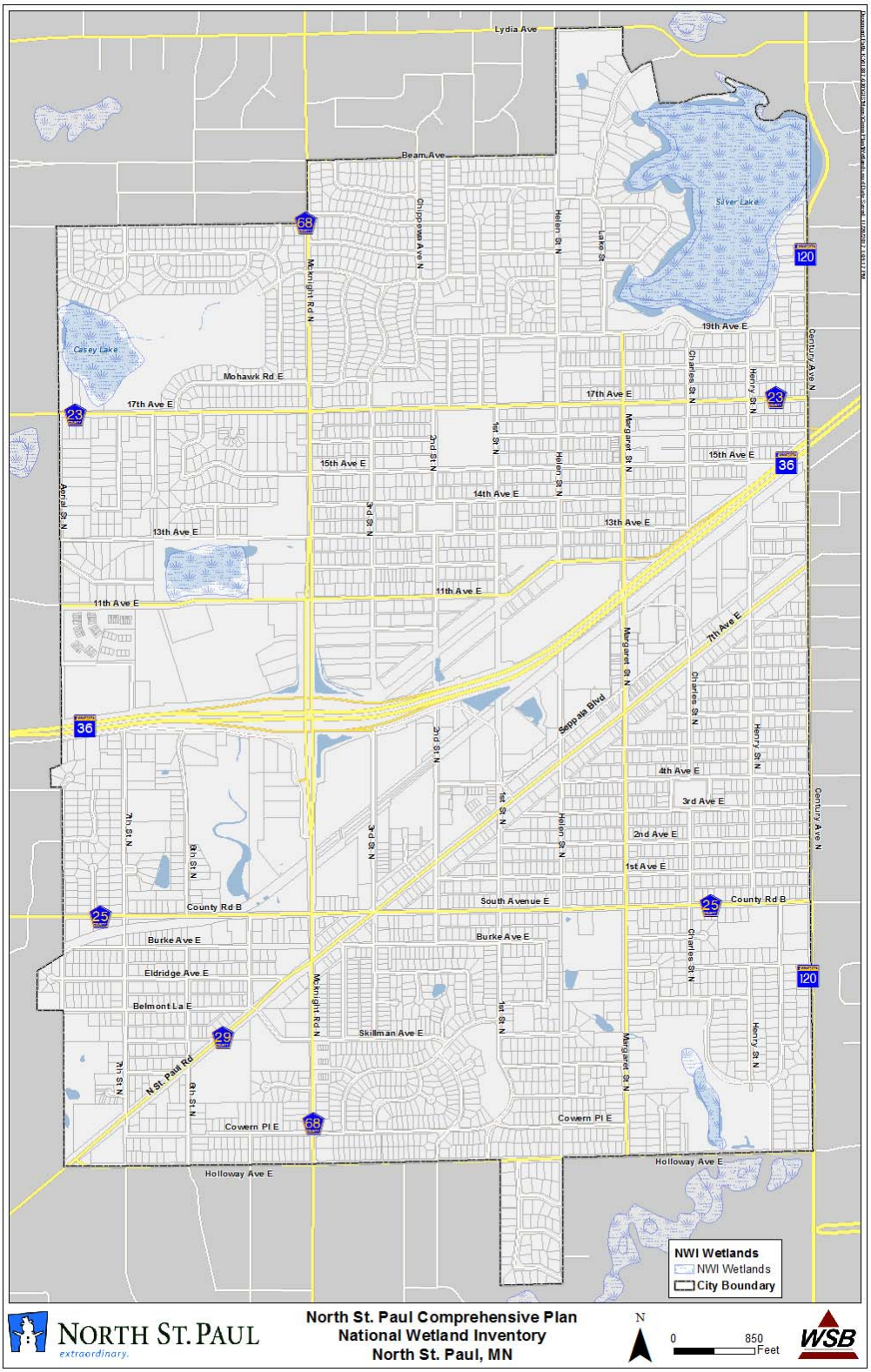
North St. Paul is a built out and largely urbanized community, but retains parks and open spaces that define the community and shape land development. Around ten percent of its land area is devoted to parks, recreational or open space. Some of the largest include Casey Lake Park, McKnight Field and the North St. Paul Urban Ecology Center.

MAP 4-2 shows North St. Paul's wetlands as included in the National Wetland Inventory. These natural features are an important part of the character of North St. Paul and are largely preserved in parks and public land areas.

MAP 4-1: EXISTING LAND USE. SOURCE, CITY OF NORTH ST. PAUL GIS AND METROPOLITAN COUNCIL, 2016.



MAP 4-2: NATURAL FEATURES



Regional Context: Community Designation

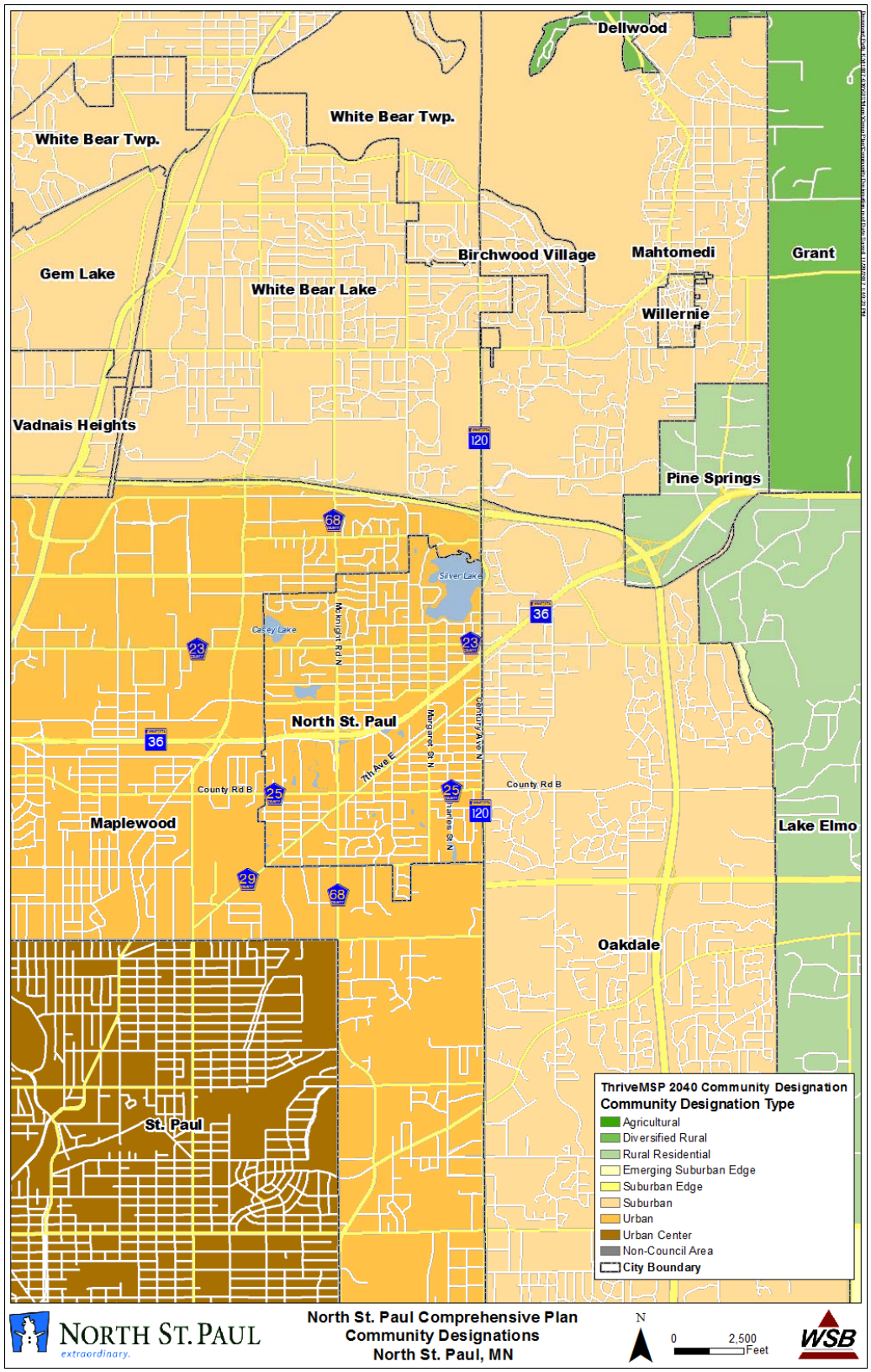
In *ThriveMSP* 2040, the Metropolitan Council groups similar jurisdictions in the metro based on urban or rural character, in order to apply the regional policies and vision outlined in the Plan. As shown in MAP 4-3, North St. Paul's "Urban" designation translates to specific expectations in terms of development density and incorporation of transit services as a transition city between the urban core and more auto-dependent suburban communities.

The Council develops population, housing and employment forecasts as a component of a city's System Statement to help set realistic goals and policies to plan for the future needs and trajectories of the community over the decades to come. The Council's forecasts have been incorporated into this plan update.

Community Designation: The Metropolitan Council identifies North St. Paul as an Urban community. Urban communities experienced rapid development during the post-World War II era, and exhibit the transition toward the development stage dominated by the influence of the automobile.

Urban communities are expected to plan for forecasted population and household growth at average densities of at least ***10 units per acre*** for new development and redevelopment. In addition, Urban communities are expected to target opportunities for more intensive development near regional transit investments at densities and in a manner articulated in the *2040 Transportation Policy Plan*.

MAP 4-3: METROPOLITAN COUNCIL COMMUNITY DESIGNATION



LAND USE: WHAT WILL BE HERE IN THE FUTURE?

Expected Growth and Change

Future land use planning begins with incorporating forecasts of community growth, and anticipating the needs that will arise as a result of this growth and change over the coming decades. The Metropolitan Council has developed growth forecasts for North St. Paul by decade out to the year 2040, addressing the projected population, number of households, and number of jobs (see TABLE 4-2). Meeting expected growth projections requires intentional land use planning.

TABLE 4-2: NORTH ST. PAUL FORECAST, 2010-2040. SOURCE: 2010 U.S. CENSUS & METROPOLITAN COUNCIL ESTIMATES AND FORECASTS.

Forecast Year	Population	Households	Persons Per Household	Employment
2010	11,460	4,615	2.48	2,942
2016 (estimate)	**12,069**	**4,809**	**2.51**	**--**
2020	12,000	5,000	2.4	3,200
2030	11,900	5,200	2.29	3,350
2040	12,000	5,400	2.22	3,500
Overall Change from 2016	**-69**	**+591**	**-0.29**	**+558**[1]

These forecasts show that the population is projected to decrease slightly in North St. Paul during the planning horizon, while the number of households is expected to increase by approximately 12 percent. This corresponds with a decrease in household size from 2.51 persons per household in 2016 to 2.22 persons per household in 2040, which is a decline of 11.5 percent, mirroring a regional trend that reflects a population more likely to live in smaller households.

[1] Change from 2010 Census

Planning for growth in a Developed Community

As a nearly built-out community, planning for new housing in North St. Paul necessitates looking for redevelopment opportunity areas and mixed use development opportunities. High priority development and redevelopment sites in North St. Paul were identified by several means:

- The City's Redevelopment Master Plan, adopted in 2012 (included as Appendix XX of this Plan).
- Feedback from the public at the Community Cafes
- Discussions with city staff and Planning Commission to identify underutilized parcels.

MAP 4-4 shows the Future Land Use Plan for the City of North St. Paul, including lands that the city feels are likely to develop or redevelop before 2040. Those consensus areas include the following high priority redevelopment areas: the Anchor Block Site, the Commerce Park Site, several other vacant or underutilized parcels in or near the downtown area.

Land Use Categories

The development of North St. Paul's 2040 land use plan involves updating the land use descriptions and density ranges of each land use category. There are significant changes in land use categories from the 2030 land use plan, due to a complete zoning rewrite that occurred in 2015. The 2040 future land use plan districts were rewritten to reflect the new zoning districts, as well as new density ranges to conform to the City's designation in *ThriveMSP 2040* as an Urban Community. A summary of those changes include:

- Medium-Density Residential. The 2040 Land Use plan includes an increase in the maximum density for this land use category from 7.3 units per acre to 12 units per acre. This is consistent with the current zoning ordinance and the intent to allow townhouse development.
- Multi-Family Residential. An increase in minimum density for multi-family development is made in the 2040 Land Use Plan, from 7.4 to 12 units per acre. This density is consistent with the intent of the multi-family district to allow for apartment buildings, condominiums and other multi-story structures.
- Downtown Mixed Use. Clarifications on the intent of this district are made in the 2040 plan, including tying the district to the historic

character of the area. The district also sets density expectations for residential development.

- Transitional Mixed Use. This is a new land use district , and replaces the General Retail district. This district allows (but does not require) a mixture of uses including high density residential, consistent with the zoning districts adopted in 2015.
- Corridor Mixed Use. This district is also new for the 2040 Future Land Use Plan, replacing the larger Diversified District from the 2030 Plan. The Corridor Mixed Use District is more focused outside of the downtown area and provides for more flexibility in the redevelopment (or intensification) of existing commercial centers and the development of vacant sites. This district includes a minimum 30 percent residential requirement.

A summary of the land use categories and changes to density ranges are shown on the next page in TABLE 4-3. The table includes the former districts from the 2030 Plan and their corresponding density ranges (if residential) on the lefthand side, followed by new 2040 Plan classifications, definitions and density ranges on the righthand side.

TABLE 4-3: FUTURE LAND USE CATEGORY SUMMARY AND COMPARISON.

2030 Land Use Category	2030 Plan Density Range		2040 Land Use Category	2040 Plan Density Range	
	Min	Max		Min	Max
Residential Low: Single-family detached uses, duplexes and townhomes left as the result of older infill housing.	3	5.5	**Low Density Residential:** Single-family detached uses, duplexes and townhomes left as the result of older infill housing.	3	5.5
Residential Medium: A mix of single-family dwellings and townhouses.	5.6	7.3	**Medium Density Residential:** Townhomes and other small-scale attached residential structures	5.6	12
Residential High: Apartments or condominiums in multi-story buildings.	7.4	22	**Multi-Family Residential**	12	22
Downtown Commercial: Central business district, some mixed use, residential on upper floor			**Downtown Mixed Use:** Established to reflect and enhance the small-town and pedestrian friendly atmosphere while encouraging development and redevelopment consistent with the historic character. Encourage both vertical and horizontal mixed use. High density residential is appropriate.	12	22
General Retail: For locations outside of the downtown where retail uses are to be allowed.			**Transitional Mixed Use:** Established to sustain and enhance the viability of commercial nodes that serve the needs of residents in adjacent neighborhoods while encouraging development and redevelopment consistent with the character and scale of those areas.	12	22
Diversified District: allows for coordinated and harmonious development of functionally related uses including high density residential (up to 36 units per acre), office, commercial, entertainment – recreation, quality industrial, and public facilities. The standards will ensure quality design, superior aesthetics, protection of the uses by minimizing adverse effects, adequate provisions for open space, and suitable transportation (including transit, transit stops, pedestrian-ways and trails with links to downtown).	12	36	**Corridor Mixed Use:** Established to encourage the development or redevelopment of mixed-use centers that combine retail development with a variety of housing, offices, live-work spaces, employment activities, and other complementary uses. This district will develop with a minimum of 30% residential component throughout the district.	12	40
Parks			Parks		

Future Land Use Guide Plan

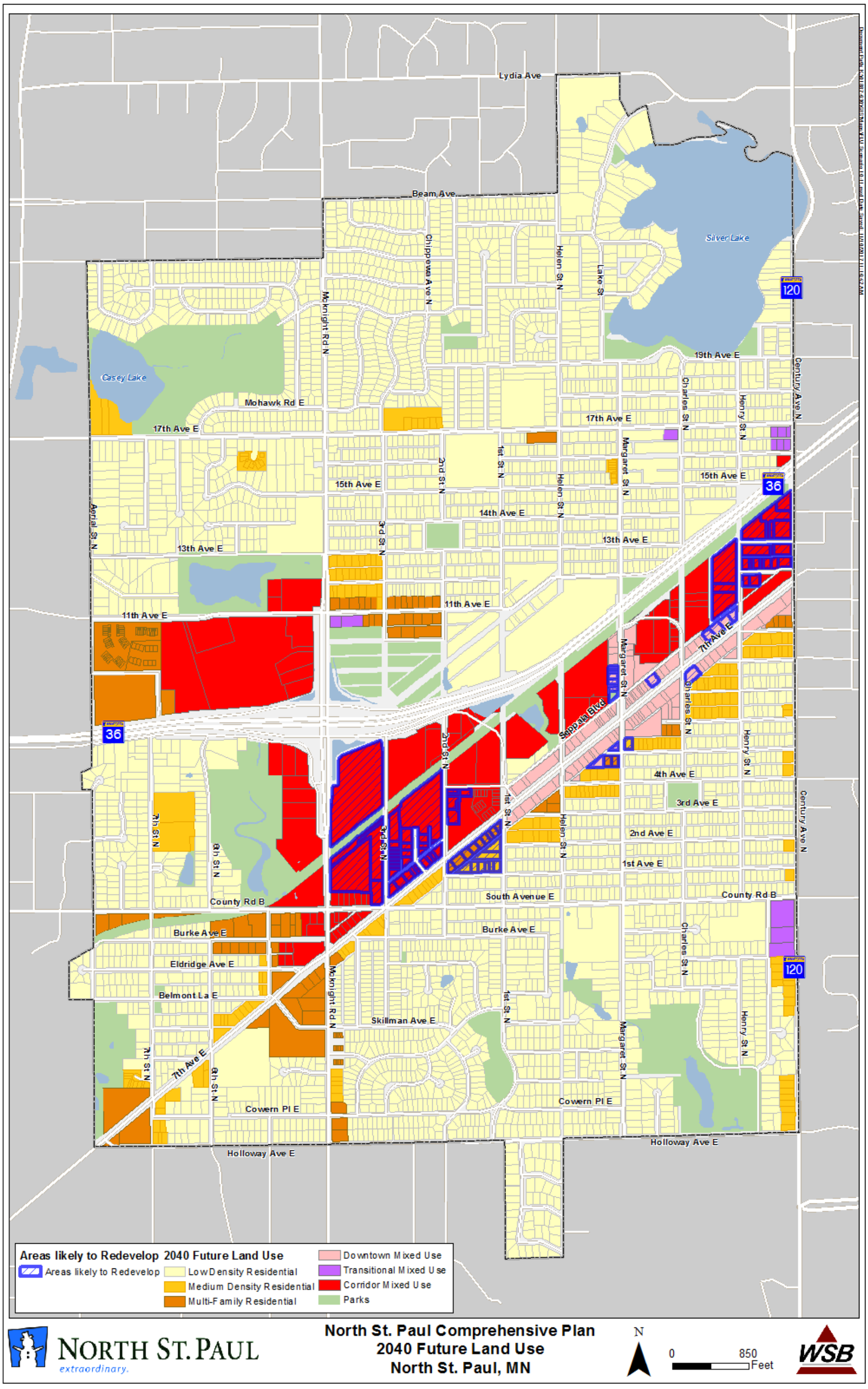
The future land use plan presented in MAP 4-4 includes the future land use districts and areas likely to develop or redevelop as discussed in previous sections of this chapter.

Table 4-4 Future Land Use Planned Areas by Land Use Category

2040 Land Use Category	Total Acres	Percent of total land area (%)
Low-Density Residential	901	56.2
Medium-Density Residential	62	3.8
Multi-Family Residential	61	3.8
Downtown Mixed Use	28	1.8
Transitional Mixed Use	7	0.4
Corridor Mixed Use	362	22.6
Parks	183	11.4
Total	**1,604**[2]	100%

[2] Acreage discrepancy between this total and existing land use is due to road right of way and open water categories not included in future land use

MAP 4-4 2040 FUTURE LAND USE PLAN WITH LIKELY REDEVELOPMENT AREAS



Meeting Growth Expectations

As stated earlier, North St. Paul's "Areas Likely to Redevelop," are identified as opportunity areas for development, redevelopment, re-use, intensification, infill or improvement within the 2040 planning horizon. Those areas are shown outlined in blue cross-hatch on MAP 4-4 and are critical to understanding how the City can expect to meet its growth expectations for the coming decades.

North St. Paul's Areas Likely to Redevelop fall into three categories:

- Vacant land: A few key sites in North St. Paul are vacant and have been prioritized for redevelopment. Those include the Anchor Block and Commerce Park sites, along with others in the Corridor Mixed Use area.
- Under-utilized sites: Some sites were identified as "under-utilized', meaning that they have an excessive amount of parking that could be used for other uses, or there are vacant *portions* of a site that could be built out.
- Areas with redevelopment potential: These areas were highlighted by participants in public engagement efforts as needing attention, revitalization, change, or intensification of uses.

Overall, the growth expectations for North St. Paul through the year 2040 can be largely met through the identified redevelopment areas in MAP 4-4. TABLE 4-5 shows the residential acreage associated with the parcels included in the redevelopment areas, as well as the land use density ranges associated with each of these residential categories. Applying the expected density ranges to the land use areas, this table demonstrates the two ways in which the likely redevelopment areas will meet North St. Paul's forecasted 2040 growth:

- Overall Average Density: Applying the *minimum* end of the density range to each residential land use category, the overall density is the total number of expected minimum units divided by the total number of acres in the likely redevelopment areas. North St. Paul's overall average density is just over 11 units per acre, which meets the expected average of ten units per acre for a community with an Urban designation.
- Overall Forecasted Growth: Applying the *midpoint* of the density range to each residential land use category, the total number of expected units from this calculation is 440 which is 151 units short of the 591 units forecasted by the Metropolitan Council from 2016 to 2040.

North St. Paul has gone to great lengths to program all available land for development and redevelopment at the highest densities available in the City. The following changes have been made since the 2030 Comprehensive Plan to accommodate additional housing units in the City:

- Increased minimum density for high density residential and all mixed use districts to twelve units per acre
- Made residential development mandatory at a 30% level in the Corridor Mixed Use district[3]
- Increased the maximum residential density in the medium density residential district to accommodate higher density townhomes
- Increased the maximum density in the Corridor Mixed use district to 40 units per acre
- Added multi-family residential areas along 7th Avenue and along the south side of the downtown
- Added medium density residential areas between the downtown and single family neighborhoods
- Changed some parcels along Century Avenue to medium density residential that were larger in size to allow duplex or quad-plex units
- Identified some housing redevelopment areas within single family neighborhoods at medium density residential.

Adding the additional redevelopable sites that are programmed for medium density residential to the "likely to redevelop" category (which would increase housing production) reduces the city's overall average redevelopment density below ten units per acre.

[3] Note that a "30 percent" residential assumption is applied to the Corridor Mixed Use district as that is the amount of residential required in that district, reducing both the guided land area and the potential residential units by 30% in that category (this is reflected in Table 4-5).

TABLE 4-5: RESIDENTIAL GROWTH POTENTIAL BASED ON FUTURE LAND USE DESIGNATIONS AND REDEVELOPMENT AREAS.

Land Use Type		Dev. Acres	Density Range			Yield %	Minimum Units	Midpoint Units
			Min	Mid	Max			
2040 Future Land Use Plan	Low Density Residential	0.00	3	4.25	5.5	100%	0	0
	Medium Density Residential	6.15	5.6	8.8	12	100%	34	54
	Multi-Family Residential	2.46	12	17	22	100%	29	42
	Downtown Mixed Use	4.95	12	17	22	0%	0	0
	Transitional Mixed Use	0.00	12	17	22	0%	0	0
	Corridor Mixed Use	44.08	12	26	40	30%	159	344
	Guided Total	**21.83**					**223**	**440**
	Overall Average Density	**10.20**						

Looking once again at the likely redevelopment areas identified in the 2040 guide plan, the following table summarizes the commercial and industrial redevelopment acreage in the city and translates this acreage into employment potential. In total, redevelopment of the identified mixed use opportunity areas could yield up to 747 new jobs in North St. Paul by the year 2040. This exceeds the number forecasted by the Metropolitan Council by 189 jobs.

TABLE 4-6 EMPLOYMENT GROWTH POTENTIAL BASED ON FUTURE LAND USE DESIGNATIONS AND REDEVELOPMENT AREAS.

Future Land Use	Acres	Yield	F.A.R.	New Sq. Footage	Area Per Employee	Employee Yield
Downtown Mixed Use[4]	4.95	70%	20%	30,187	400	75
Corridor Mixed Use	44.1	70%	20%	268,939	400	672
Total						**747**

[4] We have assumed for employment purposes that only 70% of the available development in the downtown mixed use area would be commercial, even though residential is not required here.

Staging of Redevelopment out to 2040

As shown in table 4-2, North St. Paul has already achieved its 2040 forecasted population growth, according to 2016 estimates published by the Metropolitan Council. However, there are still areas that the City has identified for revitalization and redevelopment based on community input and the Redevelopment Master Plan. These areas may not redevelop by completely removing everything that is currently on the site, but these are sites where the city believes additional development and/or reuse of existing structures is appropriate.

The staging of that development is difficult to predict, but the City has set priorities for targeting redevelopment based on the Redevelopment Master Plan and input from community leaders. Those priorities are in TABLE 4-7 and MAP 4-5.

TABLE 4-7 shows that enough development is anticipated to occur between 2020 and 2030 (77 units) to accommodate North St. Paul's affordable housing allocation of 49 units.

MAP 4-5 REDEVELOPMENT STAGING

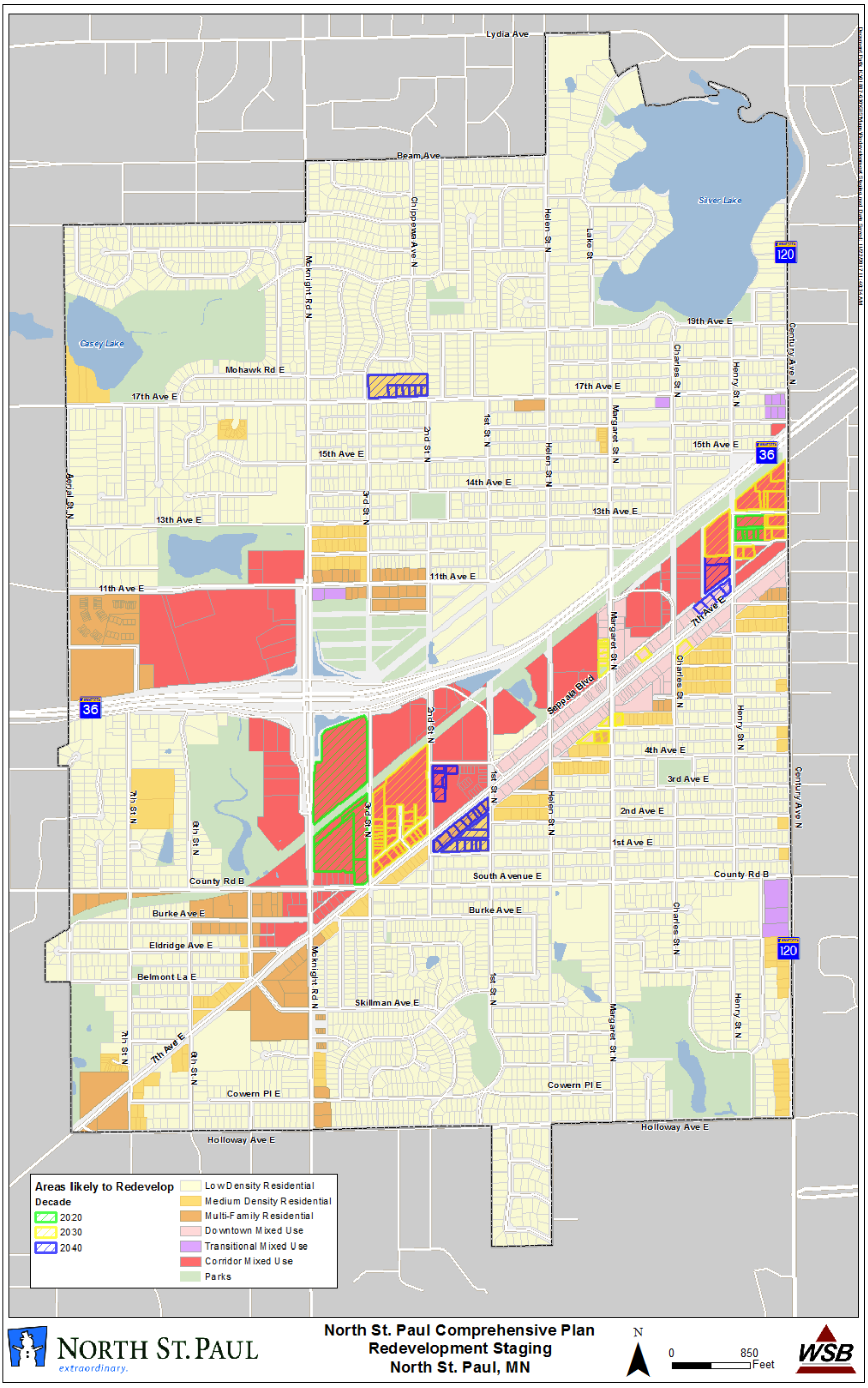


TABLE 4-7 REDEVELOPMENT STAGING TABLE

	Land Use Type	Dev. Acres	Present-2020	2020-2030	2030-2040	Density Range Min	Density Range Mid	Density Range Max	Yield %	Minimum Units	Minimum Units 2020	Minimum Units 2030	Minimum Units 2040	Midpoint Units	Midpoint Units 2020	Midpoint Units 2030	Midpoint Units 2040
2040 Future Land Use Plan	Low Density Residential	0.00				3	4.25	5.5	100%	0	0	0	0	0	0	0	0
	Medium Density Residential	6.15		0.24	5.91	5.6	8.8	12	100%	34	0	1	33	54	0	2	52
	Multi-Family Residential	2.46		0.46	1.99	12	17	22	100%	29	0	6	24	42	0	8	34
	Downtown Mixed Use	4.95		1.85	3.10	12	17	22	0%	0	0	0	0	0	0	0	0
	Transitional Mixed Use	0.00				12	17	22	0%	0	0	0	0	0	0	0	0
	Corridor Mixed Use	44.08	21.05	19.77	3.27	12	26	40	30%	159	76	71	12	344	164	154	25
	Guided Total	**21.83**	**21.05**	**22.32**	**14.27**					**223**	**76**	**78**	**69**	**440**	**164**	**164**	**111**
	Overall Average Density	**10.20**															

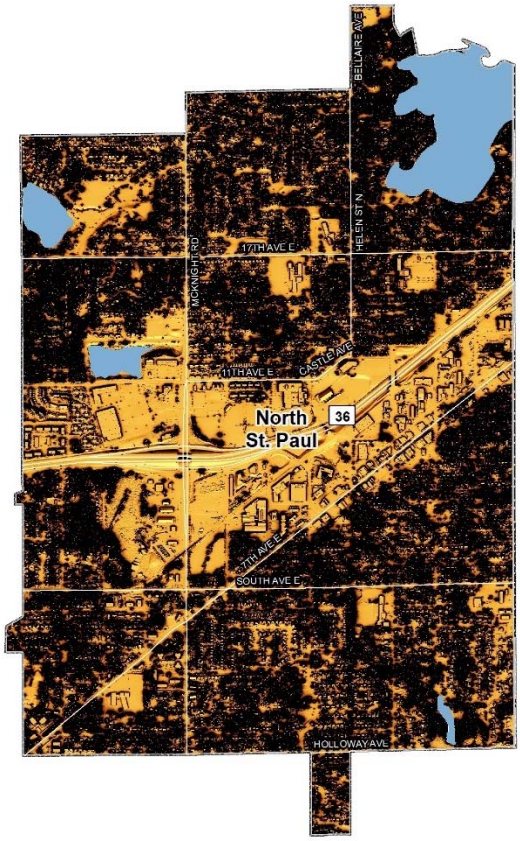
Protection of Historic Sites

North St. Paul is committed to protecting the historical and cultural resources of the City's natural and structural heritage. The City will continue its policies of assisting in efforts to preserve historical sites and buildings, and utilizing State, County and private historic preservation resources to preserve and/or restore historic building sites.

The City's Design Review Commission (DRC) also works actively to preserve the historic heritage of the City. The DRC reviews all work on structures within the Downtown Mixed Use district, prepares updates to the Downtown Design Manual, and advises the City Council on matters related to historic preservation.

Solar Access Protection

Solar energy resource protection is an increasingly important aspect of long-range planning, as communities prepare for incorporation of alternative and efficient energy technologies. The map below shows North St. Paul's gross solar energy potential, with high potential areas shown in brighter yellow.



The central parts of the city along Highway 36 and McKnight Road, with their largely developed industrial, and commercial areas, have the best solar potential as they contain fewer trees and larger areas of uninterrupted solar access. The current gross solar energy generation potential can be measured at 3,359,717 megawatt hours per year. Rooftop solar potential generation alone is 476,945 megawatt hours per year. Rooftop solar systems are the most likely and practical source of solar energy production in North St. Paul. Solar energy will be discussed in more detail in the Resiliency chapter of this Plan.

Land Use Plan Implementation Strategies

The main implementation strategy for future land use planning is to update the City's official controls to reflect the uses and density ranges in the Plan. In addition to these updates, the City commits to the following strategies to implement the goals of this chapter as well as facilitate development and redevelopment that corresponds to the Future Land Use Plan. More detail on priorities and timelines are discussed in the Implementation chapter of this Plan:

- Residential Development:
    - Provide for a variety of housing types and densities to support a wide range of housing alternatives for current and future residents, including young families.
    - Develop programs and policies to encourage the redevelopment and renovation of the housing stock in a way that maintains or enhances the integrity of existing neighborhoods.
    - Review and update the City's zoning code to reflect consistency with this Land Use Plan. Evaluate the zoning code language to ensure that the dimensional standards and zoning district regulations provide the opportunity for development to occur as guided.
    - Recognize the most likely opportunity sites for high density residential development and support projects on these sites that are well-designed, add value to the community landscape, and are located in areas connected to transitways and other community amenities.

- Commercial and Mixed Use Development

  - Review the allowed uses and standards within the city's Mixed Use zoning districts to ensure that these zoning districts provide opportunities for the desired type, design, and diversity of development opportunities reflected in this Plan.
  - Create design standards for both vertical and horizontal mixed use developments, so that not only are uses compatible, but the scale, mass, and feel of new development enhance both the existing and desired character of the City.
  - Continue to use economic development incentives to achieve redevelopment goals (refer to the Economic Development Chapter for more information).

- Parks and Open Space and Natural Resources:
  - Continue to provide the resources and programming to maintain the city's parks and green space areas in recognition of their value as cherished community amenities.
  - Continue to develop and update park master plans, and allocate resources to implementing those plans (refer to the Parks, Trails and Open Space Chapter for more information).

- Gathering Spaces and Community Feel: Prioritize the incorporation of communal amenities and gathering spaces into new development opportunities as they arise, to create public spaces for community building, particularly within the downtown area.

- Connections: Prioritize the incorporation of linkages and connections for all modes of transportation into redevelopment projects. More seamlessly connect areas of intense land uses (such as commercial and employment centers) to amenities and surrounding residential areas. Improve access between redevelopment areas, parks and recreation areas, neighborhoods and downtown business destinations.

Chapter 5

Housing

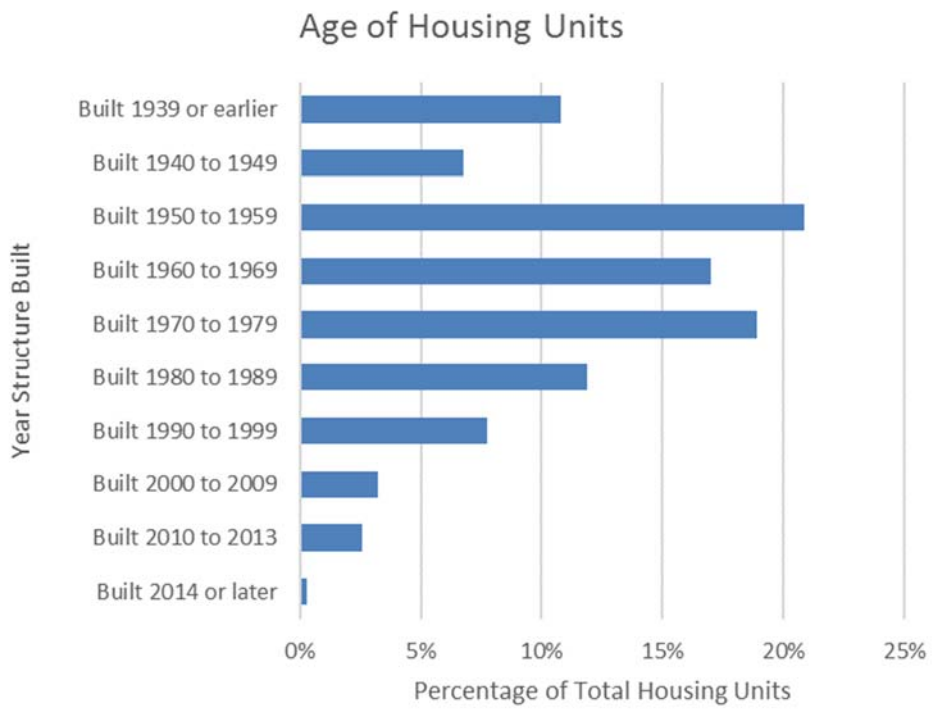
CHAPTER 5: HOUSING

Housing and neighborhoods form the core identity of North St. Paul. The City places a high priority on ensuring that people can make North St. Paul their home at any stage during their life. That means that the City must plan for a wide range of housing options for a population that comprises a diverse mix of family types, ages, cultures and economic situations. In this Chapter, we look at the existing housing stock and demographic trends to see where the future housing needs are for the City. We then conclude with goals and actions to help the City meet those needs.

BACKGROUND

North St. Paul experienced a significant housing boom between the 1950s and 1970s. During this period, 83 percent of all owner-occupied units and 74 percent of all rental units in the City were constructed (FIGURE 5-1). The rapid development of housing over a relatively short time period has resulted in housing stock and neighborhoods that are concurrently reaching the age when they will require significant investment.

FIGURE 5-1: AGE OF THE HOUSING STOCK IN NORTH ST. PAUL

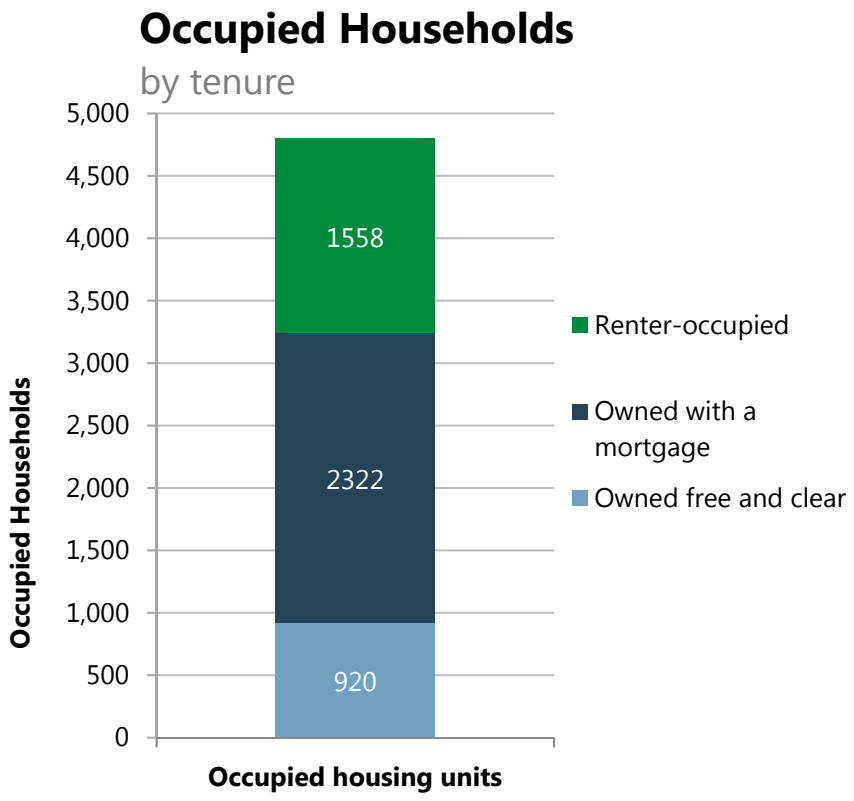


According to U.S. Census data, approximately 70 percent of the city's housing stock is owner-occupied and 30 percent are rental units (FIGURE 5-2). The percentage of renter-occupied units has increased over time, at least since the 1990s. Now, about 65% of the city's housing stock is owner-occupied.

TABLE 5-1 TOTAL HOUSING UNITS IN NORTH ST. PAUL BY TENURE (1990-2016)

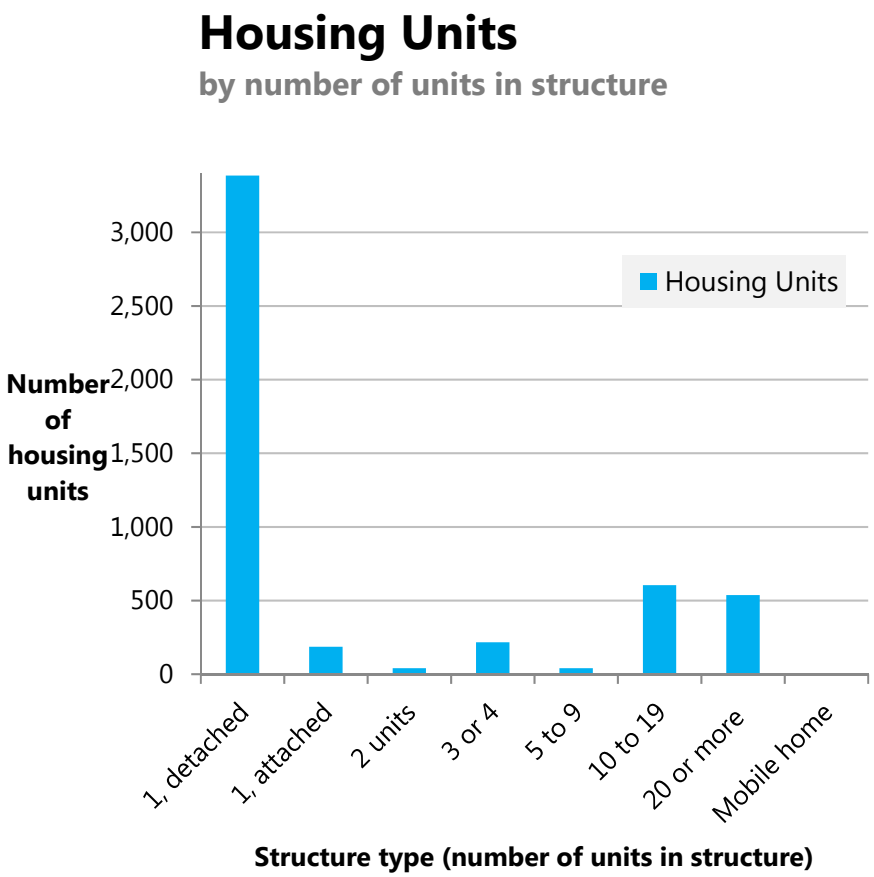
	1990		2000		2010		2016	
Owner-occupied	3,255	71%	3,402	72%	3,258	68%	3,242	65%
Renter-occupied	1,192	26%	1,301	27%	1,357	28%	1,558	31%
Vacant	160	3%	50	1%	207	4%	208	4%
	4,607		4,753		4,822		5,008	

FIGURE 5-2 OCCUPIED HOUSEHOLDS BY TENURE (2016 ACS ESTIMATES)



The data on number of units per structure illustrates an interesting pattern in the existing North St. Paul housing stock. FIGURE 5-3 shows that approximately 67% of residential structures are single-family detached (one unit per structure) and approximately 24% are 5 units or more per structure, with the large majority of those being in structures with 10 units or more per structure (large multi-family buildings). There is relatively little in between. Many cities have the same pattern, mirroring a nationwide phenomenon known as the "missing middle". The missing middle refers to a range of multi-unit or clustered housing types compatible in scale with single-family homes that help meet the growing demand for walkable urban living. These may include duplexes, fourplexes, bungalows, townhouses and more.

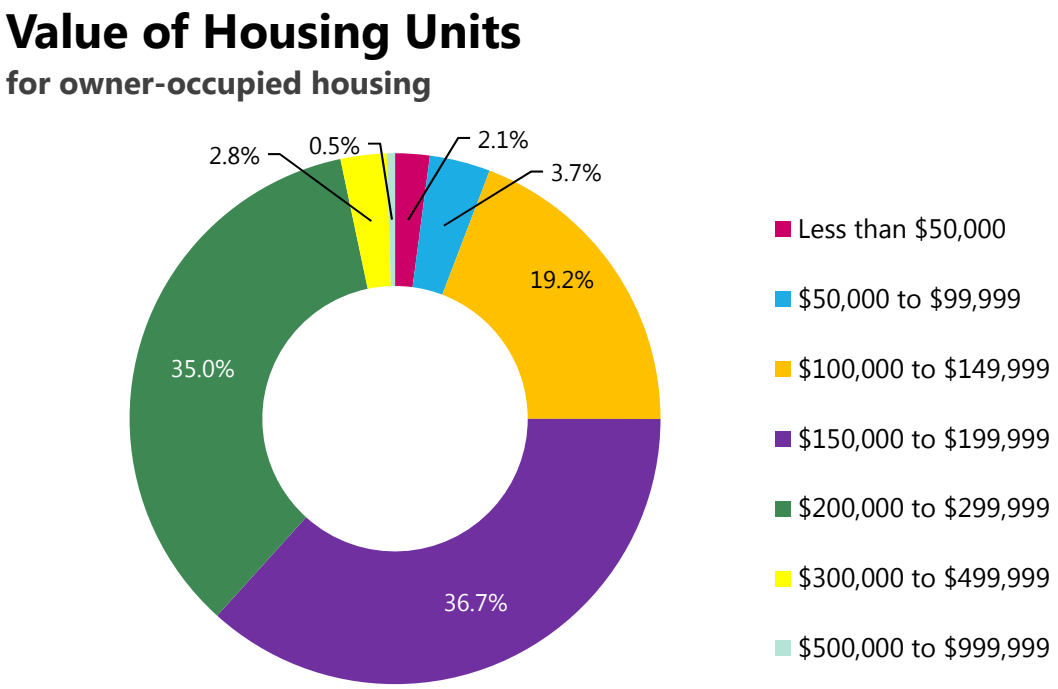
FIGURE 5-3 HOUSING UNITS BY BUILDING TYPE (NUMBER OF UNITS IN STRUCTURE)



Data source: ACS 2012-2016 Estimates

As shown in FIGURE 5-4, approximately one third of the city's owner-occupied housing (including single-family) is valued at over $200,000, with the largest share falling in the value category between $200,000 and $300,000.[1] Approximately 26 percent of the owner-occupied housing stock is valued below $150,000.

FIGURE 5-4 VALUE OF OWNER-OCCUPIED HOUSING UNITS IN NORTH ST. PAUL



Data source: ACS 2012-2016 Estimates

[1] Census data reports on housing value in $50,000 and $100,000 increments. The Metropolitan Council has determined that a home valued at or below $243,500 (in 2016 dollars) is affordable to people making 80% of the area median income or less. This document uses the closest census-reported cutoff of $200,000 when talking about home affordability.

TABLE 5-2 HOUSEHOLD COMPOSITION (2000-2015)

Household Type	2000	Share (%)	2015	Share (%)	Change (units)	Change (%)	Change in Share (%)
One-Person Households	1,271	27.03%	1,441	30.00%	+170	+13.4%	+3.0%
Non-Family Households	271	5.76%	455	9.46%	+184	+67.9%	+3.7%
Families Without Children	1,511	32.12%	1,712	35.60%	+201	+13.3%	+3.5%
Unmarried Families with Children	496	10.55%	458	9.52%	-38	-7.7%	-1.0%
Married Families with Children	1,154	24.54%	743	15.45%	-411	-35.6%	-9.1%
Total	4,703	100%	4,809	100%	+106	+0.03%	

Source: U.S. Census Bureau Decennial Census, American Community Survey, Metropolitan Council Community Profile

Data on trends in household types in TABLE 5-2 show steep declines in the "traditional family" that is usually thought to reside in suburban households and large increases in smaller household types. All types of families with children have decreased while all household types without children have increased; the household type showing the steepest decline over the period was married families with children. These changes mirror the general downward trend in household size seen in regional and city forecasts.

Existing Housing Types

The images shown below represent a sampling of the range of housing types that can be found in the City of North St. Paul.

Larger Single-Family Homes. Many of the city's larger homes, such as the home shown here, are located on the larger lots located in the west part of the city and also near Silver Lake.

Smaller Single-Family Homes. This home is more typical of smaller, more affordable single-family homes built in the 1950s.

Apartment Buildings. North St. Paul has a variety of rental options, many of them mid-density, low-rise apartment buildings like this one.

Downtown Mixed Use. The downtown area has a collection of apartment units that are located above commercial uses along 7th Avenue.

Senior Living. North St. Paul is host to several senior-oriented housing complexes that offer a spectrum of specialized programming or care.

What we Heard

Community Engagement

There were several community engagement events throughout the planning process that aimed to collect resident input on the comprehensive planning process and craft goals for the city moving forward. City staff hosted five Community Café conversations to get feedback. At these cafes, participants were asked specific questions about housing issues in the city, including:

- What amenities attract people to your neighborhood? Is it welcoming to all prospective residents? What would make it more attractive?
- What challenges do you see for housing in North St. Paul? Is our housing appropriate for all ages, abilities, ethnicities and incomes? Do you think housing here meets all housing needs? If not, what needs are we currently not meeting?

Feedback on housing generally centered on the variety and affordability of housing available. Respondents stressed that apartments and other mid-density housing like duplexes and quads were desired, specifically near the downtown area to provide residents walkable access to businesses. They also highlighted the desire for well-maintained, newer homes, or the renovation and increased maintenance of the aging housing supply to meet an increased demand for housing amenities and new technology. A common theme was the need to have housing for aging residents. Not all seniors need assisted living care, so there should also be smaller townhouse-type units available for households transitioning away from owning larger single-family homes.

Citywide Goals

Several of the Citywide Goals established in Chapter 2 relate to the topic of housing, including:

1. Enhance neighborhood value with quality housing options and types at all price points.
2. Improve the quality and mix of the City's housing so that there is a wide variety of housing available for people of all incomes, ages, cultures and abilities. Consider new forms of housing where redevelopment is necessary.
3. Revitalize and enhance the quality of the housing stock so that it is attractive and appropriate for new buyers.

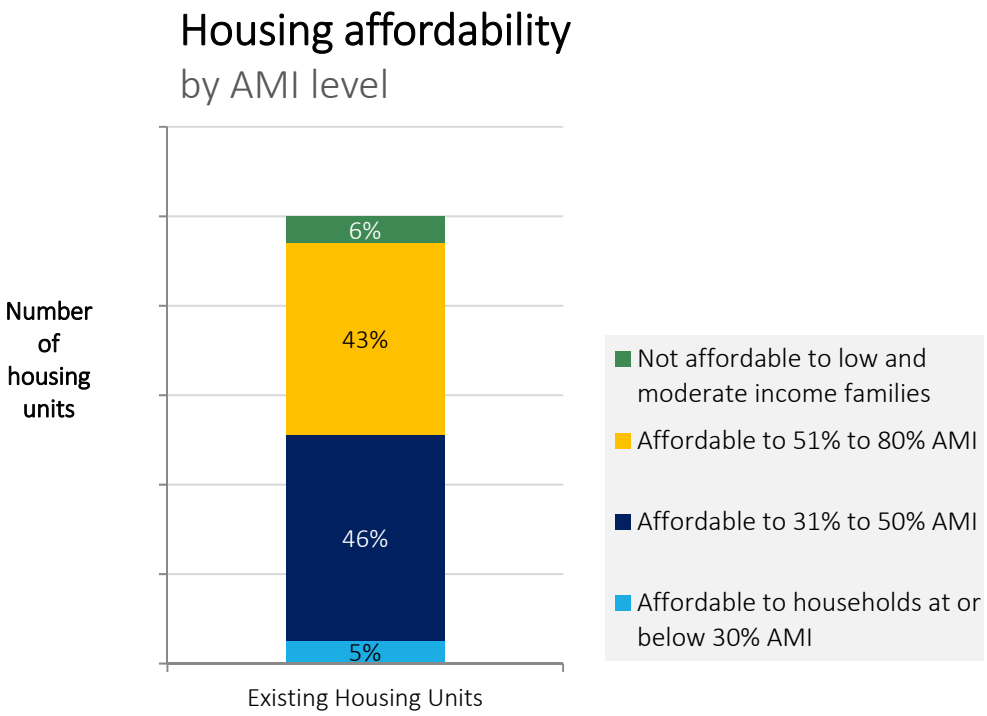
Existing Housing Affordability

The regional planning authority looks at housing affordability through lens of area median income, or AMI. For a family of four, regional AMI in the Twin Cities is $85,800. Households that have an income at or below 80 percent of the regional AMI are the targeted population for affordable housing. Median household income in North St. Paul is $57,200, which is 66 percent of the area median income for a household of four.

According to the Metropolitan Council's 2016 housing assessment, of the total housing units in North St. Paul, almost all are affordable to low or moderate-income households that are at or below 80 percent of AMI. As shown in Figure 5-5, the affordability of existing housing in the city is spread across the affordability "bands" with approximately 43% of units affordable to those

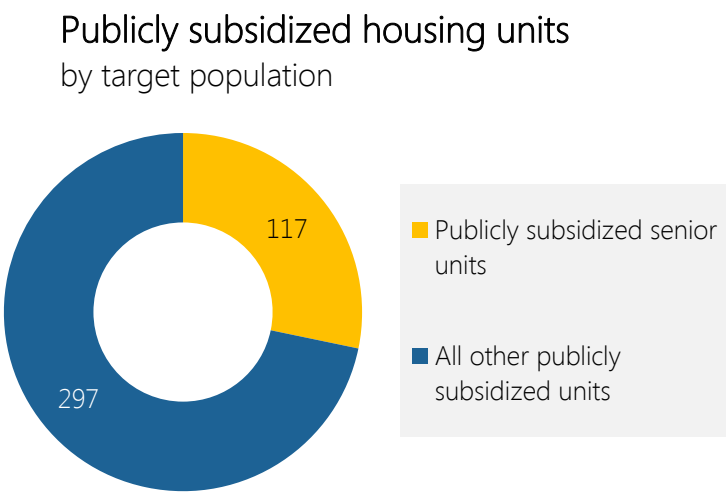
making between 51 and 80 percent of AMI ($43,605-$68,400), and 46% of units affordable to those making between 31 and 50 percent AMI ($26,505-$42,750). For those with yearly incomes of less than $25,740 (less than 30 percent of AMI), around 5 percent of North St. Paul's housing units are affordable. That leaves approximately 6 percent of the existing housing stock in the city that is not affordable to low and moderate income families.

FIGURE 5-5: HOUSING AFFORDABILITY BY AMI LEVEL



Publicly subsidized units often comprise the most deeply affordable units in a community. There are 414 publicly subsidized housing units in North St. Paul, as shown in FIGURE 5-6. Of those subsidized units, 117 of them are for seniors.

FIGURE 5-6 BREAKDOWN OF PUBLICLY SUBSIDIZED UNIT TYPES IN NORTH ST. PAUL



Compared to its neighboring cities and the Twin Cities region overall, North St. Paul offers a higher share of affordable housing that is somewhat more heavily weighted towards affordability in the highest income bands (31 to 80% of AMI).

TABLE 5-5: EXISTING AFFORDABLE UNITS COMPARISON ACROSS COMPARABLE CITIES

City	Existing Affordable Units			
	at <30% AMI	at 31-50% AMI	at 51-80% AMI	Total Affordable Units
North St. Paul	5%	46%	43%	94%
Maplewood	8%	25%	48%	81%
Oakdale	3%	23%	55%	81%
Vadnais Heights	9%	24%	39%	72%
White Bear Lake	5%	19%	61%	85%
Twin Cities Region	*6%*	*22%*	*40%*	*68%*
Source: Met Council Existing Housing Assessment 2016				

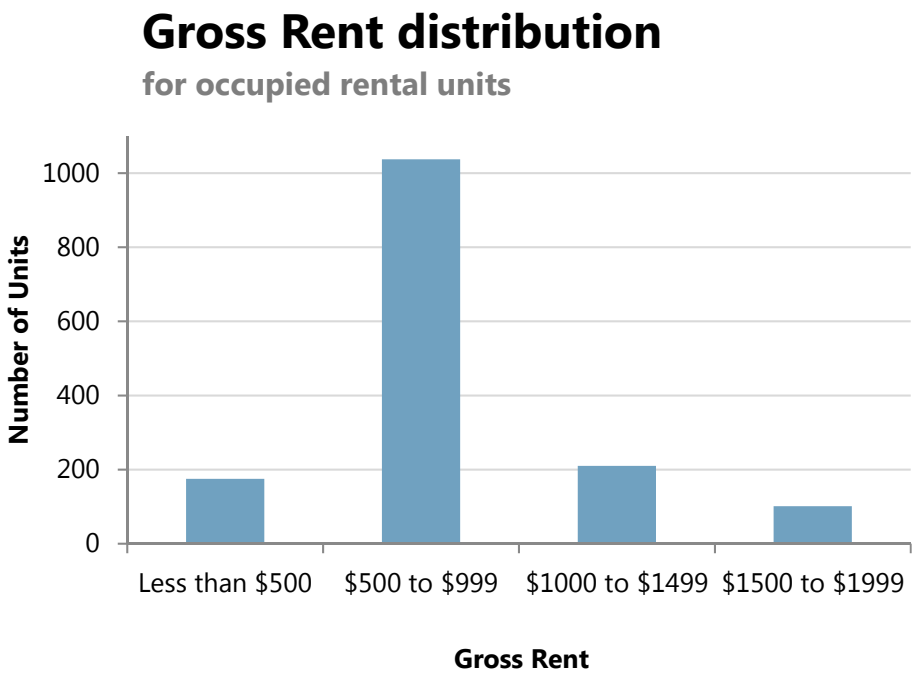
Rental Affordability

This "naturally occurring" affordable housing is a significant feature of North St. Paul's affordable housing landscape, but also presents a significant challenge for North St. Paul when it comes to striking a balance between affordability and livability. Many of these naturally-occurring affordable units have deferred maintenance, and may become targets for redevelopment and loss of affordability as they become outdated or obsolete. Strategies to manage naturally occurring affordable rental housing are an emerging topic in inner-ring suburban communities across the metro. North St. Paul will continue to monitor the policies and strategies being

developed to counter the loss of naturally-occurring affordable housing across the Twin Cities region and participate in collaborative conversations with other jurisdictions.

The chart below (FIGURE 5-7) shows the distribution of gross rent costs for North St. Paul's rental stock. North St. Paul's median gross rent is $797, which is slightly lower than the Ramsey County median gross rent of $892.

FIGURE 5-7: GROSS RENT COSTS FOR RENTER-OCCUPIED UNITS IN NORTH ST. PAUL



Data source: ACS 2012-2016 Estimates

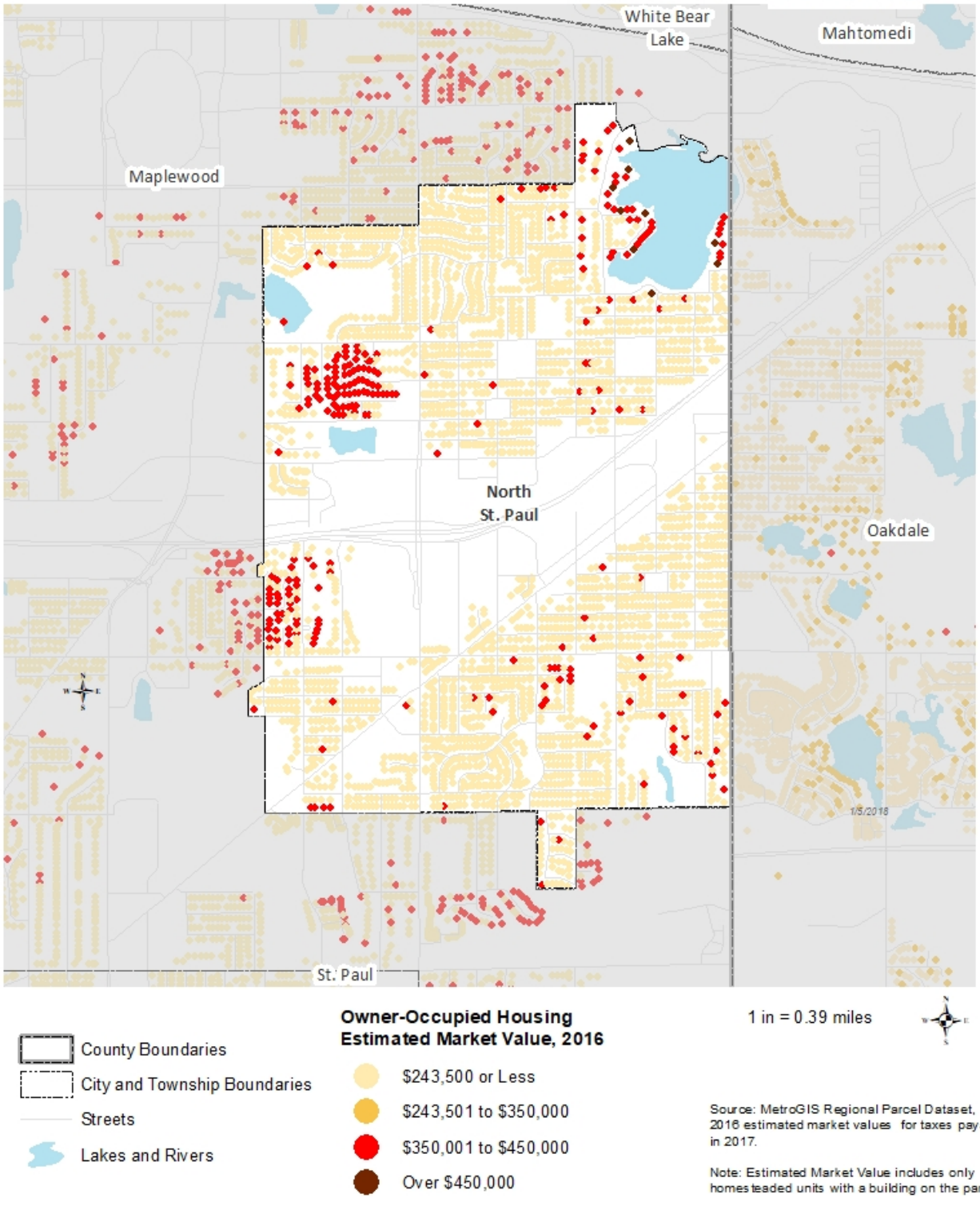
Owner-Occupied Affordability

Approximately 80 percent of North St. Paul's owner-occupied housing stock is affordable to households making at or below 80% of Area Median Income. The map in MAP 5-2 illustrates this visually, with all of the yellow areas on the map corresponding to housing at affordable levels. A high rate of owner-occupied affordability is not uncommon in first-ring suburban communities with an older housing stock that includes older housing styles built on smaller lots. In North St. Paul, housing in the western and northwestern portions of the city, and those areas close to Silver Lake, are generally on larger lots or are proximate to water bodies and are higher in value.

MAP 5-2

Owner-Occupied Housing by Estimated Market Value

North St. Paul



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.

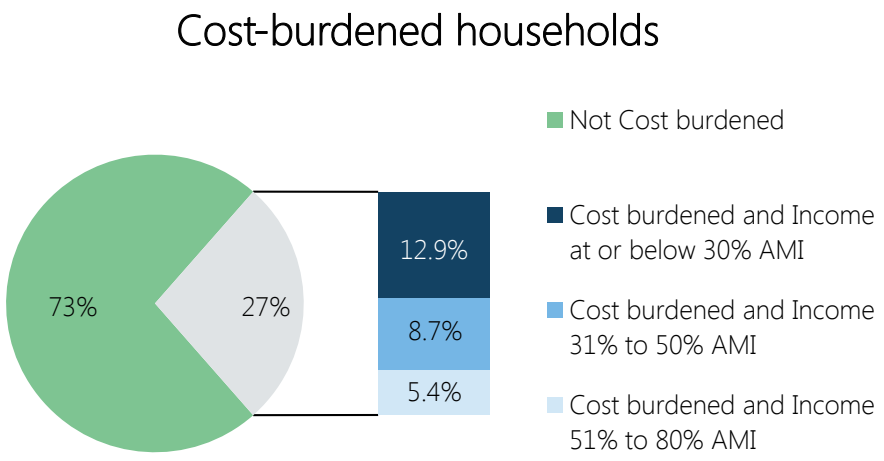
Existing Cost-Burdened Households

While the price of housing units relative to area median income is one measure of housing affordability in a community, another way to examine the impact of housing costs is by looking at **cost-burdened households**. Households are "cost-burdened" if their housing costs are at or over 30 percent of their income. This is an indicator of households that are spending a disproportionate share of their income on housing. The implications of a housing cost burden are most severe for households in the lowest income tier, or those households making 30 percent of AMI or below.

	Twin Cities Region
Area Median Income (AMI)	**$85,500**
80% of AMI	$65,700
50% of AMI	$42,900
30% of AMI	$25,750

FIGURE 5-8 illustrates the share of low-to-moderate income households that are cost-burdened in North St. Paul, by AMI income level. More than one-quarter of North St. Paul's total households are cost-burdened. Among those cost-burdened households, households making 30% of AMI or less are more burdened, proportionately because, assuming they pay at least 30 percent of their income toward housing, they will generally have less discretionary income after paying for housing costs than those in higher income tiers.

FIGURE 5-8: COST-BURDENED HOUSEHOLDS IN NORTH ST. PAUL BY INCOME TIER



With almost one in four households experiencing the phenomenon of housing cost burden in North St. Paul, the city's cost-burdened rate is nearly identical to that of the overall region. In comparison to neighboring and comparable inner-ring suburb cities, North St. Paul's cost-burdened share is about equal to that of surrounding communities. Like many other communities in the Twin Cities metro area, North St. Paul's greatest share of cost-burdened households is in the lowest (<30% AMI) income tier. The fact that the larger share of housing cost burden falls upon the lowest-income residents of North St. Paul is evidence that the City should focus some of its tools on providing affordable units at the lower end of the income spectrum.

TABLE 5-6: HOUSING COST BURDEN COMPARISON ACROSS COMPARABLE CITIES

City	Cost-burdened households			
	at <30% AMI	at 31-50% AMI	at 51-80% AMI	Total percent cost-burdened
North St. Paul	14%	9%	7%	30%
Maplewood	12%	7%	7%	26%
Oakdale	5%	12%	7%	24%
Vadnais Heights	7%	5%	5%	17%
White Bear Lake	8%	12%	7%	27%
Twin Cities Region	*10%*	*8%*	*6%*	*24%*

Source: Met Council Existing Housing Assessment 2016

Meeting the Regional Affordable Housing Allocation Share

North St. Paul, along with every community in the metro area, is responsible for retaining an adequate regional share of affordable housing. The Housing Element of Metropolitan Council's *Thrive 2040* plan has the determined the affordable housing requirement for every community by affordability level, as determined by a household's relationship to the Area Median Income (AMI).

North St. Paul's share of the region's affordable housing was determined by the Metropolitan Council based first upon the City's forecasted household growth during the 2021—2030 decade. Then, with the goal of expanding household choice for low-income households and aligning low-income housing with low-wage jobs, the Metropolitan Council adjusted that initial allocation based on two additional characteristics: existing affordable housing and ratio of low-wage jobs to low-wage workers.

North St. Paul's affordable housing requirement is shown in the table below.

Affordable Housing Need Allocation, 2021-2030	
At Or Below 30% AMI	25
From 31 to 50% AMI	4
From 51 to 80% AMI	20
Total Units	**49**
AMI = Area Median Income	

Housing calculations from the figure 5-9 indicate that North St. Paul has guided sufficient land at a minimum of 12 units per acre to produce 78 units of housing at affordable densities in the 2021-2030 decade, which well exceeds the Metropolitan Council's affordable housing allocation of 49 units.

Affordable densities as defined by the Metropolitan Council are those with a minimum range of 12 units per acre and above, which means that all multi-family residential and corridor mixed use redevelopment areas[2] expected to develop within the 2021-2030 decade qualify as potential affordable housing – using the minimum density to calculate unit potential as directed by the Metropolitan Council. FIGURE 5-9 summarizes the residential redevelopment potential from the land use chapter, and highlights with a red outline the units that would be considered affordable to meet North St. Paul's regional affordable allocation.

[2] Other mixed use districts do not qualify because they do not have a minimum residential requirement

FIGURE 5-9 TOTAL GUIDED RESIDENTIAL ACREAGE AND HOUSING UNITS IN NORTH ST. PAUL 2040 FUTURE LAND USE PLAN.

	Land Use Type	Dev. Acres	Present-2020	2020-2030	2030-2040	Density Range Min	Density Range Mid	Density Range Max	Yield %	Minimum Units	Minimum Units 2020	Minimum Units 2030	Minimum Units 2040	Midpoint Units
2040 Future Land Use Plan	Low Density Residential	0.00				3	4.25	5.5	100%	0	0	0	0	0
	Medium Density Residential	6.15		0.24	5.91	5.6	8.8	12	100%	34	0	1	33	54
	Multi-Family Residential	2.46		0.46	1.99	12	17	22	100%	29	0	6	24	42
	Downtown Mixed Use	4.95		1.85	3.10	12	17	22	0%	0	0	0	0	0
	Transitional Mixed Use	0.00				12	17	22	0%	0	0	0	0	0
	Corridor Mixed Use	44.08	21.05	19.77	3.27	12	26	40	30%	159	76	71	12	344
	Guided Total	**21.83**	**21.05**	**22.32**	**14.27**					**223**	**76**	**78**	**69**	**440**

Density Table	
Overall Community Density	10.20
Expected Housing Unit Growth	440
Units Considered Affordable (≥12 du/ac)	78

Using minimum density to calculate unit potential, North St. Paul could potentially net 78 units of affordable housing in the decade from 2021-2030. This number is based purely on available land programmed for density at above 12 units per acre, which includes land in the multi-family district and 30 percent of the land in the corridor mixed use district (the only district with a minimum residential requirement).

In practical terms, housing development above a particular density threshold does not guarantee housing affordability. The next section of this chapter will discuss the tools and strategies that North St. Paul can employ to help ensure that housing affordability goals are achieved.

Housing Need Goals

Based on this assessment of the housing stock in North St. Paul, there are some features and trends of the housing landscape that are especially notable and will shape the actions the City will take in the coming decades. This section summarizes the community's most critical housing needs as they relate to affordability and future demands on the city's housing supply.

The most critical housing trends and needs in North St. Paul are as follows:

- **North St. Paul's number of households with children is declining while household size declines.**

As an inner-ring suburban community located close to jobs and transit, North St. Paul should expect the overall demand for housing to be strong and the demand for smaller units to increase in the coming decades. The regional forecasted trend predicts population movement back to the urban core and increasing preferences for rental housing due to cost considerations and lifestyle choices.

This demographic shift toward smaller household sizes will be accompanied by a need for housing that accommodates smaller households. While the typical inner-ring suburban housing norm has long been the image of a single-family house with a yard, over the coming decades the City can expect households to continue to become more "non-traditional" and increasingly composed of single adults, empty-nesters and unrelated adults living together. North St. Paul also has multi-cultural communities with unique housing needs to consider, including multi-generational households.

Currently the City's housing stock is more than half composed of single-family detached homes, a share which may decline in the coming decades due to demand for smaller and non-traditional housing options.

Housing need goal: *Explore opportunities to provide for smaller and more "non-traditional" housing development that enhances the character of the City, including opportunities to address the lack of housing in the "missing middle", tiny homes, co-housing, and other innovative housing styles.*

- North St. Paul has a high percentage of affordable, older, single-family homes. Over the long term, the City is at risk of losing its naturally occurring affordable housing to redevelopment pressures.

North St. Paul has large share of housing that is considered affordable by way of "naturally occurring" means. Naturally-occurring affordable housing (NOAH) in North St. Paul exists in the form of small single-family homes on small lots, largely built in the 1950s and 60s, and which may have deferred maintenance. Naturally occurring affordable housing is an important source of housing affordability but requires a careful, balanced approach. All residents have a right to live in safe and well-maintained housing, but maintenance and other upgrades (including redevelopment) can contribute to the loss of housing affordability in a community.

There are proactive steps that North St. Paul can take to recognize the important role that naturally occurring affordable housing plays in the community, typically supporting households between 30-80% AMI, and to pursue opportunities to preserve this housing and improve its safety and livability while maintaining its affordability.

Housing need goal: *Anticipate the need for creative strategies to manage naturally-occurring affordable housing within all affordability bands. Focus on preserving the affordability of North St. Paul's single-family housing stock.*

- The housing stock in North St. Paul is aging, and residents will have increasing maintenance and upkeep requirements in the coming decades.

As mentioned previously, the City's affordable housing stock is largely located in smaller-lot single family areas developed in the 1950s, 60s and 70s that are beginning to age and may not be as attractive for modern households. Developing strategies to maintain and support the City's existing housing stock, particularly for those households with lower incomes and fewer resources, will remain a significant challenge in the decades to come, and will be important to continue to attract newcomers to the city.

Housing need goal: *Support housing maintenance, improvement, upgrade, and modernization programs, particularly for lower-income households, which help maintain the quality of the existing affordable housing stock.*

- North St. Paul is largely affordable, but has a gap in affordable housing available for households making less than 30% AMI.

While it is not possible to draw a direct conclusion between the number of cost burdened households and housing units available in that affordability band, the fact that approximately 14 percent of cost-burdened households in the City are in the less than 30% AMI band and only 5 percent of the housing units available are affordable in that band points to some level of mismatch. The City's affordable housing allocation from the Metropolitan Council recognizes this gap as well, placing 51% of North St. Paul's allocation of new affordable units in the less than 30% AMI band.

Housing need goal: *Enable and encourage affordable housing units that relieve the cost-burden for households making less than 30% AMI.*

Planning for Affordable Housing

Affordable housing implementation toolbox

Simply guiding land at higher densities is not a guarantee that affordable housing will be produced. To increase the likelihood of affordable housing

development, North St. Paul has identified implementation tools that the City is willing and able to use to advance its housing goals.

There are particular areas in which cities have financial and regulatory discretion and the flexibility to directly influence housing affordability. The provision of Tax Increment Financing (or TIF) is one of the most effective tools that cities have at their discretion to aid in the production of affordable housing projects, and North St. Paul is open to financially assisting future affordable rental projects through TIF and other available means if and when they come forward.

Cities also have discretion over their zoning, regulatory, and land use policies. North St. Paul must systematically review its zoning and city code to ensure that the regulatory environment is favorable to affordable housing development, and consider amending policies that present barriers to affordable housing development. One of the strategies identified in the Land Use and Housing Action Items (Chapter 4) is to revise the commercial zoning districts to reflect the mixed-use development priorities expressed in this Plan. Another is to promote and support transit-oriented development and redevelopment near existing and future transit corridors. These and other policy strategies may be considered and provided directly by the city to help encourage affordable housing production.

Many other affordable housing tools and strategies require partnerships with outside entities, counties, HRAs, funding and granting agencies, and non-profits that offer programs, funding, and policies on a wider scale that support affordable housing. Tools that can be used to generate or maintain housing affordability can generally be grouped into the following categories:

- Local funding (city or county)
- Local policy or strategy
- Regional or Federal funding source
- Affordable housing preservation

An overview of housing goals and the tools that may be used to address them are shown in the matrix on page 21. The section that follows explains each of the affordability tools in greater detail, and gives more details about when these strategies might be used.

North St. Paul Housing Goals	Affordable Housing Tools																										
	Local Funding Options							County, Regional, State and Federal Programs				Local Policies and Programs											Preserve Long-term Affordability				
	Multi-Family Property Loans	Deferred Loans	Single Family Home Loans	Development Authorities	Housing Bonds	Tax Abatement	Tax Increment Finance	MN Housing Consolidated RFP	Community Development Block Grants	HOME funds	Livable Communities grant (Metropolitan Council)	Support homebuyer assistance programs	Encourage Repair & Rehab programs	Support Foreclosure prevention programs	Support Energy Assistance programs (CAPS)	Support Rental Assistance programs	Site assembly and/or land banking	Local Fair Housing Policy	Fee waivers or adjustments	Financial or procedural incentives to private developers	Zoning and subdivision policies	Effective referrals to available programs	4(d) tax program	Community land trusts	Support developer use of LIHTC	Public/private task force	Support public housing & project-based assistance
Enhance neighborhood value with quality housing options and types at all price points.	X		X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X		X
Improve the quality and mix of the City's housing so that there is a wide variety of housing available for people of all incomes, ages, cultures and abilities. Consider new forms of housing where redevelopment is necessary.	X			X	X	X	X	X	X	X	X						X		X	X	X		X	X	X		X
Revitalize and enhance the quality of the housing stock so that it is attractive and appropriate for new buyers.		X											X	X					X		X	X				X	
Explore opportunities to provide for smaller and more "non-traditional" housing development that enhances the character of the City, including opportunities to address the lack of housing in the "missing middle" styles.	X			X	X	X	X	X			X						X		X	X	X				X	X	X

North St. Paul Housing Goals	Affordable Housing Tools																														
	Local Funding Options							County, Regional, State and Federal Programs				Local Policies and Programs												Preserve Long-term Affordability				
	Multi-Family Property Loans	Deferred Loans	Single Family Home Loans	Development Authorities	Housing Bonds	Tax Abatement	Tax Increment Finance	MN Housing Consolidated RFP	Community Development Block Grants	HOME funds	Livable Communities grant (Metropolitan Council)	Support homebuyer assistance programs	Encourage Repair & Rehab programs	Support Foreclosure prevention programs	Support Energy Assistance programs (CAPS)	Support Rental Assistance programs	Site assembly and/or land banking	Local Fair Housing Policy	Fee waivers or adjustments	Financial or procedural incentives to private developers	Zoning and subdivision policies	Effective referrals to available programs	4(d) tax program	Community land trusts	Support developer use of LIHTC	Public/private task force	Support public housing & project-based assistance
Anticipate the need for creative strategies to manage naturally-occurring affordable housing within all affordability bands. Focus on preserving the affordability North St. Paul's single-family housing stock.		X	X									X	X	X	X					X			X					
Support housing maintenance assistance programs, particularly for lower-income households.		X	X										X	X	X	X				X			X						
Enable and encourage affordable housing units that relieve the cost-burden for households making less than 30% AMI.				X	X	X	X	X	X	X	X					X		X	X	X	X		X	X	X		X		X

Affordability Category	Affordability Tool
Local funding for Affordable Housing	**Development Authorities (local HRA, CDA, or EDA)** The City has its own HRA and EDA and can levy for funds. Funds levied through these authorities can be used to accomplish housing and community redevelopment projects or programs. These might include specific development projects, rehabilitation and maintenance programs, and other housing opportunities as dictated by City goals and priorities.
	Housing Bonds EDAs and HRAs can issue bonds that help to develop and administer affordable housing developments or programs. Cities and counties may make or purchase loans using the proceeds of the bond sales for activities such as new construction, acquisition and rehabilitation, or refinancing bond debt. Bond-supported projects would typically support affordable housing for the 50% and 80% AMI bands. The City will consider issuing bonds at the request of housing developers.
	Tax Abatement Tax abatement is a financing tool that reduces taxes or tax increases for owners of specific properties. Local governments offer the tax reduction to provide a financial incentive for a public benefit, such as creation of housing affordable to low and moderate-income households. The City may consider tax abatement if the public benefit from a proposed project is substantial and the project could not occur but for the aid of this tool.
	Tax Increment Financing Cities may elect to create a tax increment financing (TIF) district as a means of subsidizing and supporting housing redevelopment projects. Under TIF, the City is able to allocate future property tax gains to fund current development. By legislative definition, TIF used for affordable rental housing projects must meet provide affordability to those at 60% of AMI or less. The affordability threshold is 115% of AMI for owner-occupied housing projects. TIF is a tool that may be considered for large-scale redevelopment projects that would not occur "but for" this type of assistance.
Local policies and strategies to promote access to affordable housing	**Effective referrals** The City supports providing appropriate resources and education about existing housing support programs offered by other agencies and organizations. The City seeks to effectively communicate to residents and prospective residents about existing programs offered through non-profits and agencies serving the area. Priority will be given to making referrals that support North St. Paul's housing goals and meeting identified housing needs, such as home buyer assistance, home maintenance programs and programs that help seniors age in place.

Local policies and strategies to promote access to affordable housing	**Fair Housing Policy** The Ramsey County HRA supports Fair Housing Policies, and the City can support implementation of that policy or adopt its own unique policy. Such a policy would allow North St. Paul to declare its commitment to fair housing and to plan proactively both to avoid fair housing issues, manage fair housing complaints, and to take advantage of opportunities to increase housing choice. The Metropolitan Council will soon be requiring LCA funding recipients to have a Fair Housing policy in place.
	First time homebuyer, down payment assistance, and foreclosure prevention programs The City encourages residents to access existing programs available through Ramsey County (FirstHOME Buyer Assistance Program), the Minnesota Homeownership Center, Minnesota Housing, and other nonprofits. North St. Paul will pursue active partnerships with organizations and agencies that provide these services, particularly those that serve or prioritize those populations at or below 80% AMI who would otherwise face very high barriers to home ownership and retention.
	Participation in housing-related organizations, partnerships, and initiatives City staff or elected officials will consider increased involvement in events, collaborations or programs that support furthering fair and affordable housing. Staying proactively involved in affordable housing discussions with other jurisdictions and agencies will allow North St. Paul to stay appraised of current programs, opportunities, and best practices.
	Site assembly The City will monitor and consider acquisition of properties that can be assembled and developed into a public good project, including the production of affordable housing or maintaining existing affordable housing. Such a strategy could be used to allow the City to put out specific RFP requirements to developers in order to achieve a project that includes housing affordability, specifically that meet thresholds for 50% AMI and below for rental housing and 115% AMI and below for ownership
	Zoning and subdivision ordinances City codes should encourage and streamline development of affordable housing. The City may consider proactive zoning policies that incentivize higher density or greater affordability.
	Rental license and inspections programs Licensing of rental properties is valuable not only to ensure tenants treated fairly, but can also act as a data collection opportunity to track rental properties and understand how these properties fit into the housing landscape of North St. Paul. The City currently has a rental licensing and inspection program, and will continue to use this program to ensure that renter-occupied properties meet livability standards.

Regional & Federal funding for Affordable Housing	**MHFA Consolidated Request for Proposals** This annual funding request from Minnesota Housing Finance Agency supports affordable housing developments across the metro area, and is very competitive. The City will continue to work with developers in coordination with MHFA in supporting RFP submissions for projects that will bring a significant number of new affordable units, and will consider support for projects that meet affordability thresholds of 50% AMI or below as a reflection of the income tiers comprising the majority of Roseville's housing allocation.
	Livable Communities Demonstration Account (LCDA) North St. Paul is eligible for Met Council funding for innovative projects, with preference for those projects that incorporate affordable housing and transit accessibility. The City will continue to work with developers in coordination with the Met Council in supporting RFP submissions for projects that will bring a significant number of new affordable units, and will consider support for projects that meet affordability thresholds of 50% AMI or below as a reflection of the income tiers comprising the majority of North St. Paul's housing allocation.
	Community Development Block Grant Funds (CDBG) Ramsey County manages disbursement of CDBG funds, which can be used on a number of housing and revitalization projects. Applicants may apply annually for these funds. The City can apply for these funds, or may assist or support specific agencies or organizations in their pursuit of these funds.
	HOME Investment Partnerships Program (HOME) Ramsey County manages disbursement of HOME funds, which can be used on a number of housing and revitalization projects. Applicants may apply annually for these funds. The City can apply for these funds, or assist or support specific agencies or organizations in their pursuit of these funds.
	Project Based Rental Assistance Typically HUD-funded, this type of assistance is a deep subsidy that remains with the units of a project or development. Although the City does not fund this type of assistance, North St. Paul may consider stating its intent of support for project-based assistance, as such projects are one of the only opportunities to support and retain housing affordable to households at or below 30% AMI.
Affordable Housing Preservation Strategies	**Low Income Housing Tax Credit Projects** With LIHTC, developers apply for tax credits to offset costs at the time of development. Although the City does not fund this type of assistance, North St. Paul may consider stating its intent of support for developers who pursue LIHTC and especially those who intend to seek ways to retain the affordability of the LIHTC property after the terms of LIHTC are up. LIHTC is a tool used to support projects that support residents in the 30-80% AMI range.
	4d tax program Non-subsidized properties may be eligible for a tax break if the owner of the property agrees to rent and income restrictions (serving households at 60% AMI or below) and receives "financial assistance" from federal, state or local government. North St. Paul may consider stating its intent of support for the 4d tax program as part of a broader strategy for preserving affordable multi-family housing.

Affordable Housing Preservation Strategies	**Community Land Trusts (CLT) L**and trusts provide permanent affordability for income eligible households. Typically, a land trust is structured where a homeowner owns the building and the land trust leases the land to the homeowner. Households that make at or below 80% of AMI typically qualify for these homes. Currently there is not an active CLT serving the City, but the City could pursue future partnerships or support CLT activities as they arise.
	Low-interest rehab programs such as the City's existing single-family home loan program, the Ramsey County deferred loan program, and multi-family property loans available from the State of Minnesota.
	Public/Private Task Force The City will establish a task force with private developers to work on breaking down barriers to constructing affordable housing. The task force will work not only on public subsidies, but bringing appropriate private resources to the table to bring projects to fruition.

Chapter 6

Economic Development

CHAPTER 6: ECONOMIC DEVELOPMENT

INTRODUCTION

The City of North St. Paul is a fully developed community and future development will be focused on the redevelopment of certain areas in the community. These areas and strategies will be identified later in the chapter with the first section of the chapter focusing on the current economic conditions in the city. These conditions will then provide the basis for the goals and implementation strategies and how they relate to the development of goals for North St. Paul in the future years.

In addition to comparing itself to the Ramsey County, the City has identified other communities that fit the general demographics and location of North St. Paul; that have developed in a similar pattern and may face similar barriers for continued economic growth. Those communities are Fridley, Maplewood, New Brighton, West St. Paul, Richfield, and South St. Paul

ECONOMIC SNAPSHOT OF THE NORTH ST. PAUL

The economic health of a community can be measured by the growth of the property tax base in the community. In North St. Paul, the property tax base has been increasing over the last 4 years at a strong rate. Over that period the growth in the tax base value has increased by more than 5% each year. While some of this increase may be a result of the catch-up from the drop in the values during the economic downturn, the strength of the growth indicates that the property values in North St. Paul are strong and should remain that way in future years. TABLE 6-1 shows change in the values and the percentage change compared to the previous year.

TABLE 6-1 PROPERTY TAX MARKET VALUE 1990-2017 (RAMSEY COUNTY ASSESSOR)

Year	Estimated Market Value	Percent Change
1990	$319,957,000	-
2001	$555,092,600	N/A
2010	$798,984,600	N/A
2011	$767,266,600	-3.97%
2012	$700,480,000	-8.70%
2013	$680,817,500	-2.81%
2014	$726,657,100	6.73%
2015	$772,585,600	6.32%
2016	$812,206,400	5.13%
2017	$853,887,100	5.13%

The economic viability of the community relies on a stable tax rate that allows for both the businesses and the city to plan for future expenditures. However, the city can only completely control one portion of the property tax bill with the county, school district and special districts making up the remainder of the tax levy. TABLE 6-2 shows the breakdown of the tax rates for the entire property tax bill for North St. Paul. The chart uses the 2000 and 2010 census as a baseline and then the years 2011-2016. The fiscal year column reflects the year of levied and payable in the following year (e.g. levied 2016, payable 2017).

TABLE 6-2 PROPERTY TAX LEVIES NORTH ST. PAUL (LEAGUE OF MINNESOTA CITIES)

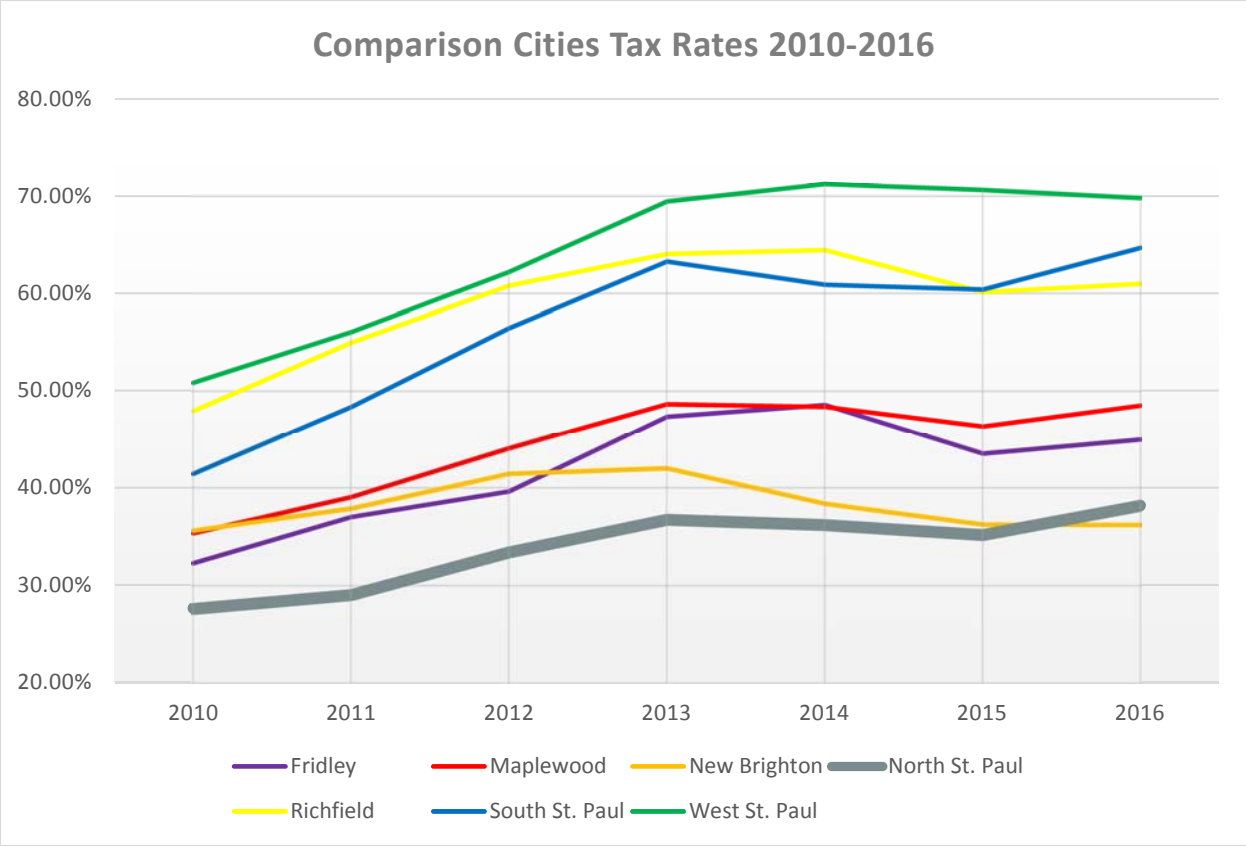
Fiscal Year	City Rate	County Rate	School District	Special Districts
2000	17.46%	45.62%	58.83%	8.72%
2010	27.60%	50.25%	25.36%	11.07%
2011	29.02%	54.68%	27.79%	11.55%
2012	33.38%	61.32%	28.34%	13.24%
2013	36.72%	65.24%	32.55%	14.18%
2014	36.19%	63.74%	37.64%	14.59%
2015	35.17%	58.92%	35.86%	13.87%
2016	38.17%	58.89%	35.57%	13.75%

The trend of the tax rates for North St. Paul will give us an idea of the property tax stability in the community with an average of 31.71% for the period of 2010-

2016. North St. Paul's tax rate 38.1% compares favorably to the state average for cities of 46.25%. Higher county and school district rates in North St. Paul than in other areas of the state bring the total tax rate in the City higher than the state average.

In addition to the stability of the tax rates in the community, the city's opportunity for future growth will also be reflected by how its tax rate compares to other cities in the comparison group. FIGURE 6-1 compares the tax rates of the comparison cities from 2010 – 2016. North St. Paul compares favorably with the group being one of the lowest throughout the entire period. The city should work to continue this trend to allow for sufficient resources to assist redevelopment and provide the level of services that current and new residents will want and require.

FIGURE 6-1 GROUP COMPARISON TAX RATES (LEAGUE OF MINNESOTA CITIES)



In addition to the tax rates, the economic wellbeing of North St. Paul is comprised of many economic issues including the availability and type of jobs

in the community. North St. Paul currently has a total of 303 businesses employing a total of 4,248 employees. This results in a ratio of .34 jobs per resident in the community. This low ratio of jobs to residents reflects that residents predominantly travel to other communities for employment opportunities.

TABLE 6-3 BUSINESS EMPLOYEES IN THE CITY OF NORTH ST. PAUL (ESRI)

Total Businesses:	303
Total Employees:	4,248
Total Residential Population:	12,360
Employee/Residential Population Ratio (per 100 Residents)	34

The employment opportunities in North St. Paul can be broken-down based on the North American Industry Classification Systems (NAICS) codes that allows for a better picture of the types of opportunities that exist in North St. Paul. TABLE 6-4 shows that breakdown of primary categories for North St. Paul. As indicated in the table, North St. Paul largest segment of businesses are Other Services – 16.5%, Health Care& Social Services – 10.9%, and Construction – 10.2%. These categories also account for 23.9%, 7.3% and 5.6% respectfully of the employees in the community.

When the businesses are compared on number of employee the following are the largest employers: Other Services – 23.9%, Educational Services – 14.8%, Retail Trade – 14.5%. This would be expected as those businesses are traditionally labor intensive regardless of the number of businesses or locations in the community.

TABLE 6-4 BUSINESS BREAKDOWN NAICS CODES - NORTH ST. PAUL (ESRI)

Business and Employees by NAICS Codes	Business Number	Business Percent	Employees Number	Employees Percent
Agriculture, Forestry, Fishing & Hunting	0	0.0%	0	0.0%
Mining	0	0.0%	0	0.0%
Utilities	0	0.0%	0	0.0%
Construction	31	10.2%	239	5.6%
Manufacturing	15	5.0%	309	7.3%
Wholesale Trade	4	1.3%	14	0.3%
Retail Trade	25	8.3%	617	14.5%
Transportation & Warehousing	5	1.7%	51	1.2%
Information	9	3.0%	56	1.3%
Finance & Insurance	15	5.0%	135	3.2%
Real Estate, Rental & Leasing	20	6.6%	63	1.5%
Professional, Scientific & Tech Services	19	6.3%	124	2.9%
Management of Companies & Enterprises	1	0.3%	5	0.1%
Administrative & Support & Waste Management & Remediation Services	9	3.0%	128	3.0%
Educational Services	17	5.6%	629	14.8%
Health Care & Social Assistance	33	10.9%	309	7.3%
Arts, Entertainment & Recreation	7	2.3%	29	0.7%
Accommodation & Food Services	20	6.6%	313	7.4%
Other Services (except Public Administration)	50	16.5%	1,016	23.9%
Public Administration	10	3.3%	207	4.9%
Unclassified Establishments	13	4.3%	4	0.1%
Total	**303**	**100%**	**4,248**	**100%**

In addition to the general business categories the NAICS codes also allow for the breakdown of some of the business types that can account for a significant number of diverse businesses. One of the categories that allows for the drilling down to see a more complete business picture is the Retail Trade Category. In the overall list this category accounts for 8.3% of the businesses and 14.5% of the employees in the community. When broken out, Food and Beverage Stores and Miscellaneous Stores make up most the businesses accounting for 14 of the 25 businesses. However, most the employees are accounted for in the general merchandise category with 400 employees. This would represent the employment at the Target Store in North St. Paul.

TABLE 6-5 BREAK-OUT OF BUSINESS AND EMPLOYEES FOR NAICS SUBGROUP CODES - NORTH ST. PAUL (ESRI)

Business and Employees by NAICS Codes	Business		Employees	
	Number	Percent	Number	Percent
Retail Trade - Total	**25**	**8.3%**	**617**	**14.5%**
Motor Vehicle & Parts Dealers	0	0.0%	0	0.0%
Furniture & Home Furnishings Stores	0	0.0%	0	0.0%
Electronics & Appliance Stores	3	1.0%	18	0.4%
Bldg Material & Garden Equipment & Supplies Dealers	3	1.0%	39	0.9%
Food & Beverage Stores	6	2.0%	46	1.1%
Health & Personal Care Stores	2	0.7%	12	0.3%
Gasoline Stations	1	0.3%	9	0.2%
Clothing & Clothing Accessories Stores	0	0.0%	0	0.0%
Sport Goods, Hobby, Book, & Music Stores	1	0.3%	75	1.8%
General Merchandise Stores	1	0.3%	400	9.4%
Miscellaneous Store Retailers	8	2.6%	18	0.4%
Nonstore Retailers	0	0.0%	0	0.0%

In addition to Retail Services, the following categories are also broken out for comparison. In North St. Paul, this break out is important because 16.5% of the businesses accounting for 23.9% of the positions and employees are in the category of Other Services except Public Administration. The breakdown does not give us significant insight into the breakdown of the other services due to the limited types of businesses that are available in the grouping.

TABLE 6-6 BREAK-OUT OF BUSINESS AND EMPLOYEES FOR NAICS SUBGROUP CODES - NORTH ST. PAUL (ESRI)

Business and Employees by NAICS Codes	Business		Employees	
	Number	Percent	Number	Percent
Finance & Insurance - Total	**15**	**5.0%**	**135**	**3.2%**
Central Bank/Credit Intermediation & Related Activities	3	1.0%	87	2.0%
Securities, Commodity Contracts & Other Financial Investments & Other Related Activities	4	1.3%	21	0.5%
Insurance Carriers & Related Activities; Funds, Trusts & Other Financial Vehicles	8	2.6%	27	0.6%
Professional, Scientific & Tech Services - Total	**19**	**6.3%**	**124**	**2.9%**
Legal Services	4	1.3%	44	1.0%
Accommodation & Food Services - Total	**20**	**6.6%**	**313**	**7.4%**
Accommodation	2	0.7%	15	0.4%
Food Services & Drinking Places	18	5.9%	298	7.0%
Other Services (except Public Administration) - Total	**50**	**16.5%**	**1,016**	**23.9%**
Automotive Repair & Maintenance	8	2.6%	52	1.2%

Major Employers in North St. Paul

North St. Paul has several major employers in the community with Target being the largest with 400 employees. A full breakdown of the top 11 are listed in TABLE 6-7. The table shows that one of the problems facing North St. Paul is the lack of a well-rounded business and industry community for major employers. The table shows that the major employers are predominately retail or service related industries. While these businesses and industries can provide livable wage positions, the city should also concentrate on the attraction of new businesses and industries in the manufacturing and Professional, Scientific & Tech Services sectors. It should be noted that in 2018 Target increased its minimum wage to $12 an hour for all employees.

TABLE 6-7: MAJOR EMPLOYERS 2017 (CITY STAFF)

Company	Number of Employees
ISD 622 Public Schools[1]	1,500
Target	400
Berwald Roofing, Inc.	150
REM Ramsey	85
T.A. Schifsky & Sons, Inc	80
Ideal Credit Union	65
Lillie Suburban Newspapers, Inc.	60
Anchor Bank	55
Custom Millwork	46
Anderson Cabinet	40
Burger King	40

Twin Cities Employment Growth By Sector

TABLE 6-8 presents predictions about the growth of the Twin Cities economy by industrial sector. As in the past, the chart shows a strong expansion in several service sectors. Over the period identified in the chart, the service sector will account for over 71% of the new positions created. Most of these positions are categorized as healthcare related services. The projected growth in these industry sectors traditionally allows for the provision sustainable positions in Healthcare, and Research and Development sectors. The general service sectors will also see significant growth during this period.

This projected growth could also allow North St. Paul to see success as they work to redevelop areas in the community to provide areas for new development of the facilities. This could be further strengthened by North St. Paul focusing on the attraction of companies that are in those and related industries.

[1] Number of employees district-wide

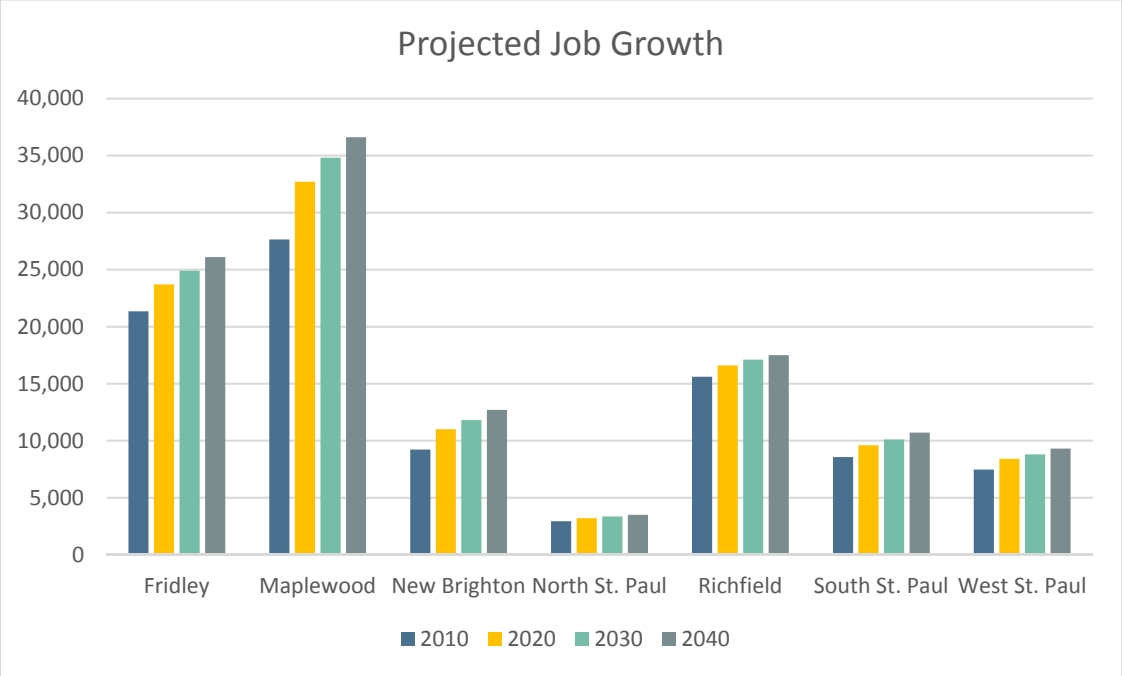
TABLE 6-8 – PROJECTED EMPLOYMENT GROWTH BY SECTOR, 7-COUNTY TWIN CITIES REGION, 2014-2024 (MN EMPLOYMENT & ECONOMIC DEVELOPMENT)

Industry	Percent Change	Numeric Change	Projected Employment
Healthcare Support Occupations	18%	16,114	107,588
Personal Care and Service Occupations	14%	21,822	179,613
Healthcare Practitioners and Technical Occupations	12%	20,142	183,754
Community and Social Service Occupations	9%	5,466	65,412
Computer and Mathematical Occupations	8%	7,812	101,315
Construction and Extraction Occupations	8%	8,722	120,583
Business and Financial Operations Occupations	6%	9,586	180,041
Life, Physical, and Social Science Occupations	5%	1,351	27,305
Food Preparation and Serving Related Occupations	5%	11,788	243,330
Building and Grounds Cleaning and Maintenance Occupation	5%	4,710	103,887
Legal Occupations	5%	990	22,093
Installation, Maintenance, and Repair Occupations	4%	4,559	107,472
Sales and Related Occupations	4%	10,788	299,882
Protective Service Occupations	3%	1,212	48,999
Education, Training, and Library Occupations	2%	4,014	168,231
Transportation and Material Moving Occupations	2%	4,167	180,617
Management Occupations	2%	5,117	233,599
Arts, Design, Entertainment, Sports, and Media Occupations	1%	770	55,098
Architecture and Engineering Occupations	1%	345	52,634
Office and Administrative Support Occupations	(1%)	(4,040)	421,343
Production Occupations	(2%)	(4,587)	219,029
Farming, Fishing, and Forestry Occupations	(5%)	(848)	15,175

Comparison Communities Projected Employment Growth

One of the areas that has been compared between North St. Paul and surrounding communities is the rate at which jobs are projected to grow in the city. The City of North St. Paul will continue to lag the comparison cities in the creation of jobs over the next 22 years. As indicated in FIGURE 6-2 while growing at a slow pace, North St. Paul will see a steady growth in the creation of new employment opportunities.

FIGURE 6-2 PROJECTED JOB GROWTH FOR COMPARISON - 2010-2040 (MET COUNCIL)



Household Income and Home Values

The growth and type of jobs available in North St. Paul will directly affect the level of household income in the city. The median household income will also affect the residents' ability to live in the community and the health of the retail sector as residents have additional discretionary income. In TABLE 6-9 is the comparison of the household incomes in North St. Paul and Ramsey County.

TABLE 6-9 – HOUSEHOLD INCOME (ESRI)

Income	North St. Paul		Ramsey County	
	Households	Percent	Households	Percent
Less than $15,000	478	9.6%	21,467	10.0%
$15,000 to $24,999	387	7.8%	22,093	10.3%
$25,000 to $34,999	529	10.7%	20,862	9.7%
$35,000 to $49,999	764	15.4%	29,347	13.7%
$50,000 to $74,999	846	17.0%	37,531	17.5%
$75,000 to $99,999	746	15.0%	27,048	12.6%
$100,000 to $149,999	842	17.0%	31,510	14.7%
$150,000 to $199,999	167	3.4%	13,047	6.1%
$200,000 or more	206	4.1%	11,941	5.6%
Total Households	8,787		214,846	

North St. Paul household income distribution follows the pattern for Ramsey County in general but does have a higher level of households in the mid-range of incomes ($50,000 – $149,999) then Ramsey County.

Comparison of Median Household Incomes

In addition to the breakdown of household income levels, another measure that can provide a different picture of the economic health of North St. Paul is the median household income. This allows for the extremes to have less of an influence on the comparison to different areas.

TABLE 6-10 - MEDIAN HOUSEHOLD INCOMES 2017 – NORTH ST PAUL (ESRI)

North St. Paul	Ramsey County	% of County	Twin Cities Region (7-County)	% of Region	State of MN	% of State
$57,449	$56,985	100%	$68,800	84%	$61,492	93%

Based on the comparison to Ramsey County, 7-County Metro Area and the State of Minnesota, North St. Paul has a lower the median income compared to both the 7 county Metro Area and the State, while matching the county median income. While these numbers indicate that the median income is lower in North St. Paul then other parts of the state, it does not take into consideration cost of living in North St. Paul which may result in a better balance of the quality of life in North St. Paul.

One of the key factors in cost of living is the cost of housing because of its large portion of a family's budget. The median value of an owner-occupied home is in North St. Paul is $205,083. Based on the standard affordability threshold of spending no more than 30% of income on housing and 20% on down payment, North St. Paul's median income of $57,449 would allow for the purchase at the median valued home in the city. This is based upon the family meeting the other home mortgage requirements like, credit score, length of employment, etc. Additional affordability may also be available should the city encourage the use of the first-time homebuyer programs.

TABLE 6-11 – NORTH ST. PAUL HOME VALUES (ESRI)

Home Value	North St. Paul		Ramsey County	
	Number	Percent	Households	Percent
Less than $50,000	99	2.9%	4,377	3.4%
$50,000 to $99,999	95	2.8%	6,262	4.9%
$100,000 to $149,999	318	9.3%	16,459	12.9%
$150,000 to $199,999	1,091	31.9%	25,779	20.2%
$200,000 to $249,999	1,028	30.1%	23,512	18.4%
$250,000 to $299,999	409	12.0%	17,445	13.7%
$300,000 to $399,999	262	7.7%	17,345	13.6%
$400,000 to $499,999	67	2.0%	7,942	6.2%
$500,000 to $749,999	32	0.9%	5,345	4.2%
$750,000 to $999,999	0	0.0%	1,763	1.4%
$1,000,000 or more	14	0.4%	1,320	1.0%
Total	3,415		127,549	
Median Value	$205,083		$223,174	
Average Value	$217,687		$261,964	

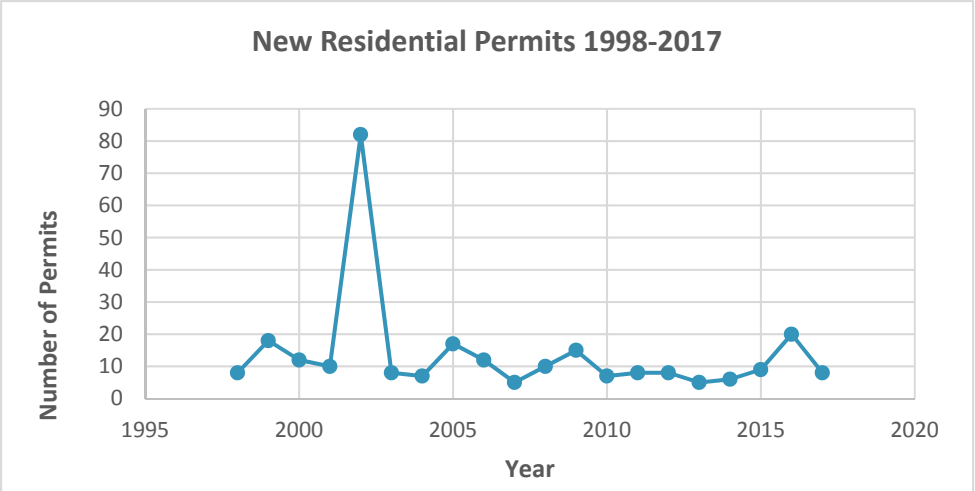
North St. Paul currently has a 5.7% of the housing units with a value of under $99,999 which represents 50% of the median home value. The City should consider the development of a program to allow for preventing these properties from continuing falling further below the median value. The development of this program should focus on the housing units below $50,000 to start and work up to the higher value properties. The program could include components like the mapping of property values, city purchasing of units, city compiling units and sites for redevelopment.

In addition to the current housing values in North St. Paul the number of new housing and value of those permits can also be a good indicator of the trends in the community. TABLE 6-12 gives a breakdown the building permits for new residential issued in North St. Paul over the last 19 years.

TABLE 6-12 BUILDING PERMIT VALUES 1998-2017 (CITY STAFF)

Year	Residential Permits[2]	Value ($)	Average New Home Value ($)	All Other Permits Value ($)	Total Permit Value ($)
1998	8	$1,066,200	$133,275	$8,232,886	$9,299,086
1999	18	$2,253,700	$125,206	$5,316,883	$7,570,583
2000	12	$298,600	$24,883	$14,852,484	$15,151,084
2001	10	$300,000	$30,000	$7,131,356	$7,431,356
2002	82	$12,345,235	$150,552	$5,578,801	$17,924,036
2003	8	$1,751,278	$218,910	$14,500,052	$16,251,330
2004	7	$1,036,594	$148,085	$9,655,276	$10,691,870
2005	17	$1,842,680	$108,393	$7,790,027	$9,632,707
2006	12	$2,351,687	$195,974	$8,991,960	$11,343,647
2007	5	$1,472,148	$294,430	$11,671,971	$13,144,119
2008	10	$1,054,510	$105,451	$5,963,547	$7,018,052
2009	15	$9,582,288	$638,819	$8,139,734	$17,772,002
2010	7	$516,622	$73,803	$11,423,546	$11,940,168
2011	8	$1,067,841	$133,480	$3,690,787	$4,758,628
2012	8	$1,443,600	$180,450	$2,602,339	$4,045,939
2013	5	$10,392,455	$2,078,491	$5,845,048	$16,237,503
2014	6	$251,190	$41,865	$5,756,690	$6,007,880
2015	9	$695,324	$77,258	$4,120,789	$4,816,113
2016	20	3,289,137	$164,457	5,587,406	8,876,543
2017	8	2,565,000	$320,625	5,919,324	8,484,324

FIGURE 6-3 NEW HOME PERMITS 1998-2017 (CITY STAFF)



[2] Multi-family housing units are issued under one permit. For example: all housing units for Polar Ridge were issued under one building permit.

North St. Paul has experienced some years of volatility in the new of residential permits issued, but has averaged 14 new permits annually over the period. This has also resulted in an average permit value for new home of $202,095 which fits closely to the average home value in the community. FIGURE 6-3 graphs the annual issuance of building permits in North St. Paul over the last 19 years.

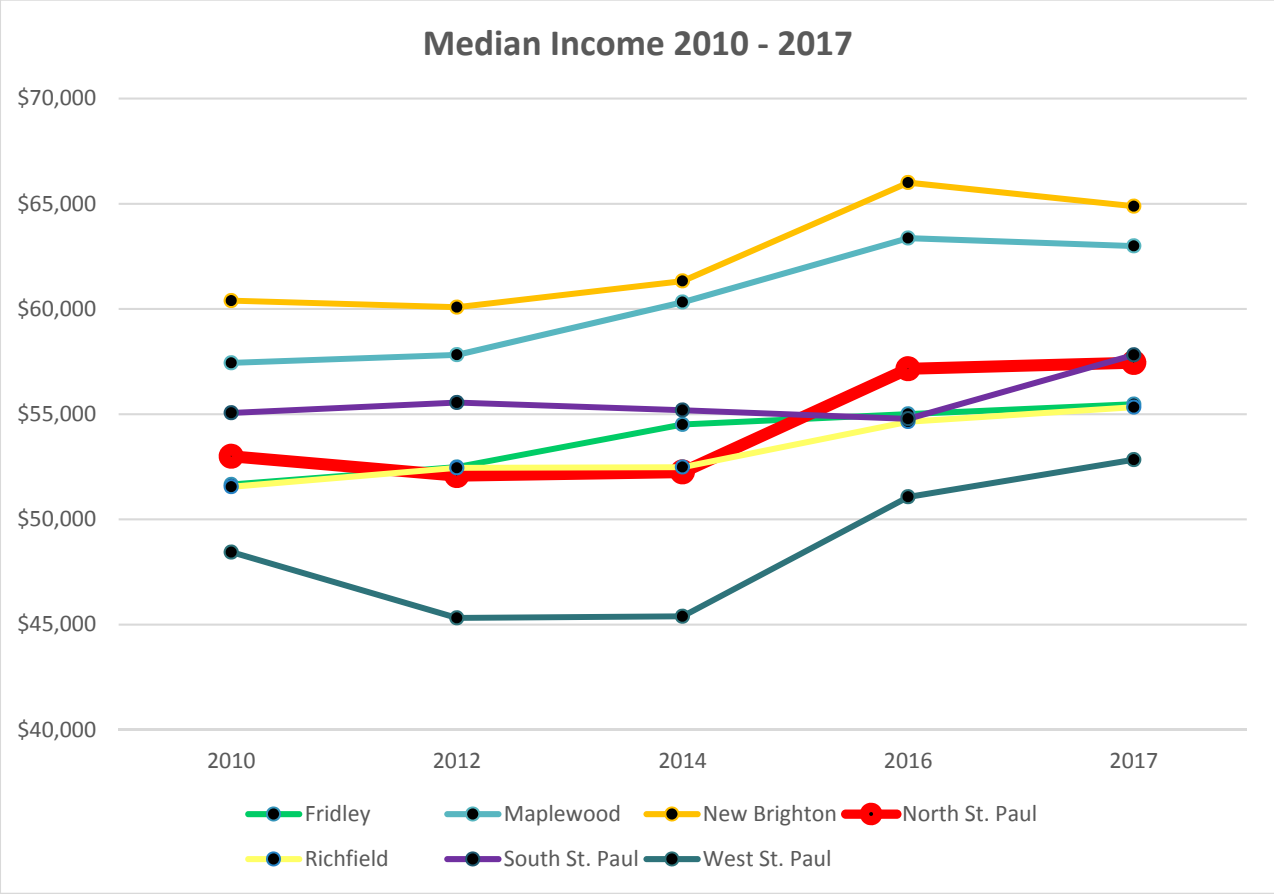
North St. Paul, in the effort to more fully understand the challenges facing the city has also compiled the following demographics of the comparison group. This information may provide North St. Paul with ideas about the relationship between the communities and ways to solve some of the issues facing the city. TABLE 6-13 compares the communities in the comparison group on several different criteria to determine the overall economic health of North St. Paul.

TABLE 6-13 COMMUNITY COMPARISON GROUP (ESRI)

Community	Population	Median Age	Average Household Size	Median Household Income
Fridley	27,905	38.1	2.4	$55,471
Maplewood	40,847	39.9	2.5	$62,993
New Brighton	23,213	41.4	2.4	$64,879
North St. Paul	**12,360**	**39.5**	**2.5**	**$57,449**
Richfield	37,895	38.1	2.4	$55,330
South St. Paul	20,678	38.6	2.4	$57,812
West St. Paul	20,210	40.9	2.3	$52,837

As shown above, North St. Paul median household income is the in the middle of the comparison group. However, we should also look at the trend of the median household income for the cities over the period since the last census in 2010. This timeframe will limit the effects of the economic downturn in 2007. All the cities in the comparison group have seen steady increases in their median incomes. North St. Paul has seen an increase of 8.4% during that time which places it behind Maplewood and West St. Paul. While West St. Paul had a 9.1% increase it should be noted that it had started with the lowest median income in the group.

FIGURE 6-4 – COMMUNITY COMPARISON HOUSEHOLD MEDIAN INCOME 2010-2017 (ESRI)

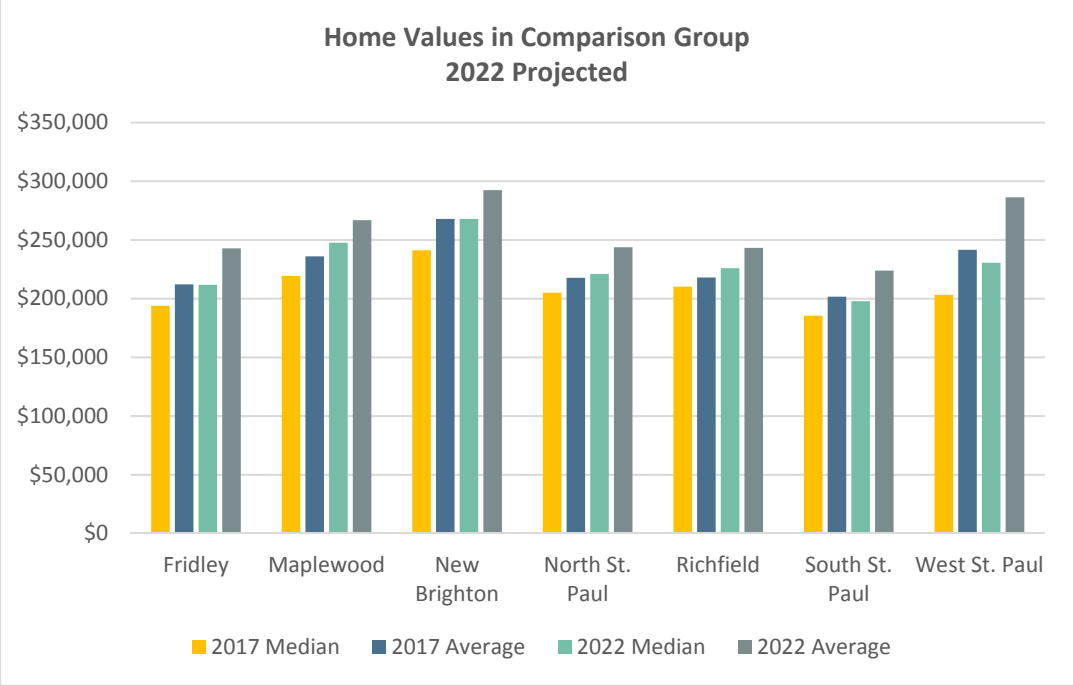


In the last year, the median income has leveled out showing only a 0.5% change. North St. Paul will need to pay attention to this trend to make sure that it recovers in the future and begins to increase. The City's goal of attracting higher paying positions will also work to reverse this recent trend.

In addition to median household income, single-family housing values also provide insight as to how North St. Paul compares to the other communities. FIGURE 6-5 shows a comparison of the home values in the comparison communities group using actual 2017 numbers and projected changes in 2022.

The City has seen a consistent growth in the median and average value of housing in the community. This trend has also been reflected across the comparison group for housing values. As this trend continues, North St. Paul's focus on the attraction of livable wage job will continue to be important for the city's growth.

FIGURE 6-5 HOME VALUES IN COMPARISON GROUP 2017 – 2022 (ESRI)

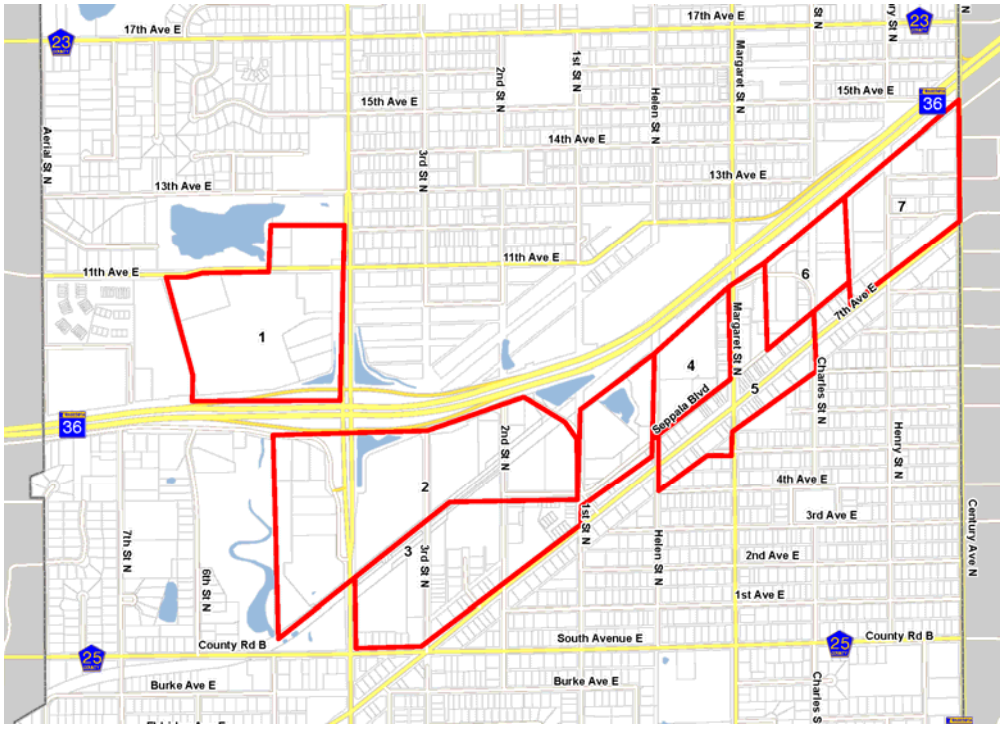


Redevelopment Districts

North St. Paul has identified 6 primary redevelopment districts in the community as shown in Figure 6-6. These districts are consistent with the districts that have been identified in the North St. Paul Redevelopment Master Plan. In addition to the districts identified in the master plan the City has also included a seventh district that is the area surrounding the Target Store. The proposed redevelopment districts are shown on the attached map. While the map shows boundaries for the 7 different districts the actual boundaries could be adjusted to allow for the completion of future projects.

As stated in the Master Plan, these districts are organized into similar land uses and urban design relationships. Many of the proposed development projects will be of similar use, size and scale and overall aesthetics. The following is a summary of some of the unique opportunities in each district.

FIGURE 6-6: REDEVELOPMENT DISTRICTS



1 = *Target Retail District* •

- Focus on the redevelopment of the area for greater tax generation.
- Area is comprised of older retail uses that are not currently maximizing property tax generation.
- Area was developed with significant impervious surfacing that has limited the repositioning of the area as a retail hub for the community.

2 = *McKnight Employment Center District*

- Develop light industrial/office, Flex/office warehouse, limited production on the northern portion of the Anchor Block Site.
- Utilize a combination of redevelopment and reinvestment for select areas west of McKnight for office, office/flex, and commercial uses.
- Plan for long-term redevelopment of entire Sste, but recognize and mitigate the impacts on immediate and short term development.
- Investigate a potential educational component (trade school/vocational school) as a potential user and integrate the environmental learning center.

- Strengthen connections to new live/work district to the south and to the regional trail.

3 = *West End Housing & Redevelopment District*

- Maintain recent, existing quality housing (apartments & townhomes).
- Balance housing redevelopment across all phases of redevelopment based on market conditions.
- Develop a neighborhood park as an amenity for surrounding residential
- Create a strong connection to downtown along a newly created parkway and enhanced 7th Avenue

4 & 6 = *Core Employment Reinvestment District*

- Redevelop the McPhillips site to more intensive office/medical employment.
- Continue reinvestment and adaptive uses on properties throughout the district as they become available.

5 = *Downtown District* •

- Focus on commercial / retail redevelopment and reinvestment at the core.
- Create an intentional compression of retail / commercial uses at the core with more mixed-use transition blocks at the edges of downtown.
- Continue to invest in the pedestrian realm along 7th Avenue and Margaret Street.
- Allow for increased residential development on 2nd and 3rd stories.
- • Convert Seppela Boulevard to pedestrian-friendly, multi-functional corridor.
- Maintain alley / service functions for 7th Avenue businesses.
- Develop a downtown park/square feature as a community destination and gathering space.

7 = *Commerce Park Redevelopment District*

- Redevelop convenience retail near the Highway 36 intersection.
- Develop office, mix or light industrial internalized and focused on Henry Street.

- Utilize high quality building materials on sites along the perimeter of the district.
- Design roadways with enhanced streetscape and district identity.
- Make a stronger connection to the Gateway Trail.

The City of North St. Paul will be using significant city resources to help encourage and assist in the redevelopment of the districts. The level of possible assistance will be based on the type and the quality of the project that has been proposed. In addition, the level to which the proposed project fits the goals of the community will also be a factor in the level of possible assistance. It is anticipated that the City may be required to be actively involved with a developer in the project including the assembly of properties to encourage the project to occur.

TABLE 6-14 shows some of the possible financial assistance programs that the City may use to assist with the redevelopment of the districts.

TABLE 6-14 FUNDING ASSISTANCE PROGRAMS

Tool	Description	Funding Source
Tax Increment Financing	The most commonly used tool to enable redevelopment and already used by the City.	City
Tax Abatement	Tax abatement may be considered to help pay for public improvements, redevelop blighted areas, provide employment opportunities, or help provide access to services	City, County, School District
Special Taxing Districts	Enabled by state statute, can be set up by an EDA to fund redevelopment	City
Livable Communities Grants	These grants fall into several categories focused on housing (LHIA), transit-oriented development (TOD), tax-base revitalization (TBRA) and that links housing, jobs, and services (LCDA)	Metropolitan Council
Special assessments	Special assessment districts can be created to pay for infrastructure projects.	City
Federal Grants	Community Economic Development Strategy Program and Low-Income Housing Tax Credits	EDA, HUD
Infrastructure Requirements	Adjustment of the requirements for infrastructure to help the area redevelop in a pattern that supports current usage trends	City
Ramsey County Economic Gardening Program	Geared toward cultivating home-grown businesses looking to grow and expand; provides technical assistance and focused research.	County
DEED Redevelopment Grant Program	Helps communities with the costs of redeveloping blighted industrial, residential, or commercial sites and putting land back into productive use.	State

Tool	Description	Funding Source
Clean Up Revolving Loan Program	Provides low-interest loans to clean up contaminated sites that can be returned to marketable use	EPA
Contamination Clean Up and Investigation Grant	Helps pay for assessing and cleaning contaminated sites for private or public redevelopment	State
Demolition Loan Program	Helps with the costs of demolishing blighted buildings on sites that have future development potential but no current plans.	State
Ramsey County Environmental Response Fund	Program focused on brownfield sites, that helps project partners clean up contaminated properties.	County
Eminent Domain	Only for "Public Use" or "Public Purpose" (	City

GOALS AND TASKS

Goal 1 – Develop a comprehensive marketing plan that promotes the community in a positive fashion.

Task 1 – Create a plan that focuses on the location of the community and its proximity to Minneapolis and St. Paul.

Task 2 – Target specific industries that fit with the community targets and available workforce.

Task 3 - Assemble core stakeholder group, including the Economic Development Authority and NSP Business Association, to work with Economic Development staff to develop a marketing and branding strategy.

Task 4 - The strategy should utilize social media and encourage tourism while promoting the City and its businesses.

Goal 2 – Create infrastructure necessary to retain and attract desirable businesses and promote an innovative business environment through parking, technology and multi modal opportunities.

Task 1 – Develop and implement a comprehensive downtown master plan for public improvements, which promotes/encourages future investment and business growth in the downtown area

Task 2 –Identify specific industries that fit with the community goals and available workforce.

Task 3 – Review development requirements to make sure they are project friendly while still meeting the needs of the community. Consider adopting the Urban Land Institute's (ULI-MN) Redevelopment Ready and DEED's Shovel Ready programs

Goal 3 - Utilize land use planning to enhance job growth and continued economic health throughout all areas of the City.

Task 1 - Inventory, research and analyze land areas of the City that appear to be underutilized, underperforming or antiquated.

Create effective land use strategies for economic sustainability of the City.

Task 2 - Identify the types of land uses and related building types that promote job generation and job retention to encourage economic growth in the City. Establish a process by which the preservation or creation of job producing land uses is reviewed periodically by City staff.

Goal 4 – Develop a plan to allow for the growth of the tax base of the community through growth and redevelopment of the identified districts.

Task 1 – Identify additional districts in the community to focus on for redevelopment opportunities.

Task 2 – Create and/or implement programs to facilitate the acquisition and redevelopment of the identified sites.

Task 3 – Find funding sources and work with the partners to allow for the successful acquisition of additional resources projects.

Chapter 7

Downtown

CHAPTER 7: DOWNTOWN

Downtown is the heart of the North St. Paul community. It is a unique resource that other inner-ring Twin Cities suburbs do not have, and is a key contributor to the City's identity. It has also been the subject of much discussion and planning over the past decade. This chapter will summarize those efforts as well as introduce the Downtown Master Plan.

PLANNING HISTORY

Several plans and studies undertaken by the City have components that directly or indirectly relate to Downtown North St. Paul. Those include the Living Streets Plan, the City's Strategic Plan, the Downtown Design Manual, and the Redevelopment Master Plan. All of these efforts have, in some way or another, studied pieces of the downtown and provided strategies for its improvement.

In 2014, the City began a process to engage the community in a larger discussion of revitalizing the downtown centered around its infrastructure. This downtown revitalization project included several types of community engagement (described in "What We Heard" below), and eventually led to the Downtown Master Plan that will be introduced in this Chapter.

WHAT WE HEARD

During the downtown revitalization project between 2014 and 2016, the City gathered input from the community in several ways:

Community Conversation

In 2015, a series of meetings with the community, with citizens, and with downtown businesses, resulted in preliminary identification of issues facing the downtown and ideas for how to improve it. Figure 7-1 shows that preliminary issues map and Figures 7-2 and 7-3 are Venn Diagrams of the improvement ideas generated from those conversations.

FIGURE 7-1 DOWNTOWN ISSUES MAP

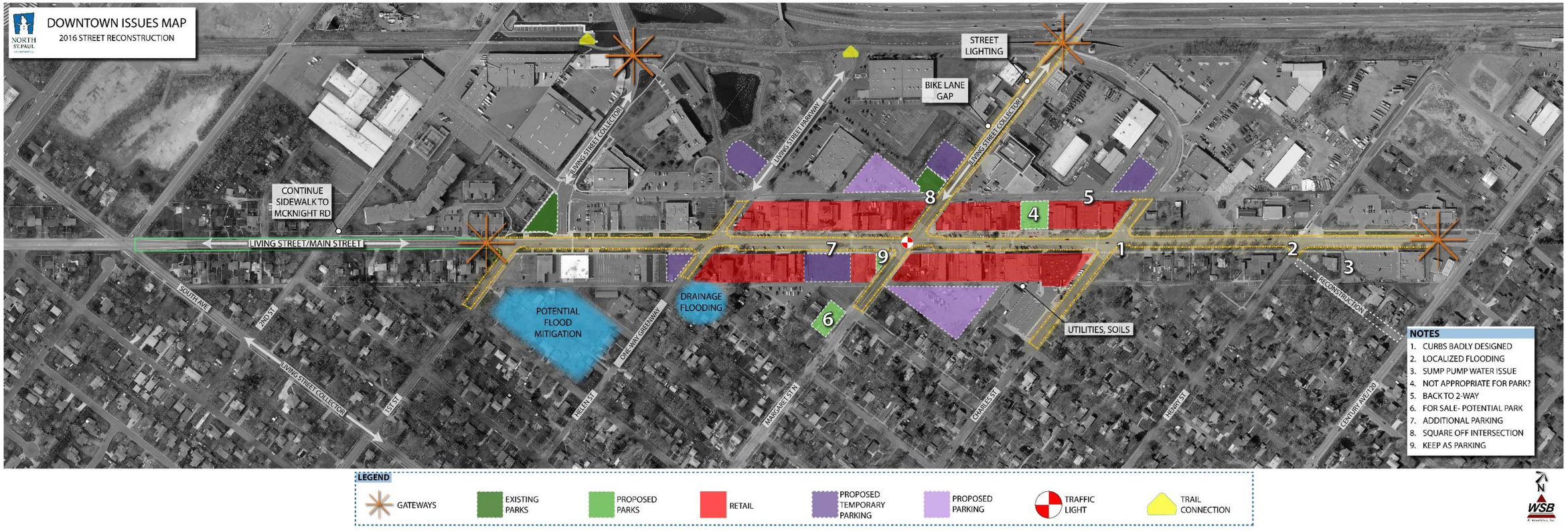


FIGURE 7-2 PUBLIC INPUT ON IMPROVING THE IMAGE OF DOWNTOWN

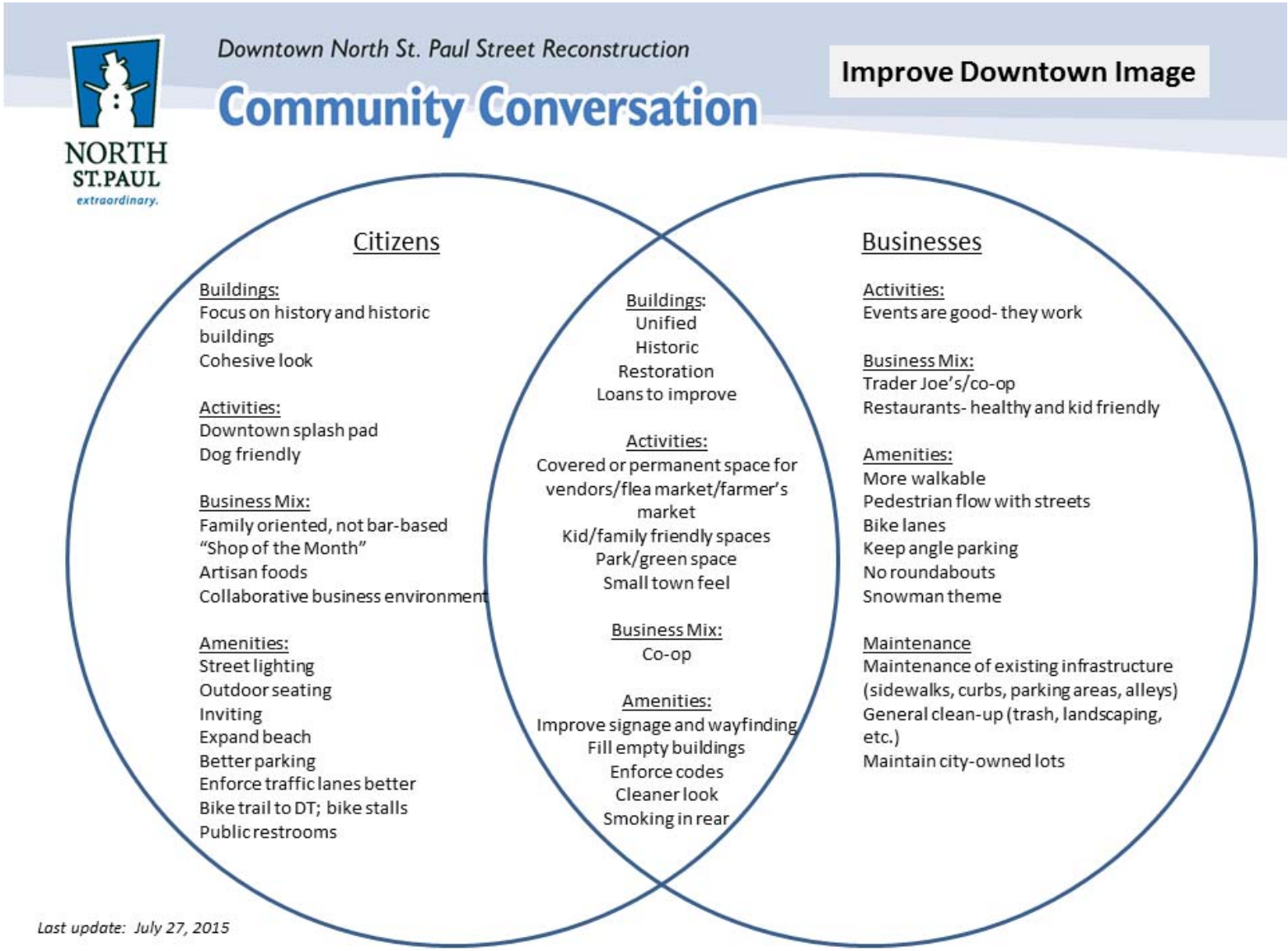
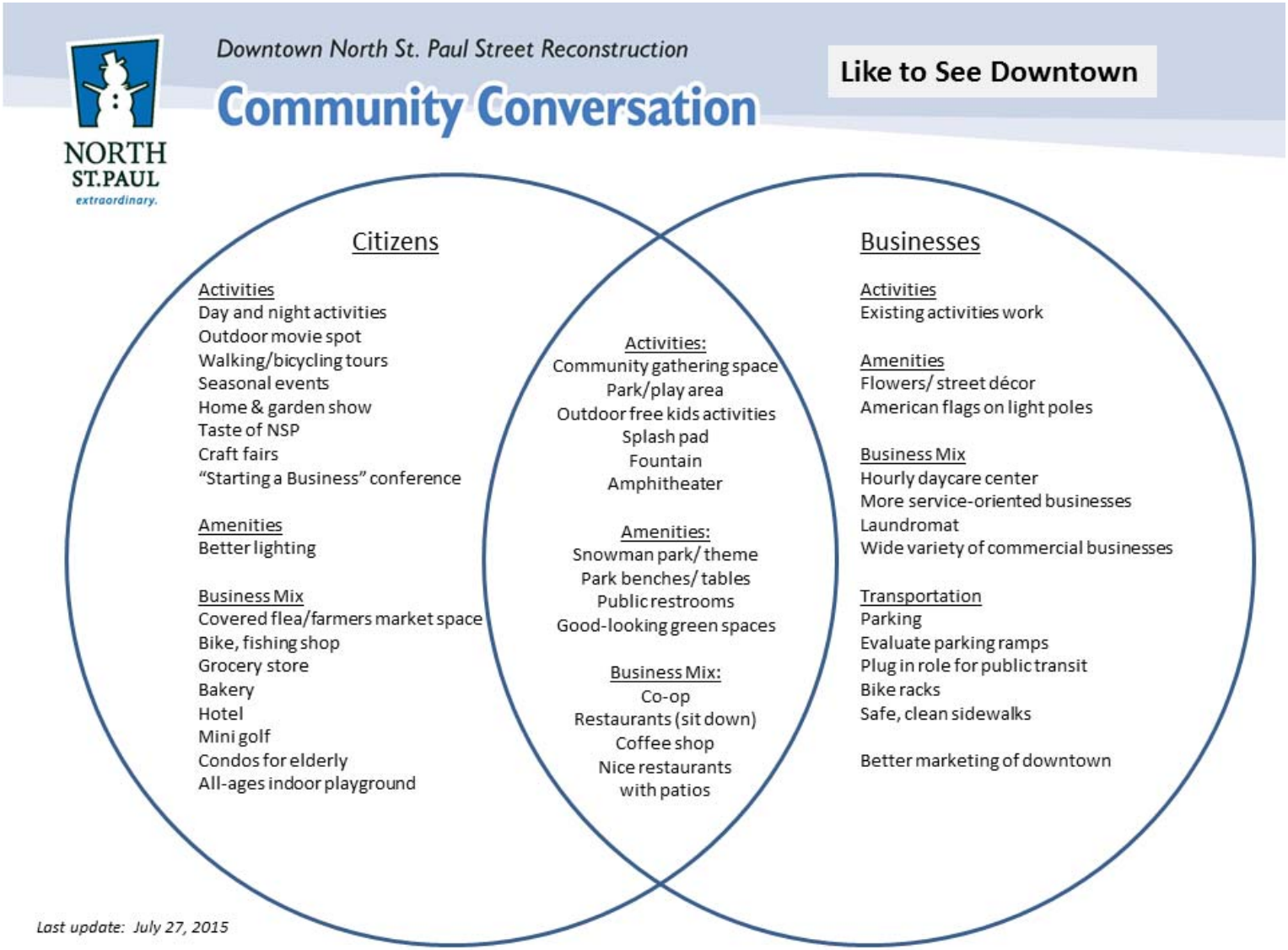


FIGURE 7-3 PUBLIC INPUT ON HOW RESIDENTS WOULD LIKE TO SEE DOWNTOWN IN THE FUTURE



In addition to those meetings, additional input on downtown issues and needs was gathered during the summer and fall of 2015 during the annual Car Show as well as a bus/walking tour of similar cities sponsored by the City.

Visual Preference Survey

Based on the issues and needs from the initial rounds of public engagement, the City created a Visual Preference survey in 2016 to get more feedback from residents and business owners about how the downtown should look, feel and function. Participants were given visual examples and asked their preferences for pavement types, concrete types, plantings, site amenities (such as benches and lighting), gathering spaces, active v. passive spaces, and overall corridor appearance. Table 8-1 shows a summary of the highest scores in each category:

TABLE 8-1

Overall Category	Design Type	Average Score	
Pavement type	Concrete	2.35	
	Decorative concrete	2.58	
	Pavers	**2.93**	
Concrete styles	Pattern	2.54	
	Color	1.90	
	Texture	**3.23**	
Planters	Formal	2.20	
	Raised planters	2.84	
	Rain gardens	**3.27**	

Site Amenities	**Antique**	**3.20**	
	Modern	1.61	
	Custom	2.00	
Gathering spaces	Open lawn	2.64	
	Pocket plaza	2.50	
	Downtown plaza	**2.83**	
Active vs. Passive Space	Active Play	2.31	
	Active Water play	2.30	
	Passive Park	**2.92**	
Corridor Appearance	Simple	2.17	
	Lightly developed	**2.60**	
	Parkesque	2.33	

Downtown Goals and Policies

From the public engagement of the downtown revitalization process, as well as the output of all of the previous planning process, several guiding values for the downtown emerged.

Aesthetics and Image: Create a positive visual image for the downtown through high-quality design, materials and graphics. The downtown design should be user-friendly, encourage redevelopment, and communicate a distinct identity for the district.

Policies:

- Make downtown visually interesting at a small town scale.
- Ensure quality design and superior aesthetics of development.
- Possess a progressive image for redevelopment while maintaining a sense of the community heritage.

- Design transportation improvements to enhance the functional and aesthetic character of the road or facility.
- Enhance the appearance of streets through boulevard landscaping, careful placement of necessary signs, underground utilities when improvements are made and by providing decorative street lights.
- Create user friendly edges and provide more form to downtown
- Include graphics to provide useful and appealing information, add street interest, and to celebrate downtown.
- Create new landmarks and gateways to better signal the arrival into downtown.
- Landscaping/streetscape –
    - Establish more complete landscaping to enjoy and feature the four seasons.
    - Implement streetscape improvements, especially where downtown interfaces with redevelopment in the State Highway 36 corridor.
    - Develop and implement a tree planting program along major streets and highways and in redevelopment areas. Also, coordinate this effort with the active living and bench locations.
    - Create a strong place identity by providing uniformity and consistency in the character of the streetscape.
- Signage –
    - Expand redevelopment district signage to include signage and wayfinding for trail users to better navigate to the downtown commercial district.
    - Provide enhanced wayfinding and signage for visitors arriving via Hwy 36 and the Gateway Trail into downtown.

Parking and Transit: Provide adequate, convenient parking that is both functional and visually appealing. Incorporate public transit into downtown reconstruction project where possible, including aesthetic and functional upgrades to transit stops.

Policies:

- Provide adequate and convenient parking on streets, in lots and perhaps in small parking decks designed for visual and functional appeal.
- Allow and promote shared parking.

- Support improvement, expansion and upgrades to the transit system and seek alignment for light rail or similar forms of new transit.
- Create functional and aesthetic transit stops which encourage transit use and compliment the area.

Circulation and Design: Create a balanced transportation system downtown which safely accommodates multiple modes and users (pedestrians, bicycles, automobiles, trucks and transit vehicles). Design streets to accommodate future modifications to adjacent areas (such as those identified in the Living Streets Plan).

Policies:

- Enhance pedestrian and vehicle circulation in a friendly, functional and aesthetic manner.
- Balance and coordinate multiple functions within a right-of-way; for example, the road, boulevard, landscaping, pedestrian-way, sidewalk or trail, decorative street lighting, traffic control signage, transit stops, snow storage and, in some cases, on-street parking which all compete for space within the ROW.
- Use change and redevelopment to implement active living goals, especially as related to placement of sidewalks, benches and other street functions such as bike racks, lighting, bus stops.
- Transportation -
    - Construct a pedestrian link between downtown, the Gateway State Trail, State Hwy 36, North H.S. and McKnight Field.
    - Support construction of pedestrian and bike links for transportation and recreational use to and from neighborhoods, schools, Gateway State Trail, downtown (including Polar Ridge), activity centers and community facilities (including the Library).
- Parks, Open Spaces and Trails –
    - Enhance the (parks, open space and trails) system through making functional improvements and expanding the system into redevelopment areas.
    - Construct proposed trails as shown on the Parks, Open Space and Trails Plan.
    - Develop a downtown park/square feature.
- Street Design –

- Limit intersections to no more than 4 intersecting streets and improve the intersection design and safety features at problem intersections.
- Employ traffic calming methods.
- Incorporate amenities for the handicapped in transportation improvements.
- Design key intersections to accommodate future street types included in Living Streets Plan.

Water Quality and Stormwater Management: Incorporate stormwater management solutions that control runoff and infiltration into the downtown street design as a means of improving overall water quality.

Policies:

- Incorporate runoff control, infiltration, and other BMPs into infrastructure and redevelopment projects as a means to improve stormwater management.
- Preserve, maintain and improve stormwater storage and detention systems to control excessive volumes and rates of runoff, control flooding, to protect public health and safety, and to prevent the inundation of occupied structures.
- Utilize stormwater treatment as an amenity throughout the district
- Initiate projects and programs consistent with the Surface Water Management Plan.
- Encourage the use of rain gardens and similar techniques to reduce and control runoff and enhance water quality.
- Utilize boulevard filtration systems in planter boxes for public streets (approximately 5% of required volume).

Energy: Incorporate alternative energy and underground utilities into downtown street designs where feasible.

- Modify facilities and provide underground electric service to accommodate redevelopment in downtown and expansion of downtown north on Margaret St.
- In concert with redevelopment, underground the feeder lines and services on Seppala.
- Repair, upgrade and maintain the electricity system to provide quality, reliable service in a cost-effective manner.
- Alternative Energy –

- Seek out opportunities to generate electricity from wind and solar sources.
- Promote effective and aesthetic use of solar energy for certain public uses.

Services, Capital Improvements and Financing: Include service provision, maintenance costs, and overall timing of Capital Improvements as considerations in the downtown street redesign.

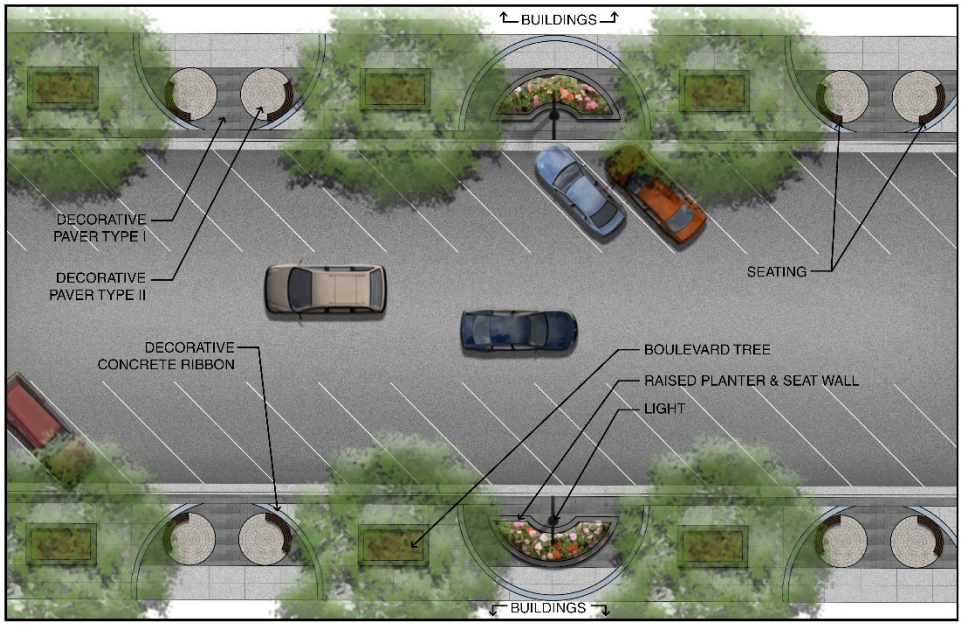
- Consider establishing a special service district, supported by a levy, to maintain and enhance the downtown public areas.
- Continue to achieve a high level of cleanliness and protect runoff quality on City streets through regular sweeping.
- Plan & Coordinate location and scheduling of capital improvements in an efficient manner.
- Prepare and implement the CIP.

Downtown Master Plan

The culmination of the public engagement efforts from 2014-2016 is the Downtown Master Plan, which is included as Appendix ____ to the Comprehensive Plan. The Downtown Master Plan provides a design for the public realm of the downtown, taking into account the goals from this chapter and the public input gathered since 2015. It is the intent of the City to use this Plan as a springboard for a future street reconstruction project and reinvestment project in the downtown. The City intends its public investment in infrastructure as a catalyst for private investment in the downtown.

The Master Plan divides the study area into three distinct character zones, with different cross-sections, parking schemes, non-motorized trails and landscaping. The design for the core downtown area includes preservation of the angled parking, decorative pavers along the sidewalk, raised planters and seating areas near the street.

FIGURE 7-4 ENLARGEMENT OF DOWNTOWN CORE SECTION CONCEPT DESIGN



The section to the west of the core downtown area, with less dense commercial development and buildings sitting back from the street, is characterized by a planted median and wide multi-use trail on both sides of the street. The median is meant to serve as a clear entry to the City.

FIGURE 7-5 CROSS SECTION OF DOWNTOWN CORE AREA

FIGURE 7-6 CONCEPT DESIGN FOR 7TH AVE. E. AND MARGARET ST.

The intersection of 7th Avenue East and Margaret St. is a special focus of the Downtown Master Plan. Bump-outs have been incorporated at the corners to slow traffic, clearly define angled parking areas, allow for landscaped areas, and make for easier pedestrian crossings.

FIGURE 7-7 CROSS SECTION OF WESTERN COMMERCIAL PORTION OF THE 7TH AVENUE CORRIDOR

And finally, the eastern portion of the corridor which is more residential in character, is also designed with the median concept. Areas for on-street parallel parking are also included, which will not only provide parking spaces but will

help to slow traffic and provide a buffer for people walking or biking and driving traffic along 7th Ave.

The Downtown Master Plan will be the key implementation measure for this chapter. Elements of the Plan will be incorporated into the City's Capital Improvements Plan as part of the next downtown area street reconstruction project cycle.

Chapter 8

Transportation

CHAPTER 8: TRANSPORTATION

INTRODUCTION

The transportation system in North St. Paul operates generally well today. The city's multimodal transportation system includes facilities for vehicles, freight, walking, bicycling and transit. Facilities are operated by a number of agencies, including the City of North St. Paul, Ramsey County, the Minnesota Department of Transportation (MnDOT), and the Minnesota Department of Natural Resources (DNR).

This transportation chapter has been prepared in compliance with State of Minnesota Statutes and applicable Metropolitan Council guidelines. As part of this Plan, the city has reviewed existing and future conditions for each mode and identified safety, operations, and network improvements that will be important to address over the 2040 planning horizon. The city has also developed goals and strategies to preserve and improve the transportation system.

This transportation plan includes the following information:

1. Summary of Regional Strategies
2. Existing Roadway System
3. 2040 Traffic Forecasts and Roadway Network Planning
4. Existing and Planned Non-Motorized Transportation Network
5. Freight Network
6. Transit
7. Aviation
8. Goals and Multimodal Strategies
9. Proposed Short and Long Range Roadway Projects
10. Public Comments
11. Conclusion and Next Steps

TRANSPORTATION GLOSSARY

CIP: Capital Improvement Plan – five year plan for capital investments in the transportation system and in other capital assets owned by the city (equipment, buildings, etc.).

CR: County Road – county-owned roadway that does not receive State funding.

Critical Crash Rate: Statistical indicator of a safety problem at a location. If crash rates at a location are above the critical crash rate, it indicates that the location has a crash rate that is statistically significant compared to similar roadways.

CSAH: County State Aid Highway – county-owned roadway that receives State Aid funding.

MnDOT: Minnesota Department of Transportation.

RBTN: Regional Bicycle Transportation Network – existing and planned regional bicycle network established by the Metropolitan Council.

TH: Trunk Highway – State highway owned and operated by MnDOT.

TPP: Transportation Policy Plan – Regional transportation plan for the Twin Cities metropolitan region, developed by the Metropolitan Council.

1. Summary of Regional Strategies

This Plan has been prepared to be consistent with the regional transportation strategies outlined in the Metropolitan Council 2040 Transportation Policy Plan (TPP). Similar to this Plan, the TPP evaluates the existing transportation system, identifies transportation challenges to the region, and sets regional goals, objectives, and priorities to meet the transportation needs of current residents while accommodating the region's anticipated growth. The TPP also guides local agencies in coordinating land use and transportation and establishes regional performance measures and targets.

The TPP is guided by the following goals:

- Transportation system stewardship: Sustainable investments in the transportation system are protected by strategically preserving, maintaining, and operating system assets.
- Safety and Security: The regional transportation system is safe and secure for all users.
- Access to Destinations: People and businesses prosper by using a reliable, affordable, and efficient multimodal transportation system that connects them to destinations throughout the region and beyond.
- Competitive Economy: The regional transportation system supports the economic competitiveness, vitality, and prosperity of the region and State.
- Healthy Environment: The regional transportation system advances equity and contributes to communities' livability and sustainability while protecting the natural, cultural, and developed environments.
- Leveraging Transportation Investment to Guide Land Use: The region leverages transportation investments to guide land use and development patterns that advance the regional vision of stewardship, prosperity, livability, equity, and sustainability.

Funding is a key constraint that is acknowledged in the TPP. Current transportation revenue will not meet the region's transportation needs through 2040. As a result, the TPP includes two long-term investment scenarios: a fiscally-constrained scenario that identifies projects anticipated to be funded based on current revenue projections, and an increased revenue scenario that identifies project priorities should additional transportation funding become available.

Under the current revenue scenario, the TPP is focused on operations and maintenance of the existing transportation system. Investments in highway mobility and access are limited to those projects that address multiple TPP goals and objectives. The increased revenue scenario would allow additional investments in operations and maintenance, as well as regional mobility, access, safety, and bicycle/pedestrian improvements. However, congestion cannot be greatly reduced under even the increased revenue scenario. Under both scenarios, proposed investments are focused on areas of the metro with the greatest existing and future challenges and anticipated growth.

The Metropolitan Council classifies North St. Paul under the Urban Community Designation. Based on *Thrive MSP 2040*, Urban areas are expected to plan for forecasted population and household growth at average densities of at least ten units per acre for new development and redevelopment. These communities are also expected to target opportunities for more intensive development near regional transit investments.

2. Existing Roadway System

The sections below provide information about the existing roadway system in North St. Paul, including existing number of lanes, existing roadway jurisdiction, existing functional classification, existing traffic, existing safety, and access management. This chapter also includes summary recommendations from recent plans and corridor studies.

2.1. Functional Classification

The functional classification system groups roadways into classes based on roadway function and purpose. Functional classification is based on both transportation and land use characteristics, including roadway speeds, access to adjacent land, connection to important land uses, and the length of trips taken on the roadway.

The **functional classification system** organizes a roadway and street network that distributes traffic from local neighborhood streets to collector roadways, then to minor arterials and ultimately the principal arterial system. Roads are placed into categories based on the degree to which they provide access to adjacent land and mobility for through traffic. Functional classification gives an indication of the relative hierarchy of roadways in the transportation network.

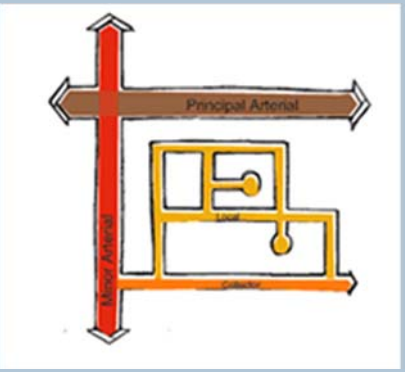


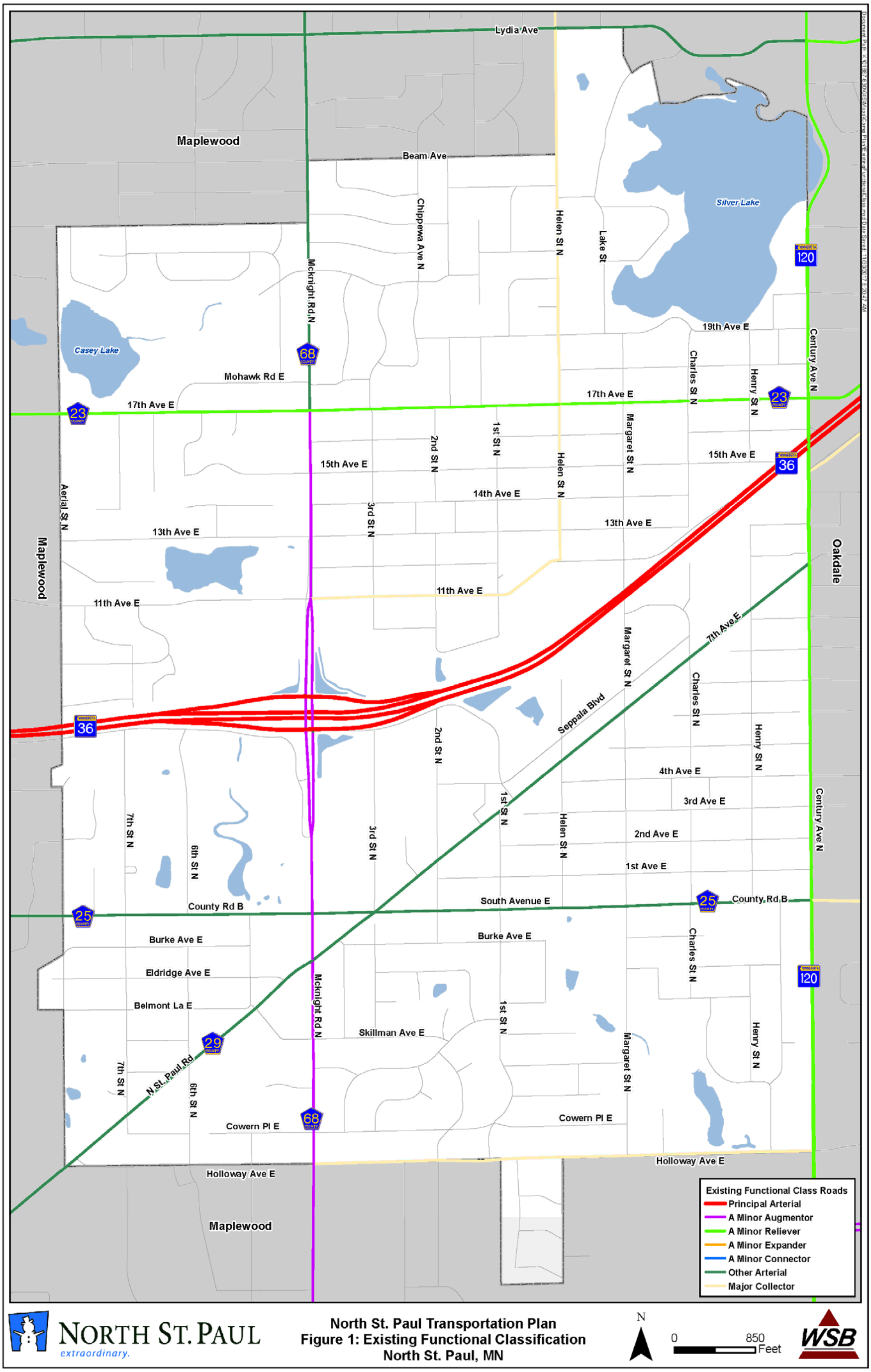
Image: MnDOT

Four classes of roadways are included in the seven-county metropolitan area functional classification system: principal arterials, minor arterials, collector streets, and local streets. Figure 1 shows the existing functional classification of each road in the City of North St. Paul and Figure 2 shows the existing roadway jurisdiction. The following sections describe each functional class in greater detail and indicate which roadways fall into each classification.

2.1.1. Principal Arterials

Principal arterials are roadways that provide the greatest level of mobility and access control. Within the metropolitan area, the great majority of principal arterials are under MnDOT jurisdiction. Principal arterials are typically Interstate highways or other state or US freeways or expressways. These facilities are intended to serve trips greater than eight miles and express transit trips. Spacing of principal arterials varies within developing areas of the metropolitan area.

Typically, these facilities are spaced between two and six miles apart. These facilities connect regional business and commercial concentrations, transportation terminals, and large institutions within the metropolitan area. Principal arterials also connect to other cities, regions, and states outside of the metropolitan area.


Lydia Ave
Maplewood
Beam Ave
Chippewa Ave N
Helen St N
Lake St
Silver Lake
Century Ave N
19th Ave E
Mcknight Rd N
Casey Lake
Mohawk Rd E
17th Ave E
Charles St N
Henry St N
Margaret St N
15th Ave E
2nd St N
1st St N
Aerial St N
14th Ave E
3rd St N
13th Ave E
11th Ave E
Oakdale
7th Ave E
Seppala Blvd
4th Ave E
3rd Ave E
2nd Ave E
1st Ave E
7th St N
6th St N
County Rd B
South Avenue E
Burke Ave E
Eldridge Ave E
Belmont La E
Skillman Ave E
N St. Paul Rd
Cowern Pl E
Holloway Ave E
Maplewood
Existing Functional Class Roads
Principal Arterial
A Minor Augmentor
A Minor Reliever
A Minor Expander
A Minor Connector
Other Arterial
Major Collector
NORTH ST. PAUL
extraordinary.
North St. Paul Transportation Plan
Figure 1: Existing Functional Classification
North St. Paul, MN
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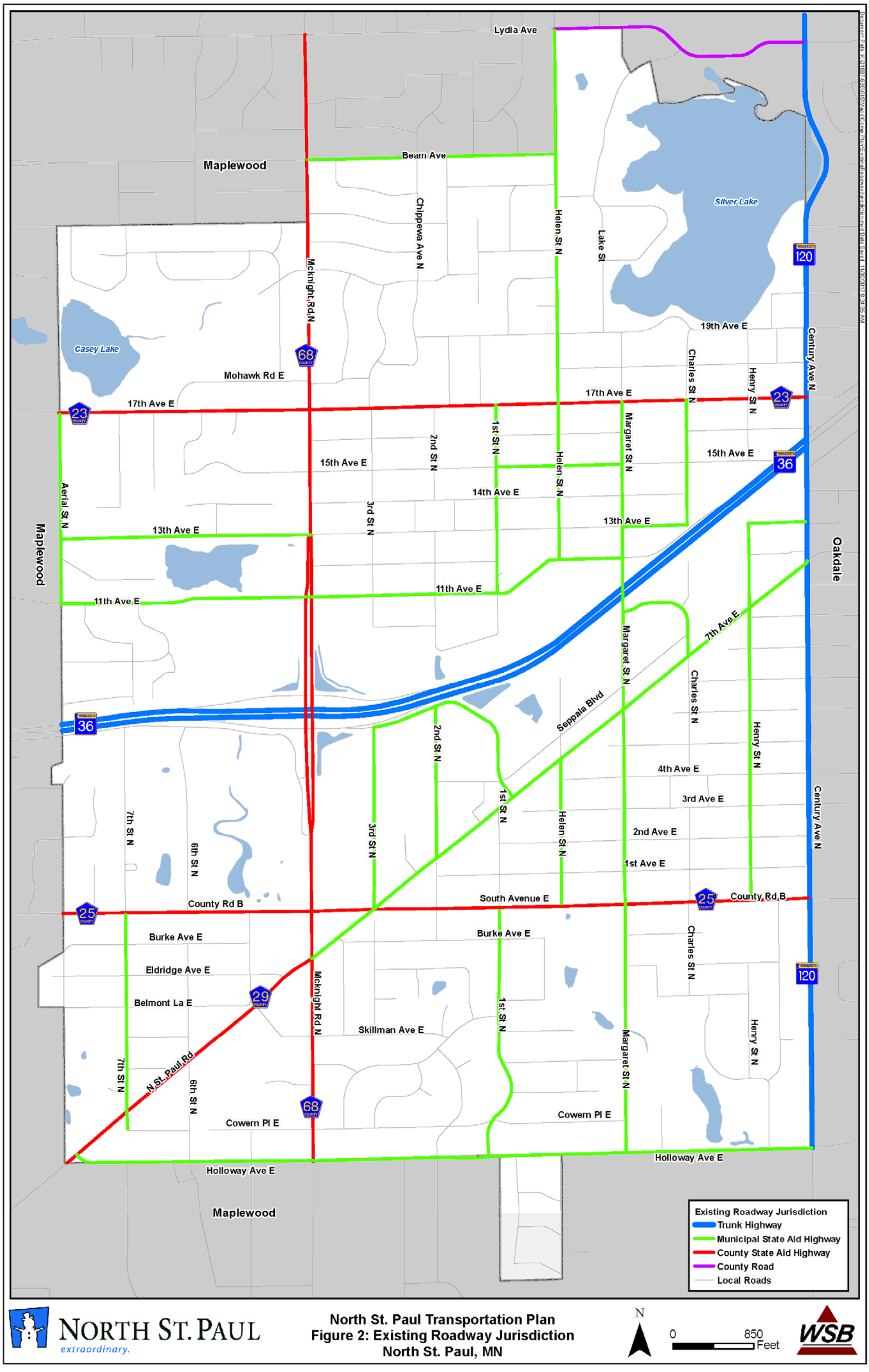
850
Feet
WSB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Helen St N
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Silver Lake
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Henry St N
Margaret St N
Casey Lake
Mohawk Rd E
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15th Ave E
2nd St N
1st St N
14th Ave E
3rd St N
13th Ave E
Aerial St N
11th Ave E
Oakdale
7th Ave E
Seppala Blvd
4th Ave E
3rd Ave E
2nd Ave E
1st Ave E
6th St N
7th St N
South Avenue E
County Rd B
Burke Ave E
Eldridge Ave E
Belmont La E
Skillman Ave E
N St. Paul Rd
Cowern Pl E
Holloway Ave E
Maplewood
Existing Roadway Jurisdiction
Trunk Highway
Municipal State Aid Highway
County State Aid Highway
County Road
Local Roads
North St. Paul Transportation Plan
Figure 2: Existing Roadway Jurisdiction
North St. Paul, MN
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0
850
Feet
NORTH ST. PAUL
extraordinary.
WSB

Principal arterials are intended to maintain average speeds of 40 mph during peak traffic periods. To maintain mobility and speeds on principal arterials, land access and transportation system connections are limited. There is little to no direct land access from principal arterials. Intersections are limited to interstate freeways, other principal arterials, and "A" Minor arterials. Access points are typically grade-separated or controlled with a signal and are spaced one to two miles apart.

One existing principal arterial is located within North St. Paul. Trunk Highway (TH) 36 crosses the city from west to east, with access provided at the McKnight Road (CSAH 68) interchange and Century Ave. (Trunk Highway 120). TH 36 connects North St. Paul with Minneapolis to the west via I-35W and Stillwater and Wisconsin to the east. The 2040 Transportation Policy Plan does not propose any additional principal arterials within the city.

2.1.2. Minor Arterials

Minor arterials maintain a focus on mobility but provide more land access than principal arterials. Within North St. Paul, minor arterials are under the jurisdiction of MnDOT, Ramsey County, and the City of North St. Paul. Minor arterials are intended to serve trips of four to eight miles in length. Within developing areas of the metro, these facilities are spaced between one and two miles apart. Minor arterials connect cities and towns within the region and link to regional business and commercial concentrations. Access points along minor arterials are generally at-grade and typically controlled with signals or stop signs.

During peak traffic, minor arterials in developing areas are intended to maintain 30 mph average speeds. As a result, transportation system connections are limited to interstate freeways, other principal arterials, other minor arterials, collectors, and some local streets. Land access is limited to concentrations of commercial and industrial land uses. The Metropolitan Council has established a system of "A" Minor and "B" Minor arterials. "A" Minor arterials are eligible for federal funding administered by the Metropolitan Council.

The Metropolitan Council has further split "A" Minor arterials into four types, described below:

- Relievers: Arterials located parallel to congested principal arterials. The purpose of "A" Minor Relievers is to provide additional capacity in congested corridors.

- Augmenters: Arterials that supplement the principal arterials system within urban centers and urban communities.
- Expanders: Arterials that supplement principal arterials in less-densely developed areas of the metro area.
- Connectors: Arterials that provide connections between rural towns and connect rural areas with the principal arterial system.

There is one "A" Minor Augmenter and two "A" Minor Relievers within the city:

"A" Minor Augmenter:

- County State Aid Highway (CSAH) 68 (McKnight Road) south of CSAH 23

"A" Minor Relievers:

- Trunk Highway 120 (Century Avenue)
- CSAH 23 (17th Avenue)

"B" Minor arterials have a similar focus on mobility above land access. These roadways connect major traffic generators in the region. "B" Minor arterials are not eligible for federal funding. "B" Minor arterials within the city include the following:

- CSAH 29 (North St. Paul Road)/7th Avenue East
- CSAH 25 (County Road B/South Avenue)
- CSAH 68 (McKnight Road) north of CSAH 23
- County Road (CR) 107 (Lydia Avenue)

No additional minor arterials are proposed within the city.

2.1.3. Major and Minor Collectors

Major and minor collector roadways provide linkages to larger developments and community amenities. They generally do not link communities to one another. Collector roadways generally favor access to the system over mobility but try to balance the two competing needs. Collector roadways are generally lower speed than the principal or minor arterial routes. Collector roadways are often owned and operated by cities, although counties operate some of these facilities. Within North St. Paul, all collector roadways are owned and operated by the city. Collectors are intended to serve trips of one to four miles in length. Collectors link minor arterials, other collectors, and local streets.

Major collectors typically serve higher density residential areas and concentrations of commercial and industrial land uses. These facilities tend to serve longer trips than minor collectors. Major collectors within the city include the following:

- 11th Avenue/Castle Avenue east of McKnight Road
- Helen Street north of 12th Avenue

- Holloway Avenue east of McKnight Road

There are no minor collectors within the city, and the 2040 Transportation Policy Plan does not propose any additional collector roadways within the city.

2.1.4. Local Roadways

The primary function of local roadways is land access. Local roadways connect individual land parcels with other local roadways and collectors. Trips on local roadways are typically under two miles. Speeds on local roadways are typically low. Longer trips are facilitated by local roadway connections to the collector and arterial systems. Local roadways are under the jurisdiction of the City of North St. Paul. Local roadways are all roadways that are not arterials or collectors.

2.1.5. Planned Functional Classification

No functional classification changes are recommended within the city. However, two jurisdictional transfers are under consideration. There is a long-term plan for TH 120 to be turned back to Ramsey County. Additionally, CSAH 23 (17th Avenue) has been proposed as a potential turnback to the city. The City of North St. Paul should proactively communicate any concerns to the county regarding a potential turn-back of the existing CSAH 23 to a North St. Paul city street.

A note on transportation plan strategies:

Throughout this Plan, locations associated with numbered mode-specific strategies are identified on corresponding maps. These strategies are listed and described in further detail in Table 7.

2.2. Existing Roadway Capacity and Safety

Roadway capacity and roadway safety are two key indicators of how well the roadway system is meeting the city's transportation needs. The sections below provide information to better understand capacity and safety issues within North St. Paul.

2.2.1. Existing Roadway Capacity

A roadway's capacity indicates how many vehicles may use a roadway before it experiences congestion. Capacity is largely dependent upon the number of lanes. Table 1 below lists planning-level thresholds that indicate a roadway's capacity (measured in annual average daily traffic, AADT). Additional variation

(more or less capacity) on an individual segment is influenced by a number of factors including: amount of access, type of access, peak hour percent of traffic, directional split of traffic, truck percent, opportunities to pass, and amount of turning traffic, the availability of dedicated turn lanes, parking availability, intersection spacing, signal timing and a variety of other factors.

Table 1: Planning-level Urban Roadway Capacities

Facility Type		Daily Two-way Volume	
		Lower Threshold	Higher Threshold
Arterials	Two-lane Undivided	10,000	12,000
	Two-lane Divided or Three-lane Undivided	15,000	17,000
	Four-lane Undivided	18,000	22,000
	Four-lane Divided or Five-lane Undivided	28,000	32,000
Freeways	Four-lane Freeway	60,000	80,000
	Six-lane Freeway	90,000	120,000
	Eight-lane Freeway or Higher	Calculated on a segment-by-segment basis	

2.2.2. Existing Capacity Problems on Arterial Roads

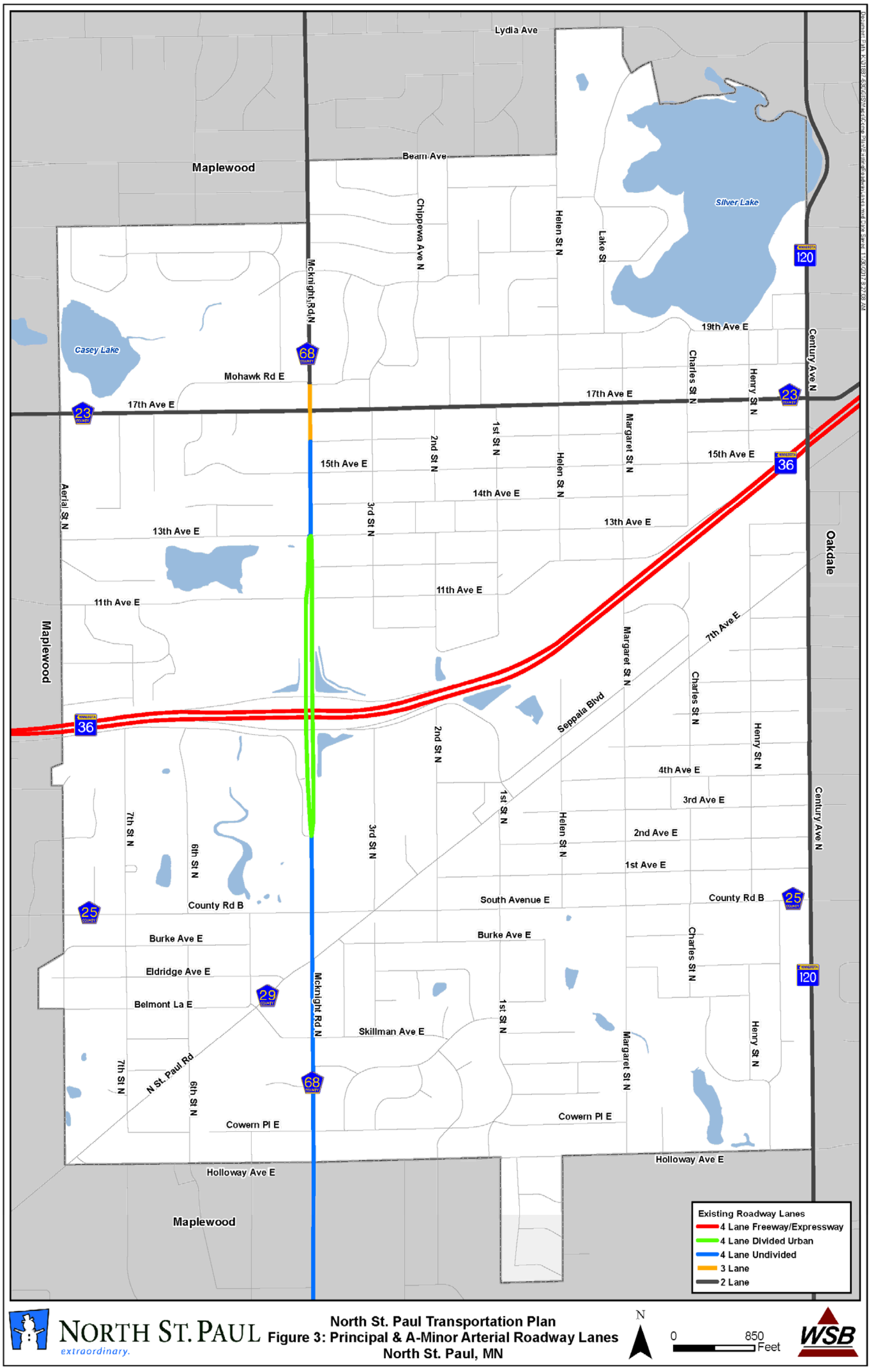
At the planning level, capacity problems are identified by comparing the existing number of lanes with current traffic volumes. Table 2 and Figure 3 illustrate the existing number of lanes on arterial roadways within the city. Figure 4 illustrates existing traffic volumes on Principal Arterial, A-Minor Arterials and other significant roadways within the city.

As shown in the table, all arterial roadways within the city have four or fewer lanes. CSAH 68 (McKnight Road) transitions between two and four lanes. Most North St. Paul existing and forecasted 2040 traffic volumes are below or within the planning-level capacity thresholds shown in Table 1; however, TH 120 (Century Avenue) exhibits existing volumes that surpass these thresholds and a

segment of CSAH 68 (McKnight Road) in the southern portion of the city has forecasted volumes approaching these thresholds. Additionally, while most of TH 36 has been converted to a freeway within the city, the eastern portion of it is an expressway (due to the at-grade signalized intersection with TH 120/Century Avenue). The existing volumes near this location surpass the planning-level capacity thresholds for a four-lane divided arterial. This indicates that congestion is occurring along these roadways under existing conditions and/or may occur in the future as traffic levels increase.

Table 2: Existing number of lanes on arterial roads

Functional Classification	Roadway Name	Location	Number of Lanes
Principal Arterial	TH 36	From western North St. Paul-Maplewood border to North St. Paul-Oakdale border	4
"A" Minor Augmenter	CSAH 68 (McKnight Road)	From southern North St. Paul-Maplewood border to CSAH 23 (17th Avenue)	3–4
"A" Minor Reliever	TH 120 (Century Avenue)	From southern North St. Paul-Maplewood border to North St. Paul-Oakdale border	2
	CSAH 23 (17th Avenue)	From western North St. Paul-Maplewood border to North St. Paul-Oakdale border	2
"B" Minor Arterial	CSAH 25 (County Road B)	From western North St. Paul-Maplewood border to North St. Paul-Oakdale border	2
	CSAH 29 (North St. Paul Road)/ 7th Avenue	From western North St. Paul-Maplewood border to North St. Paul-Oakdale border	2–3
	CSAH 68 (McKnight Road)	From CSAH 23 (17th Avenue) to northern North St. Paul-Maplewood border	2–3
	CR 107 (Lydia Avenue)	From Helen Street to northeastern North St. Paul-Maplewood	2


Lydia Ave
Maplewood
Beam Ave
Chippewa Ave N
Helen St N
Lake St
Silver Lake
Century Ave N
19th Ave E
Mcknight Rd N
Casey Lake
68
Mohawk Rd E
17th Ave E
23
Charles St N
Henry St N
Margaret St N
1st St N
2nd St N
3rd St N
15th Ave E
120
36
14th Ave E
13th Ave E
Aerial St N
Oakdale
11th Ave E
7th Ave E
Seppala Blvd
4th Ave E
3rd Ave E
2nd Ave E
1st Ave E
7th St N
6th St N
County Rd B
25
South Avenue E
Burke Ave E
Eldridge Ave E
Belmont La E
29
Skillman Ave E
N St. Paul Rd
Cowern Pl E
Holloway Ave E
Existing Roadway Lanes
4 Lane Freeway/Expressway
4 Lane Divided Urban
4 Lane Undivided
3 Lane
2 Lane
North St. Paul Transportation Plan
Figure 3: Principal & A-Minor Arterial Roadway Lanes
North St. Paul, MN
N
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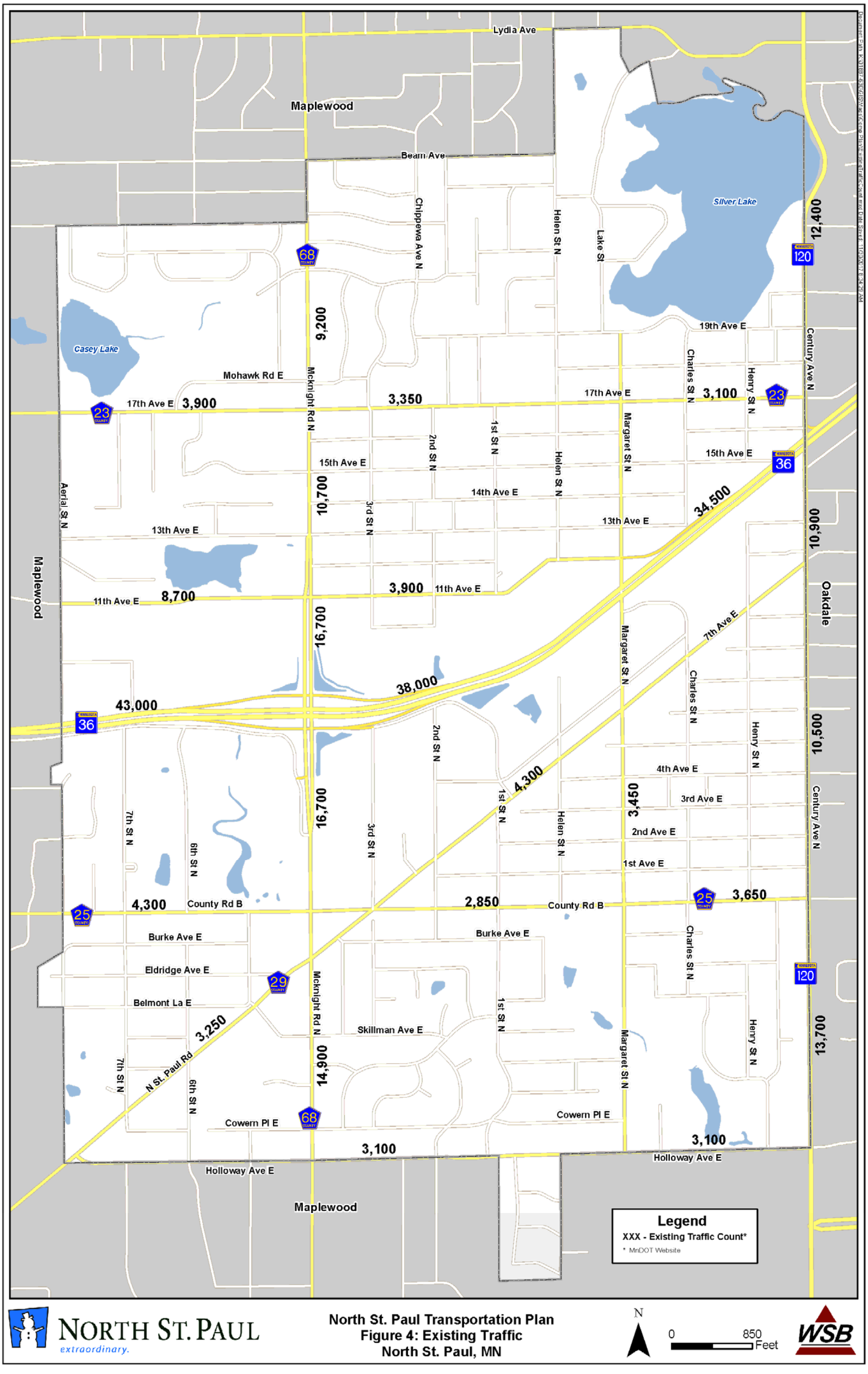
Lydia Ave
Maplewood
Beam Ave
Chippewa Ave N
Helen St N
Lake St
Silver Lake
12,400
Century Ave N
Casey Lake
Mohawk Rd E
McKnight Rd N
9,200
19th Ave E
Charles St N
Henry St N
17th Ave E
3,900
3,350
3,100
Margaret St N
15th Ave E
2nd St N
1st St N
Aerial St N
14th Ave E
13th Ave E
10,700
3rd St N
34,500
10,900
11th Ave E
8,700
3,900
16,700
7th Ave E
Oakdale
38,000
43,000
10,500
4th Ave E
3rd Ave E
2nd Ave E
1st Ave E
4,300
3,450
7th St N
6th St N
4,300
County Rd B
2,850
3,650
Burke Ave E
Eldridge Ave E
Belmont La E
3,250
N St. Paul Rd
Skillman Ave E
14,900
13,700
Cowern Pl E
3,100
Holloway Ave E
Maplewood
Legend
XXX - Existing Traffic Count*
* MnDOT Website
North St. Paul Transportation Plan
Figure 4: Existing Traffic
North St. Paul, MN
N
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Feet
NORTH ST. PAUL
extraordinary.
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2.3. Access Management

The purpose of access management is to provide adequate access to adjacent land development while maintaining acceptable and safe traffic flow on higher level roadways. Access management consists of carefully controlling the spacing and design of public street intersections and private access points to the public roadway system. Because they are designed for higher speed, longer distance trips, arterials generally have restricted access, while local streets can accommodate much greater access. Collector roadways fall in between arterials and local roadways regarding the amount of access that is permitted.

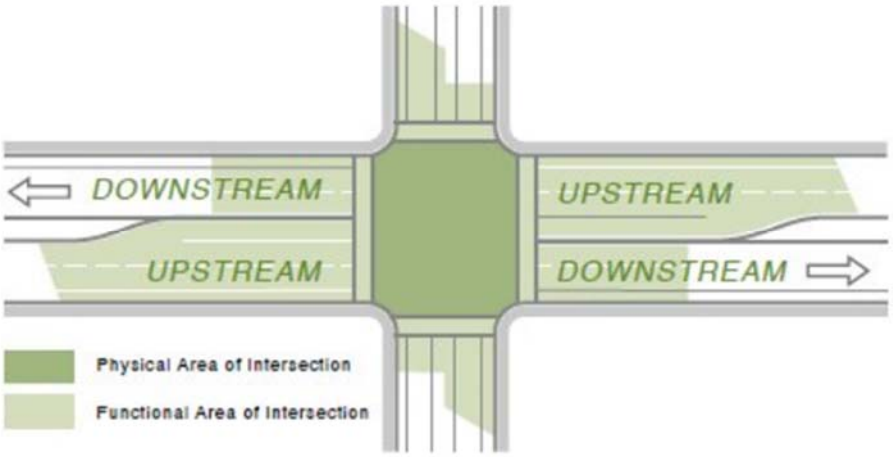
The agency with jurisdiction over a roadway sets access management guidelines. Access to TH 36 must meet MnDOT access management guidelines. See Tables 3.1 and 3.2 for MnDOT Access Management Guidelines.

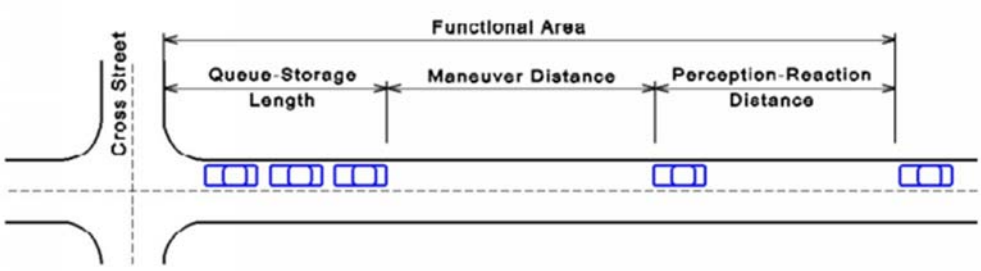
Ramsey County has also developed a draft set of access management policies. Rather than a set of specific standards, Ramsey County's draft policies "are intended to apply accepted access management principles in a context-sensitive manner to maximize the possible benefits as development occurs or as existing properties are modified." The draft policies are as follows:

- A parcel has the legal right to one access from a public street. If access can be obtained from an adjacent street, access from a County Road or County State Aid Highway should be directed to the minor street.
- Opportunities to combine or eliminate accesses shall be considered when new accesses are proposed.
- Where feasible, the access spacing standards of the MnDOT Access Management Manual shall be met.
- Where possible, new driveways shall be aligned with existing driveways or streets.
- Any proposed new access or modification of an existing access to a Ramsey County Road or County State Aid Highway requires a county access permit, with approval subject to review by the County Engineer.
- Any change in land use of a property with access to any County Road or County State Aid Highway, requires review of the access, in accordance with Minnesota Rules 8810.5200. Existing access is not automatically perpetuated.
- Unless no other option for access to a property exists, access will not be allowed within the functional area of a street intersection, or within the functional area of another existing access. As defined by MnDOT, the functional areas of intersections are defined as follows:

- On roadways with posted speed limits less than 45 MPH, 435 feet.
- On roadways with posted speed limits of 45 MPH or greater, 650 feet.

The interpretation of the functional area of an intersection shall be made by the County Engineer and adjustments to these distances shall be made, as appropriate to the particular situation. Diagrams of intersection functional areas are shown below:





- If no access to a parcel can be obtained, except from a County Road or County State Aid Highway, Ramsey County acknowledges that a parcel has the right to one access, subject to approval by the County Engineer. More than one access may be approved but should not be assumed.
- The need for turn lanes, bypass lanes, medians or median improvements, signage, or any other accommodations necessary for safe operation of an access shall be determined by the County Engineer and incorporated into access permit provisions. All construction costs shall be paid for by the permit applicant. Ramsey County will not contribute to the costs of necessary improvements.

- The need for a Traffic Impact Study for any proposed access shall be determined by the County Engineer. The County Engineer may require installation of any mitigation measures recommended by a Traffic Impact Study.
- The County Engineer may require dedication of access control over the remainder of a parcel as a condition of granting access in a particular location.

It should be noted that there are existing access points within the city that are inconsistent with Ramsey County's draft access management policies. In many cases these access points were established prior to agency access spacing guidelines/policies. In other cases the agency has granted an exception to the existing guidelines. As roadways are reconstructed and as development or redevelopment occurs, each of these agencies generally works to modify and/or relocate access points that do not meet current access spacing guidelines, recognizing that this may not be feasible in all instances.

MnDOT Access Management Manual

Table 3.1 – Summary of Recommended Street Spacing for IRCs

Category	Area or Facility Type	Typical Functional Class	Public Street Spacing		Signal Spacing
			Primary Full-Movement Intersection	Secondary Intersection	
1	**High Priority Interregional Corridors & Interstate System (IRCs)**				
1F	Interstate Freeway	Principal Arterials	Interchange Access Only		⊘
1AF	Non-Interstate Freeway		Interchange Access Only (see Section 3.2.7 for interim spacing)		See Section 3.2.5 for Signalization on Interregional Corridors
1A	Rural		1 mile	1/2 mile	
1B	Urban/Urbanizing		1/2 mile	1/4 mile	
1C	Urban Core		300-660 feet dependent upon block length		
2	**Medium Priority Interregional Corridors**				
2AF	Non-Interstate Freeway	Principal Arterials	Interchange Access Only (See Section 3.2.7 for interim spacing)		See Section 3.2.5 for Signalization on Interregional Corridors
2A	Rural		1 mile	1/2 mile	
2B	Urban/Urbanizing		1/2 mile	1/4 mile	
2C	Urban Core		300-660 feet, dependent upon block length		¼ mile
3	**Regional Corridors**				
3AF	Non-Interstate Freeway	Principal and Minor Arterials	Interchange Access Only (see Section 3.2.7 for interim spacing)		Interim
3A	Rural		1 mile	1/2 mile	See Section 3.2.5
3B	Urban/Urbanizing		1/2 mile	1/4 mile	1/2 mile
3C	Urban Core		300-660 feet, dependent upon block length		1/4 mile

MnDOT Access Management Manual

Table 3.2 – Summary of Recommended Street Spacing for Non-IRCs

Category	Area or Facility Type	Typical Functional Class	Public Street Spacing		Signal Spacing
			Primary Full-Movement Intersection	Secondary Intersection	
4	**Principal Arterials in the Twin Cities Metropolitan Area and Primary Regional Trade Centers (Non-IRCs)**				
4AF	Non-Interstate Freeway	Principal Arterials	Interchange Access Only (see Section 3.2.7 for interim spacing)		Interim
4A	Rural		1 mile	1/2 mile	See Section 3.2.5
4B	Urban/Urbanizing		1/2 mile	1/4 mile	1/2 mile
4C	Urban Core		300-660 feet dependent upon block length		1/4 mile
5	**Minor Arterials**				
5A	Rural	Minor Arterials	1/2 mile	1/4 mile	See Section 3.2.5
5B	Urban/Urbanizing		1/4 mile	1/8 mile	1/4 mile
5C	Urban Core		300-660 feet, dependent upon block length		1/4 mile
6	**Collectors**				
6A	Rural	Collectors	1/2 mile	1/4 mile	See Section 3.2.5
6B	Urban/Urbanizing		1/8 mile	Not Applicable	1/4 mile
6C	Urban Core		300-660 feet, dependent upon block length		1/8 mile
7	**Specific Area Access Management Plans**				
7	All	All	By adopted plan		

2.4. Recommendations from Other Plans and Studies

2.4.1. Highway 36 Corridor Study

In 2014, MnDOT partnered with the Cities of North St. Paul and Oakdale, Ramsey County, and Washington County to develop the TH 36 corridor study between Hadley Avenue and TH 120 (Century Avenue). The purpose of the study was to address safety and mobility issues along the corridor by developing preliminary concept designs for improvements at the intersections of TH 36 with TH 120 and Hadley Avenue. Alternatives were developed and evaluated based on a range of criteria including safety and operations, right of way impacts, environmental impacts, consistency with plans and policies, and estimated construction cost.

As a result of this study, a concept was advanced that recommends construction of a tight diamond interchange at TH 120 and a folded diamond interchange at Hadley Avenue. The preliminary concept included recommendations for access control and supporting roadway connections. While the TH 120 interchange is not currently funded, the Hadley Avenue interchange is scheduled to begin construction in 2019.

2.4.2. Highway 120 Access Study

Concurrent to the Highway 36 Corridor Study, MnDOT and its group of partners also evaluated access conditions along TH 120 (Century Avenue) between Holloway Avenue and 20th Avenue, along the eastern edge of the City of North St. Paul. As described in Section 2.3, MnDOT has specific access management guidelines for the various types of roadways that it owns and operates. The primary goal of this study was to provide an overall assessment of existing access conditions and develop potential strategies based on MnDOT's spacing guidelines. The study identified several key recommended improvements within the corridor:

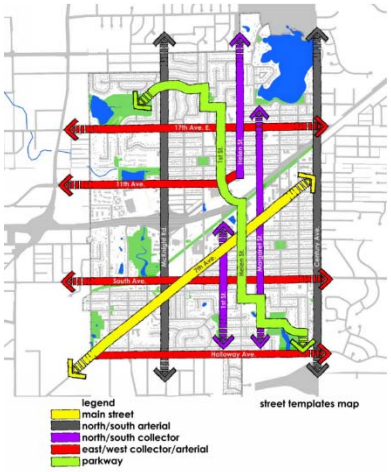
- Maximize overall intersection operations along Highway 120. The following intersection-specific improvements should be considered:
    - Based on traffic model results, to realize improved traffic operations along TH 120, there must first be improvements made to the TH 36/TH 120 intersection.
    - Add southbound left-turn lane at 17th Avenue.
    - Add eastbound left-turn lane at 7th Avenue.
    - Re-optimize all signalized intersections (Highway 5, County Road B, 7th Avenue, TH 36, and Hadley Avenue/Joy Road).
- Expand (or restripe) highway to include center left-turn lane.

- Monitor crash history and consider access restrictions (i.e. raised medians and closures) if higher crash rates appear related to access conditions.
- Evaluate opportunities to reduce the level of private access by modifying existing access points (consolidate or close), especially where a parcel has multiple access points on TH 120.
- Evaluate opportunities to reduce public street access by modifying intersections (median restrictions, right-in/right-out only, or cul-de-sacs) where reasonable alternative access to TH 120 exists.

2.4.3. Principal Arterial Intersection Conversion Study

In February 2017, MnDOT and the Metropolitan Council completed the Principal Arterial Intersection Conversion study. The purpose of this study was to set priorities for grade separations on non-freeway principal arterials to support the long-term ability of these roadways to provide mobility and safety. The study will serve as a key input into future updates of the MnSHIP and the Metropolitan Council's Transportation Policy Plan (TPP). Of the 91 intersections included in Phase II of the study, the TH 36/TH 120 intersection was identified as having one of the ten highest safety scores based on the frequency and severity of crashes at this location.

2.4.4. Living Streets Plan



In 2011, the City of North St. Paul worked with the Ramsey-Washington Metro Watershed District to develop a Living Streets Plan. The Plan proposes an approach to using existing streets and public rights of way within North St. Paul to better accommodate bicyclists, pedestrians, and integrate stormwater management through the construction of green infrastructure. The Plan identifies four distinct types of living streets: residential streets, north-south arterials/collectors, east-west arterials/collectors, and a parkway. Each living street type is associated with a set of design guidelines and features, such as sidewalks, bike lanes, street trees, rainwater gardens, curb extensions, and public art.

2.4.5. Highway Transitway Corridor Study

The Metropolitan Council developed the Highway Transitway Corridor Study in 2014 to examine the potential for all-day, frequent, station-to-station highway

bus rapid transit service along eight highway corridors throughout the Twin Cities. The Highway 36 Corridor between downtown Minneapolis and Hadley Avenue was one of the corridors evaluated in the study. This corridor would have nine stations and would be 17.7 miles long. The estimated end-to-end travel time during peak periods would be 47 minutes. Based on the preliminary station locations included in the study, the only station within the City of North St. Paul would be located at TH 120 (Century Avenue). Based on the evaluation results, the Highway 36 corridor was one of four that received a "High Potential" rating. Additional and more detailed study is necessary, along with vetting with local communities and policymakers prior to moving forward. The corridor was included in the Increased Revenue Scenario for the transitway vision in the TPP.

3. Future Roadway System

This section addresses future roadway improvement needs and roadway design guidelines.

3.1. Roadway Capacity – Traffic Forecasting

To determine future roadway capacity needs, year 2040 traffic forecasts were prepared using the Metropolitan Council travel demand model. The 2040 projections were compared against the assumed 2040 roadway network to see where roadway segment capacity deficiencies may result. The 2040 roadway network assumed for this analysis is the same as the current roadway network, as the city's CIP and the county's Transportation Improvement Program (TIP) do not include any projects that add significant capacity to the roadway network.

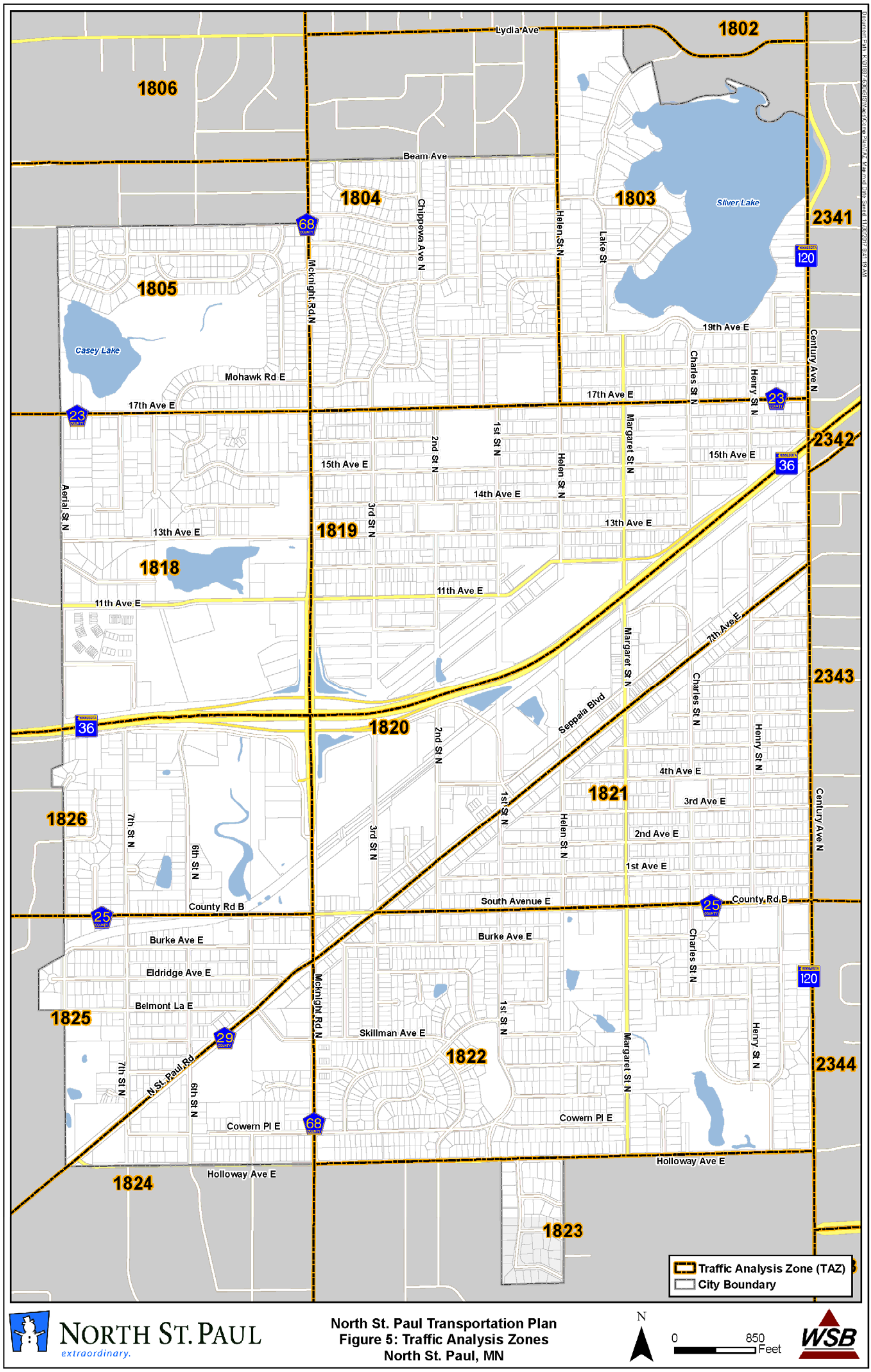
While the travel demand model is a valuable tool for identifying future traffic based on the proposed land use impacts, it is not meant for use in detailed traffic operations studies. For a more accurate representation of the transportation impacts from specific developments, detailed traffic studies should be conducted to determine the operational impacts on adjacent roadways and intersections.

A central concept of travel demand forecasting is the use of Transportation Analysis Zones (TAZs). Each forecast study area, in this case, the City of North St. Paul, is divided into a series of TAZs. Each TAZ has population, employment, and household data that is used by the model to assign trips to the various network roadways. Figure 5 displays Metropolitan Council TAZs within North St. Paul.

The results of the North St. Paul modeling process are summarized in Figure 6, which displays Metropolitan Council 2040 projected average daily traffic volumes compared to the existing (2014) traffic volumes.

Table 5 provides a summary of existing and forecasted demographic growth by TAZ for North St. Paul through the year 2040. The North St. Paul population is forecasted to reach 11,700 by the year 2040, with households and employment increasing by approximately 600. Allocated demographic growth and associated land use was generally located along the 7th Avenue corridor. Most of the forecasted growth in terms of high density residential, commercial, and multi-optional development is anticipated to take place along this corridor, and particularly in the area between 7th Avenue and TH 36. For more information

about the demographic allocation and associated land use forecast, please refer to the Future Land Use Plan in Chapter 4 of this Plan.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1806
Lydia Ave
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1803
Silver Lake
2341
1805
Casey Lake
Mohawk Rd E
17th Ave E
19th Ave E
Century Ave N
Charles St N
Henry St N
Margaret St N
Helen St N
Lake St
Chippewa Ave N
Mcknight Rd N
1st St N
2nd St N
3rd St N
15th Ave E
14th Ave E
13th Ave E
11th Ave E
Aerial St N
1819
1818
2342
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1821
1826
1825
1824
1822
1823
2343
2344
7th Ave E
Seppala Blvd
4th Ave E
3rd Ave E
2nd Ave E
1st Ave E
South Avenue E
County Rd B
Burke Ave E
Eldridge Ave E
Belmont La E
Skillman Ave E
Cowern Pl E
Holloway Ave E
7th St N
6th St N
N St. Paul Rd
68
23
36
25
29
120
Traffic Analysis Zone (TAZ)
City Boundary
NORTH ST. PAUL
extraordinary.
North St. Paul Transportation Plan
Figure 5: Traffic Analysis Zones
North St. Paul, MN
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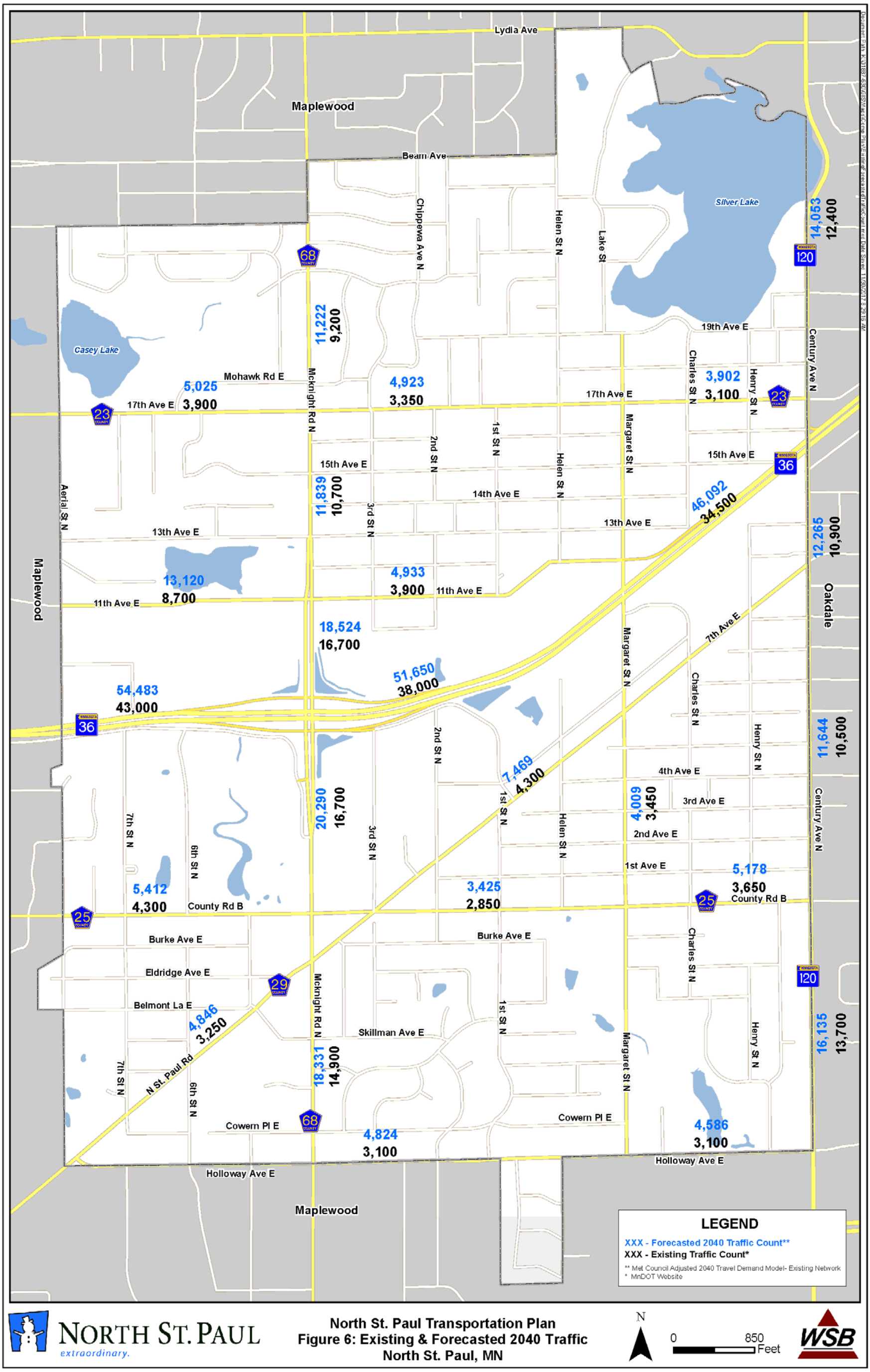
Lydia Ave
Maplewood
Beam Ave
Chippewa Ave N
Helen St N
Lake St
Silver Lake
14,053
12,400
68
11,222
9,200
Casey Lake
Mohawk Rd E
5,025
3,900
17th Ave E
23
Mcknight Rd N
4,923
3,350
19th Ave E
Charles St N
3,902
3,100
Henry St N
Century Ave N
120
15th Ave E
36
Aerial St N
11,839
10,700
3rd St N
2nd St N
1st St N
Margaret St N
46,092
34,500
14th Ave E
13th Ave E
12,265
10,900
Oakdale
13,120
8,700
4,933
3,900
11th Ave E
18,524
16,700
51,650
38,000
54,483
43,000
7th Ave E
7,469
4,300
4th Ave E
4,009
3,450
3rd Ave E
2nd Ave E
1st Ave E
20,290
16,700
11,644
10,500
7th St N
6th St N
5,412
4,300
County Rd B
25
3,425
2,850
5,178
3,650
Burke Ave E
Eldridge Ave E
29
Belmont La E
4,846
3,250
N St. Paul Rd
Skillman Ave E
18,331
14,900
16,135
13,700
Cowern Pl E
4,824
3,100
4,586
3,100
Holloway Ave E
Maplewood
LEGEND
XXX - Forecasted 2040 Traffic Count**
XXX - Existing Traffic Count*
** Met Council Adjusted 2040 Travel Demand Model- Existing Network
* MnDOT Website
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North St. Paul Transportation Plan
Figure 6: Existing & Forecasted 2040 Traffic
North St. Paul, MN
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Table 5: North St. Paul 2040 Land Use Plan TAZ Growth Allocation

	2010 Census			2020 Forecast			2030 Forecast			2040 Forecast		
TAZ	**Population**	**Housing**	**Employment**	**Population**	**Housing**	**Employment**	**Population**	**Housing**	**Employment**	**Population**	**Housing**	**Employment**
1803*	586	221	7	548	221	7	526	221	7	508	221	7
1804*	1,183	452	39	1,146	462	39	1,100	462	39	1,113	484	39
1805*	650	238	105	590	238	105	566	238	105	547	238	105
1818*	1,216	514	588	1,275	514	588	1,247	524	588	1,205	524	588
1819	1,773	721	606	1,788	721	606	1,740	731	606	1,681	731	606
1820	348	244	787	936	579	1,047	1,082	639	1,185	1,334	693	1,325
1821	1,456	575	283	1,500	605	283	1,464	615	295	1,470	639	305
1822	2,225	785	228	1,947	785	228	1,892	795	228	1,829	795	228
1823*	106	44	0	109	44	0	105	44	0	101	44	0
1824*	676	303	55	751	303	55	721	303	55	697	303	55
1825*	871	389	14	965	389	14	926	389	14	895	389	14
1826*	370	129	228	345	139	228	331	139	228	320	139	228
Metropolitan Council Growth Allocation**	**11,460**	**4,615**	**2,940**	**11,900**	**5,000**	**3,200**	**11,700**	**5,100**	**3,350**	**11,700**	**5,200**	**3,500**

* TAZ boundary lies partially outside the City of North St. Paul. 2010 data adjusted by Metropolitan Council to only include North St. Paul demographics.

**Includes Metropolitan Council adjustments lowering growth allocation limits from initial allocations

3.2. 2040 Future Roadway Capacity Improvement Needs

To identify the need for potential future capacity improvements, Metropolitan Council 2040 forecasts were compared to planning-level roadway capacities for Principal and A-Minor Arterial Roadways. Planning-level roadway capacities used for this analysis are illustrated in Table 6 below (measured in AADT). Based on this comparison, forecasted 2040 volumes along TH 120 (Century Avenue) will surpass these planning-level capacity thresholds, as will segments of CSAH 68 (McKnight Road). Existing and forecasted future volumes along the portion of TH 36 that has not been converted to a freeway also surpass planning-level capacity thresholds for a four-lane divided arterial. This indicates that without capacity enhancements along these roadways future congestion may occur as traffic levels increase.

Table 6: Planning-Level Roadway Capacity

Facility Type		Daily Two-way Volume	
		Lower Threshold	Higher Threshold
Arterials	Two-lane Undivided	10,000	12,000
	Two-lane Divided or Three-lane Undivided	15,000	17,000
	Four-lane Undivided	18,000	22,000
	Four-lane Divided or Five-lane Undivided	28,000	32,000
Freeways	Four-lane Freeway	60,000	80,000
	Six-lane Freeway	90,000	120,000
	Eight-lane Freeway or Higher	Calculated on a segment-by-segment basis	

4. Existing and Planned Non-Motorized Transportation Network

This section addresses network needs for walking and bicycling within North St. Paul. This section also addresses the needs of all pedestrians including those using mobility devices as well as those with hearing or sight impairments.

Enhancing the non-motorized elements of the North St. Paul transportation system is a key goal in terms of improving transportation sustainability in the city and in the region. This approach gives residents an alternative to driving, supports transportation options for people who do not have consistent access to a personal vehicle, and encourages healthy activities and lifestyles.

This section includes information on the existing non-motorized transportation network within North St. Paul, connections to land use planning, the planned local non-motorized transportation network, and the planned regional non-motorized transportation network. This section also includes recommendations for intersection improvements and design best practices.

4.1. Existing Non-Motorized Transportation Network

The non-motorized transportation network in North St. Paul is comprised primarily of sidewalks, footpaths, trails, striped shoulders, bike lanes, and one regional trail. As shown in Figure 7, a number of main roadways in the city include segments of sidewalks on one or both sides of the road, including 7th Avenue, McKnight Road, 1st Street, Margaret Street, South Avenue, 11th Avenue, and 17th Avenue.

Additionally, there is one regional multi-use trail located within the City of North St. Paul. The Gateway State Trail is an existing regional trail that is managed and maintained by the DNR. The trail runs along abandoned railroad tracks in a southwest-northeast direction, south of TH 36 and north of 7th Avenue/North St. Paul Road. There are two important connecting trails to the Gateway State Trail, including a grade-separated crossing of TH 36 connecting to North High School and a trail connection to Seppala Boulevard in the city's downtown business district.

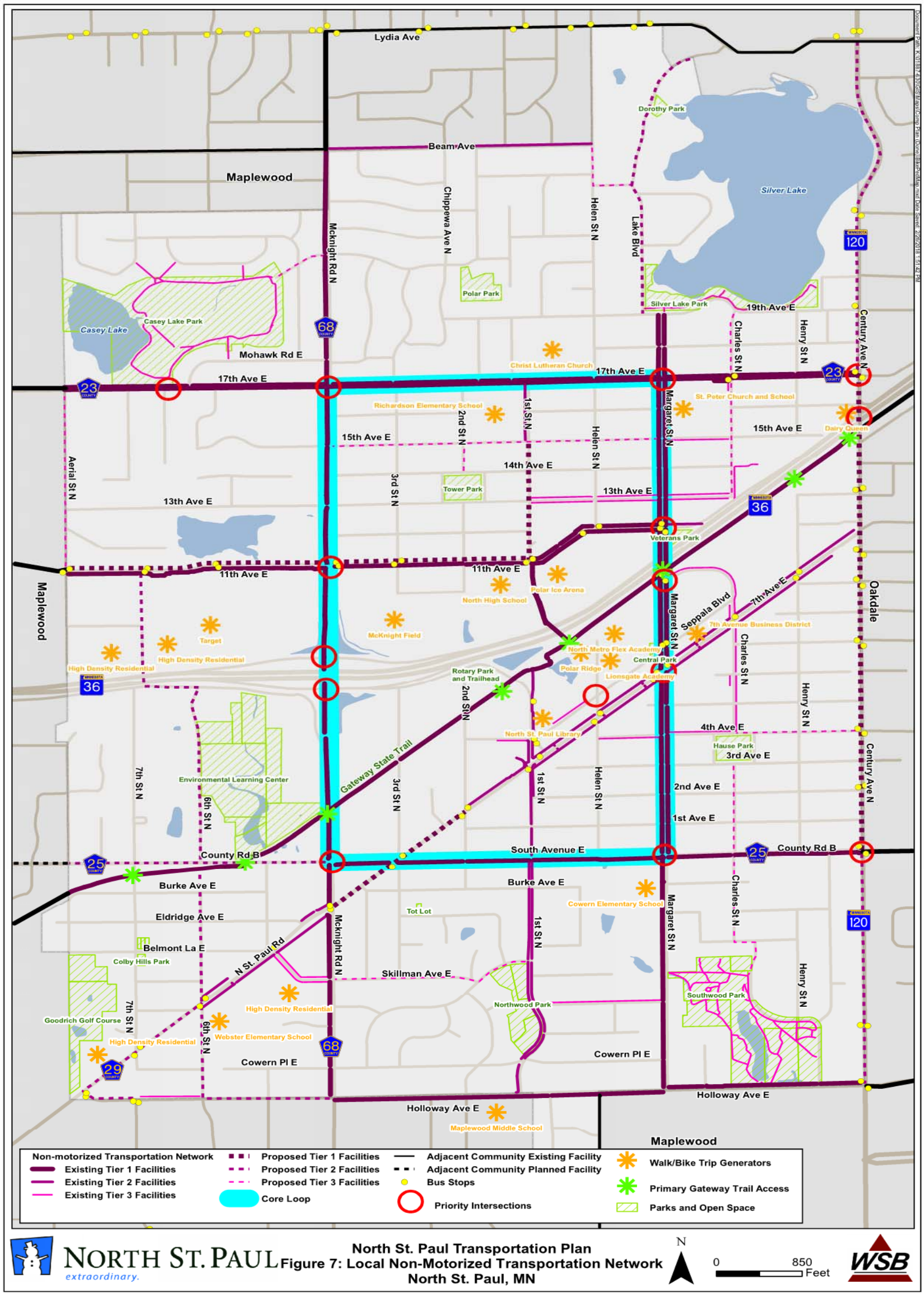
A number of parks within the city also have footpaths and trails that can be used for transportation, such as Southwood Park and Casey Lake Park. On-street facilities for bicyclists include segments of bike lanes along North St. Paul

Road and paved shoulders on portions of 7th Avenue, South Avenue, 11th Avenue, 17th Avenue, 7th Street, 1st Street, Helen Street, and Century Avenue.

4.2. Connections to Land Use Planning

North St. Paul has development patterns consistent with its designation as an Urban community. Existing residential development is higher in density compared with suburban areas but reflects the transition toward development patterns influenced by the rise of the automobile, with some commercial land uses separated from largely single-family residential land uses. This means that people walking and bicycling must cover greater distances to reach commercial areas from their homes. However, the development patterns in the city are well-suited to bicycling and walking, due to a largely regular street grid, relatively short blocks, and convenient connections to regional trails, parks, and schools. There are also commercial destinations throughout North St. Paul that lie within walking or biking distance of many city residents, including the historic downtown area along 7th Avenue, a shopping center north of TH 36 and west of McKnight Road, and the Centennial Park Row office park along TH 120 in the southeast portion of the city.

The city's land use planning and coordination with developers can help improve opportunities for walking and bicycling for transportation. The city can encourage mixed-use development that situates residents within a short walk of commercial destinations. The city can also work with developers to construct sidewalks and trails adjacent to redevelopment areas. Additionally, the city can require pedestrian and bicycle connections in areas where the roadway network does not connect, such as connector trails that provide shortcuts for people walking and bicycling.



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North St. Paul Transportation Plan
Figure 7: Local Non-Motorized Transportation Network
North St. Paul, MN

4.3. Planned Local Non-Motorized Transportation Network

Because the city's existing non-motorized transportation network is relatively well-established, the planned network focuses on filling gaps that exist and improving safety conditions and the comfort or convenience of non-motorized facilities through intersection design, streetscape improvements, and other design considerations. When the network is complete, it will provide safe, convenient linkages between residential areas and commercial, institutional, and recreational areas within the city. The network will improve options for people to walk and bicycle for transportation within the city, and facilitate regional connections (described in greater detail in the following section).

As part of public engagement, members of the public were presented with a map of existing bicycle and pedestrian facilities throughout the City and asked to provide feedback regarding gaps or barriers in the non-motorized network along with locations of concern regarding safety. Feedback was compiled and combined with previous planning efforts to develop a draft map for the city's planned non-motorized transportation network (see Figure 7).

Proposed facilities were assigned to one of three "tiers" based on the relative importance of the facility in the overall non-motorized network (in a manner somewhat similar to roadway functional classification). Additionally, a "Core Loop" of facilities was identified as providing a primary network within the city. Non-motorized trip generators were also mapped, including schools, parks, churches, retail commercial business districts, high-density residential areas, bus stops, and access points to the Gateway State Trail. These are locations within the community that are likely to generate the most trips by individuals traveling by bike or by foot. The map also identifies priority intersections as the city, county, and MnDOT consider potential safety improvements at intersection locations.

Criteria for the various facility designations are as follows:

- The Core Loop consists of an existing rectangular loop of facilities along McKnight Road, South Avenue, Margaret Street, and 17th Avenue, that provide core connectivity for non-motorized users to a range of destinations within the city. This loop should be a primary focus for operations and maintenance.
- Tier 1 facilities fulfill one or more of these criteria:
    - Designated as a regional or state trail (Gateway State Trail)

  - Enable trips of at least one mile along contiguous facilities
  - Provide direct connections to multiple non-motorized trip generators

- Tier 2 facilities fulfill one or more of these criteria:
  - Fill a gap between a Tier 1 facility and at least one non-motorized trip generator
  - Enable trips of at least one-half mile along contiguous facilities
  - Provide direct connections to an existing facility in a neighboring community

- Tier 3 facilities fulfill one or more of these criteria:
  - Provide a "reliever" function parallel to busier roadways
  - Fill a gap or provide a shorter/more direct route between a Tier 1 or Tier 2 facility and at least one non-motorized trip generator. [Note: These routes can be important in providing a network that is convenient and comfortable for all users. In some cases, these types of facilities consist of trails or footpaths within parks.]

The existing and proposed local bicycle and pedestrian network is shown in Figure 7.

4.4. Planned Regional Non-Motorized Transportation Network

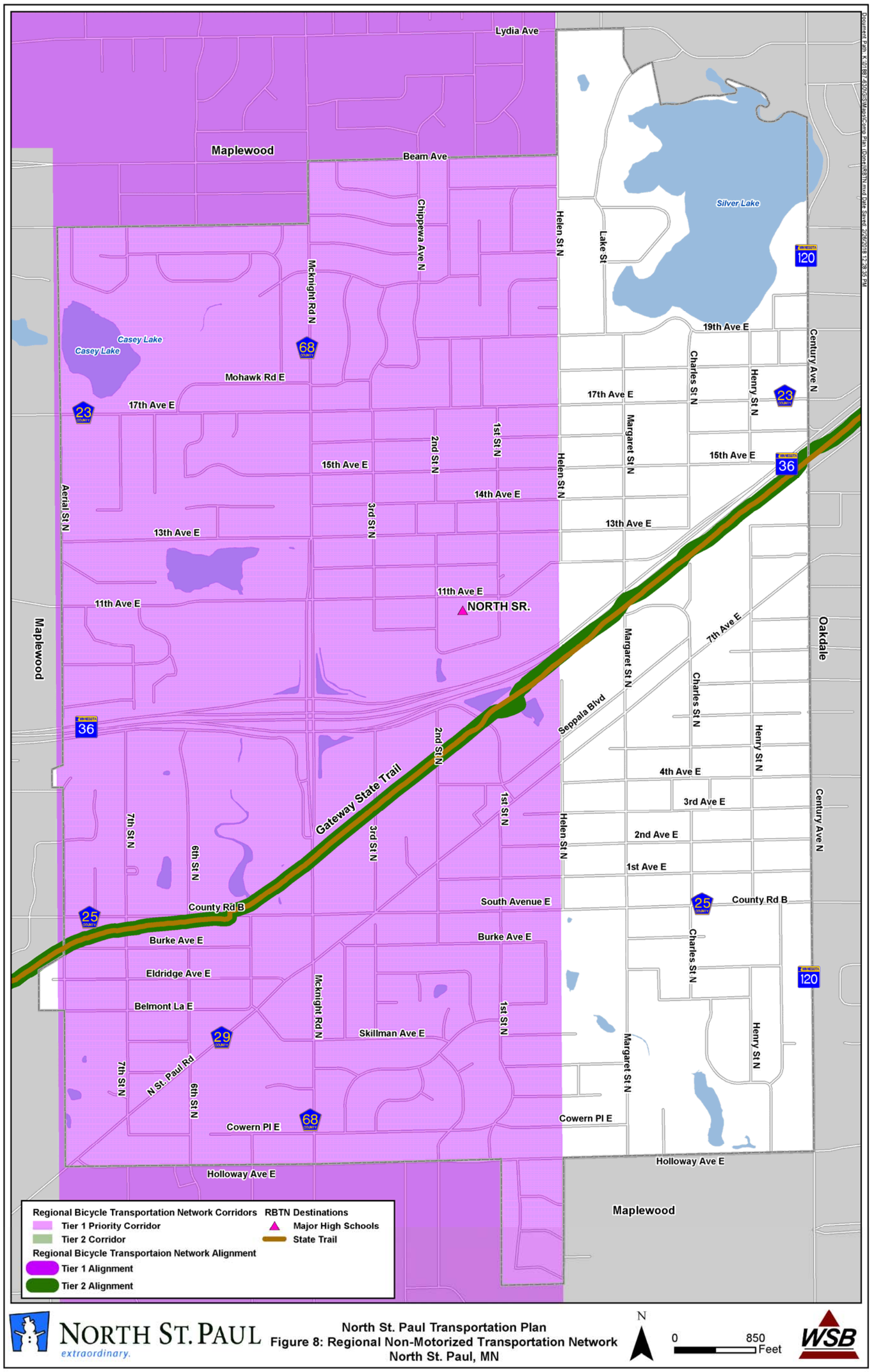
The Metropolitan Council 2040 TPP encourages the use of bicycles as a mode of transportation and establishes a Regional Bicycle Transportation Network (RBTN) to establish an integrated network of on-street bikeways and off-road trails that complement each other to improve conditions for bicycle transportation at the regional level. The RBTN identifies Tier 1 and Tier 2 alignments where existing regional or other trails exist or where a specific alignment has been identified. The RBTN also identifies Tier 1 and Tier 2 corridors where specific alignments have not yet been defined.

Within North St. Paul, the RBTN identifies a Tier 1 RBTN corridor which runs in a north-south direction centered along McKnight Road (CSAH 68). There is existing trail along the west side of McKnight Road between the Gateway State Trail and 11th Avenue. The city proposes that McKnight Road be the designated alignment for this RBTN corridor.

The Ramsey County-Wide Pedestrian & Bicycle Plan identifies a Connected Ramsey Communities Network, with a series of corridors that represent long-distance bikeways crossing the county. Within North St. Paul, there are five of these corridors: Gateway, South Avenue, Century Avenue, McKnight, and NE

Diagonal/County Road C/Keller Parkway. The County Road C corridor is identified as a County-wide Connector Corridor with a planned upgrade within North St. Paul. The McKnight corridor is identified as a Major County-wide Corridor with portions that are planned or an identified need within North St. Paul (those portions of McKnight Road where multiuse trail has not been constructed).

The existing and proposed regional network is shown in Figure 8.


Lydia Ave
Maplewood
Beam Ave
Chippewa Ave N
Mcknight Rd N
Helen St N
Lake St
Silver Lake
120
19th Ave E
Century Ave N
Casey Lake
Casey Lake
68
Mohawk Rd E
17th Ave E
23
Charles St N
Henry St N
Margaret St N
15th Ave E
36
2nd St N
1st St N
3rd St N
14th Ave E
13th Ave E
Aerial St N
11th Ave E
NORTH SR.
Oakdale
7th Ave E
Seppala Blvd
Gateway State Trail
4th Ave E
3rd Ave E
2nd Ave E
1st Ave E
7th St N
6th St N
South Avenue E
County Rd B
25
Burke Ave E
Eldridge Ave E
Belmont La E
Skillman Ave E
29
N St. Paul Rd
Cowern Pl E
Holloway Ave E
Regional Bicycle Transportation Network Corridors
Tier 1 Priority Corridor
Tier 2 Corridor
Regional Bicycle Transportaion Network Alignment
Tier 1 Alignment
Tier 2 Alignment
RBTN Destinations
Major High Schools
State Trail
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North St. Paul Transportation Plan
Figure 8: Regional Non-Motorized Transportation Network
North St. Paul, MN
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4.5. Intersection Improvements for Bicycling and Walking

A number of intersections have been identified for improvements based on safety issues related to vehicle speed and proximity to popular bicycling and walking destinations, such as schools, parks, and retail shopping areas; future improvements at these intersections could benefit pedestrians and bicyclists by slowing vehicles, shortening crossing distances, providing pedestrian refuges, and/or adding improved pavement markings, signs, or signals. Intersections include:

- Century Avenue (TH 120) and TH 36
- Century Avenue (TH 120) and 17th Avenue (CSAH 23/County Road C)
- Century Avenue (TH 120) and County Road B
- McKnight Road (CSAH 68) and 11th Avenue
- McKnight Road (CSAH 68) and 17th Avenue (CSAH 23/County Road C)
- 17th Avenue (CSAH 23/County Road C) and the Casey Lake Park entrance
- 17th Avenue (CSAH 23/County Road C) and Margaret Street
- Margaret Street and 12th Avenue
- Margaret Street and Centennial Drive
- Margaret Street and County Road B
- Helen Street and Seppala Boulevard

4.6. Non-Motorized Transportation Design Considerations

The city's Living Streets Plan includes design guidelines for various non-motorized facilities, including sidewalks and bike lanes. The design standard for sidewalks in the Living Streets Plan includes the following elements:

- Sidewalks shall be a minimum width of 4 feet. This is intended to accommodate walkers and reduce cost while avoiding the over-creation of impervious surfaces.
- The costs of sidewalks should be shared project-wide and not allocated to individual homeowners.
- Sidewalks on one side of the street on single family residential streets are recommended. Institutions may require sidewalk on both sides.
- Sidewalks, pedestrian ramps, ramp slopes, walkways and surfacing should be ADA-compliant and in accordance with statute.
- Avoid obstructions to pedestrian areas.
- Top of sidewalk elevation must be set above rainwater garden inlet and outlet elevations.
- Utilize curb extensions to slow traffic and shorten pedestrian crossing distance at intersections and crossings.
- Plant appropriate tree species that will not heave sidewalks.
- Coordinate pedestrian ramp locations with stormwater management facilities to avoid conflicts and unacceptable inundation of walking areas and waiting areas.
- Intersections must function safely for bicyclists, pedestrians and drivers. Safety should be the design priority.
- Use recycled materials where possible, such as in aggregates, pavement materials, bridge materials, wall materials, etc.

Other considerations for sidewalk and streetscape design include consideration of signalized intersections, a six-foot buffer from the curb, adequate lighting, enhancements at higher-traffic pedestrian nodes (such as decorative pervious pavers, trash receptacles, seating, enhanced landscaping, tree shade, etc.), and public art elements including wayfinding signage or neighborhood identifiers.

The Living Streets Plan also includes a design standard for bike lanes, which consists of the following:

- Create bike lanes 5 feet wide where ADT<5,000 and 6 feet wide where ADT>5,000 on 2-lane Collector/Arterial streets, per the MnDOT Bikeway Facility Design Manual.
- Design intersections for the safe waiting, turning and movement of bicycles, especially in higher-traffic areas. Address this priority prior to addressing automobile needs.

- Accommodate bicycles at intersections, particularly in high-traffic areas. Provide pavement markings and signage to alert drivers to their presence.
- Install appropriate signage, signalization and pavement markings.
- For street edges along bike lanes, select stormwater grates that prevent bike tires from becoming trapped.

Additional design considerations for bike lanes include narrowing automobile lanes and lowering posted speeds where feasible, installation of well-lit bicycle storage racks near businesses and institutions, and installation of vegetated soil reinforcement pavers at bicycle storage rack locations to infiltrate stormwater.

Other types of bicycle facilities not specifically included in the Living Streets Plan include off-street multiuse trails, protected bikeways, buffered bicycle lanes, bicycle boulevards, and wide paved shoulders. Figure 9 shows examples of these facility types.

Multi-use trails are recommended to be a minimum of eight-feet wide. Regional trails are recommended to be a minimum of ten-feet wide due to higher use and the design requirements to comply with federal funding. Trails must have a two-foot wide clear zone on either side to reduce hazards for bicyc lists and provide a recovery zone if a bicyclist leaves the edge of the trail. The clear zone can be paved or turf surface. No signs, furnishings, trees, or other obstructions can be in the clear zone.

Paved shoulders should be a minimum of four-feet wide if intended for bicycle and pedestrian use. Four-foot wide shoulders are adequate on streets with traffic volumes below 1,000 vehicles per day. Six- to eight-foot shoulders are recommended when traffic volumes exceed 1,000 vehicles per day. A wider shoulder improves pedestrian and bicyclist safety and comfort when vehicle traffic speeds and volumes are higher.

As non-motorized facilities are planned and designed, the city should consult additional planning and design resources, including:

- Ramsey County-Wide Pedestrian & Bicycle Plan
- MnDOT Bikeway Facility Design Manual
- Minnesota Manual on Uniform Traffic Control Devices
- Guide for the Development of Bicycle Facilities – American Association of State Highway and Transportation Officials
- Guide for the Planning, Design, and Operation of Pedestrian Facilities – American Association of State Highway and Transportation Officials

- Complete Streets Implementation Resource Guide for Minnesota Local Agencies, MnDOT
- Public Rights of Way Accessibility Guidelines (PROWAG) – US Access Board

Accessibility is a very important consideration for non-motorized design. All new pedestrian and bicycle facilities must meet the ADA accessibility guidelines established in PROWAG. The guidelines in PROWAG address the design needs of people with physical and/or visual impairments. Accessibility will become increasingly important over the next 20 years due to demographic changes. Baby boomers are aging and the population over age 65 is increasing. People over 65 are more likely to have physical and/or visual impairments that affect their ability to get around.

Off-street Facility
Source: www.pedbikeimages.org / Laura Sandt

Conventional Bicycle Lane
Source: www.pedbikeimages.org / Jennifer Compos

Protected Bikeway
Source: NACTO Urban Bikeway Design Guide

Bicycle Boulevard
Source: NACTO Urban Bikeway Design Guide

Buffered Bicycle Lane
Source: www.pedbikeimages.org / Lyubov Zuyeva

Wide Paved Shoulder
Source: www.pedbikeimages.org / Laura Sandt

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Figure 9:
Example Bicycle Facilities
North St. Paul Transportation Plan
North St. Paul, MN

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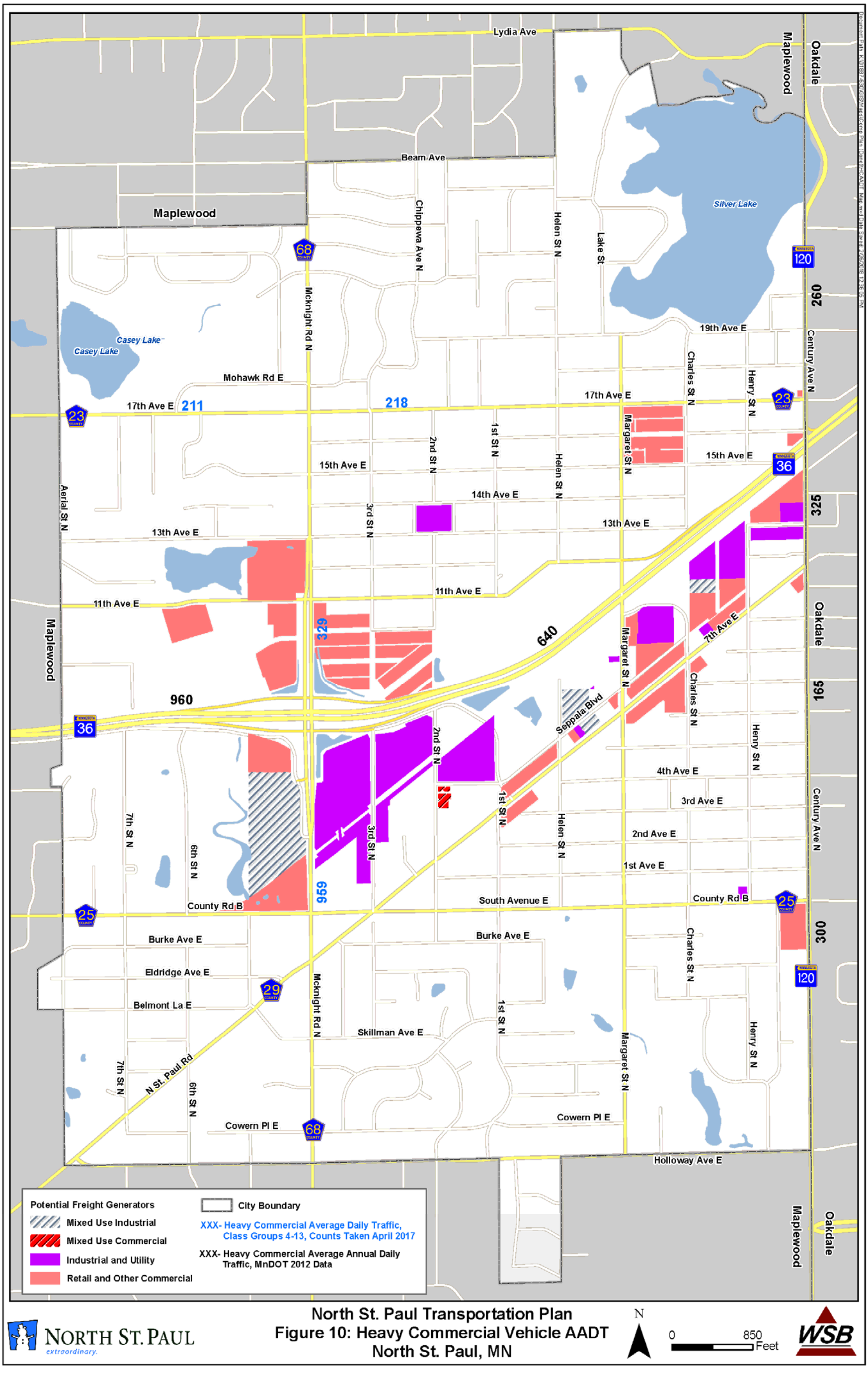
5. FREIGHT

Freight transportation in North St. Paul is primarily served by arterial roadways, including TH 36. Figure 10 shows the city's freight system and potential freight generators. An abandoned Wisconsin Central rail line also passes diagonally across the city; this rail line was developed into the Gateway State Trail.

There are no large freight traffic generators within the city. Most truck traffic is passing through North St. Paul on trips to, from, and through the Twin Cities. To the south of the city, there are several intermodal freight terminals located in the City of St. Paul. Freight traffic generators within North St. Paul are located along TH 36 and include concentrations of industrial land uses south of TH 36 and north of 7th Avenue. Commercial businesses near the McKnight Road interchange and along 7th Avenue also generate some freight traffic along TH 36. A large FedEx distribution facility is located northeast of the city, which likely contributes to freight traffic along Century Avenue (TH 120) and TH 36 within the city.

Figure 10 also shows Heavy Commercial Average Annual Daily Traffic (HCAADT) within North St. Paul. TH 36 west of CSAH 68 (McKnight Road) and CSAH 68 south of TH 36 carry the greatest number of heavy commercial vehicles in the city (approximately 960 vehicles per day).


Lydia Ave
Maplewood
Oakdale
Beam Ave
Maplewood
Chippewa Ave N
Helen St N
Lake St
Silver Lake
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120
260
Mcknight Rd N
Casey Lake
Casey Lake
19th Ave E
Century Ave N
Charles St N
Henry St N
Mohawk Rd E
17th Ave E
211
218
23
17th Ave E
Margaret St N
15th Ave E
2nd St N
1st St N
Helen St N
15th Ave E
36
Aerial St N
14th Ave E
3rd St N
13th Ave E
13th Ave E
11th Ave E
11th Ave E
325
Maplewood
329
640
Margaret St N
7th Ave E
Oakdale
960
Seppala Blvd
Charles St N
Henry St N
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2nd St N
4th Ave E
3rd Ave E
1st St N
Helen St N
Century Ave N
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South Avenue E
County Rd B
County Rd B
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Burke Ave E
Burke Ave E
Charles St N
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Eldridge Ave E
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120
Belmont La E
Mcknight Rd N
Skillman Ave E
1st St N
Margaret St N
Henry St N
7th St N
N St. Paul Rd
6th St N
Cowern Pl E
68
Cowern Pl E
Holloway Ave E
Maplewood
Oakdale
Potential Freight Generators
Mixed Use Industrial
Mixed Use Commercial
Industrial and Utility
Retail and Other Commercial
City Boundary
XXX- Heavy Commercial Average Daily Traffic, Class Groups 4-13, Counts Taken April 2017
XXX- Heavy Commercial Average Annual Daily Traffic, MnDOT 2012 Data
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North St. Paul Transportation Plan
Figure 10: Heavy Commercial Vehicle AADT
North St. Paul, MN
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6. TRANSIT

North St. Paul is located within the Transit Capital Levy District as shown in the Metropolitan Council 2040 TPP. The TPP further classifies the metropolitan area into transit markets based on demographic and urban design factors. Most of North St. Paul is located in Market Area III; however, a portion of the city located around commercial areas along 7th Avenue and TH 36 is located within Emerging Market Areas II or III. Transit service in Market Area III is primarily commuter express bus service with some fixed-route local service providing basic coverage. Emerging Market Areas II or III consist of areas that are currently too small or non-contiguous to support a higher level of transit service. They represent areas where future growth and connections to other areas of higher potential transit use will present good opportunities for future transit improvement. General public dial-a-ride services are available where fixed-route service is not viable. Fixed route bus service in North St. Paul is currently provided by three routes, which are described below and shown on Figure 11.

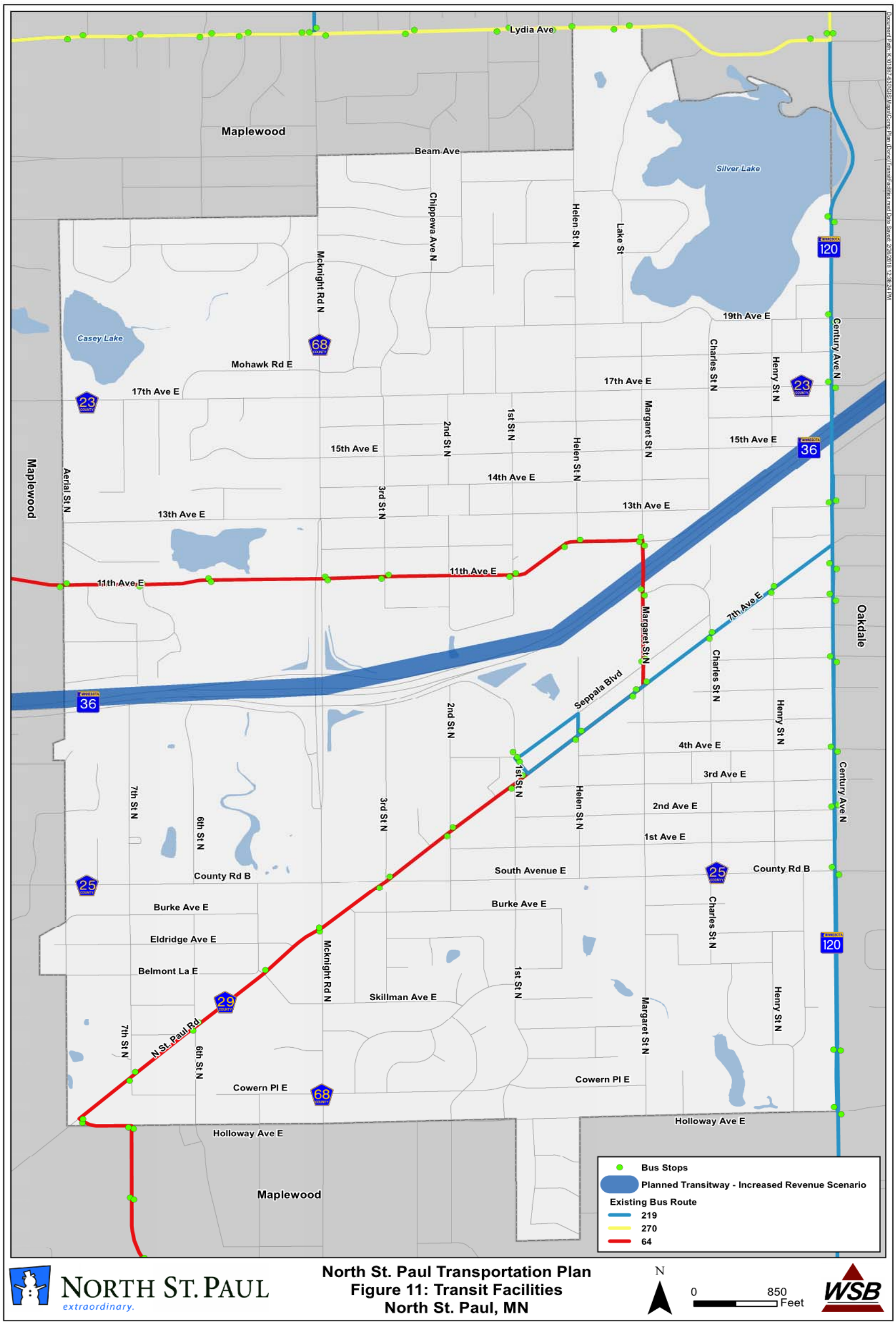
- Route 64: Daytime and evening service between downtown St. Paul and Maplewood via 11th Avenue, 12th Avenue, 7th Avenue, and North St. Paul Road in North St. Paul.
- Route 219: Daytime and evening service between Maplewood, White Bear Lake, Oakdale, and Sun Ray Shopping Center in St. Paul via 7th Avenue and Century Avenue in North St. Paul.
- Route 270: Limited stop commuter service between downtown Minneapolis and Mahtomedi via Lydia Avenue in North St. Paul.

The bus routes that serve this area have a mix of frequencies and types of service that they provide. Route 64 operates at least every 30 minutes during the day and evening while Route 270 operates only during peak commuting times.

In addition to the fixed-route transit options, the city is also served by Washington County Transit Link, a dial-a-ride service for the general public. Transit Link provides connections to destinations within Ramsey County and connects to regular route transit for trips within the metro area, including outside of Ramsey County. North St. Paul residents also have opportunities to participate in the Metro Vanpool program. This program provides financial assistance for vanpools to serve areas with limited regular-route transit service.

The TPP's transit investment plan does not show any transitway investments planned for North St. Paul in the current revenue scenario. As described in Section 2.4.5, the Highway Transitway Corridor Study identified a potential future transitway along Highway 36. This transitway, which would potentially include a station within North St. Paul at Century Avenue, was incorporated into the increased revenue scenario of the TPP. A mode has not been determined and this corridor is not funded within the currently-expected resources for transitways. Nonetheless, residents and employees in North St. Paul may benefit from development of a transitway corridor along Highway 36 depending on its final alignment and operational plan.

There are no formal park-and-ride lots located within North St. Paul. The closest park-and-ride facilities are located at the Maplewood Mall Transit Center and at the intersection of Highway 61 and County Road C in Maplewood. The Metropolitan Council 2016 Annual Regional Park-and-Ride System Report indicates that just over half of the spaces at these facilities are used, indicating that parking spaces are available to accommodate a growth in transit users.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Charles St N
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Margaret St N
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Aerial St N
3rd St N
36
11th Ave E
7th Ave E
Oakdale
Seppala Blvd
4th Ave E
3rd Ave E
2nd Ave E
1st Ave E
7th St N
6th St N
25
County Rd B
South Avenue E
Burke Ave E
Eldridge Ave E
Belmont La E
29
N St. Paul Rd
Skillman Ave E
Cowern Pl E
Holloway Ave E
Bus Stops
Planned Transitway - Increased Revenue Scenario
Existing Bus Route
219
270
64
North St. Paul Transportation Plan
Figure 11: Transit Facilities
North St. Paul, MN
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7. AVIATION

There are currently no existing or planned aviation facilities within North St. Paul. However, the city is responsible for airspace protection in order to reduce hazards to air travel within the region. The closest airports to North St. Paul are:

- St. Paul Downtown Airport (Holman Field) approximately 5 miles southwest of North St. Paul
- Lake Elmo Airport, approximately 6 miles east of North St. Paul

Due to the distance to the nearest airports, there are no radio beacons or other air navigation aids located in off-airport locations in North St. Paul. The city is not within the area of influence of either of the airports identified above, and is therefore not subject to associated land use restrictions.

Any person or organization who intends to sponsor the construction or alteration of a structure affecting navigable airspace as defined in Federal Regulation Title 14; Part 77 needs to inform the Federal Aviation Agency (FAA) of the project. This notification is accomplished through the completion and submittal to FAA of Form 7460-1, Notice of Proposed Construction or Alteration. In North St. Paul, this requirement applies to any construction or alteration exceeding 200 feet above ground level.

There are currently no heliports in North St. Paul or any known plans to construct one. Additionally, none of the surface waters within the city are identified by MnDOT as an authorized landing site for seaplanes.

8. Goals and Multimodal Strategies

This Plan, and the city's actions over the next 20 years, will be guided by the following transportation goals and strategies.

8.1. Goals

Table 7 identifies the goals of the North St. Paul Transportation Plan. These goals represent the city's overall vision for transportation over the next 20 years. The strategies listed in the following section provide guidance that the city can use to reach the transportation goals.

Table 7: City of North St. Paul Transportation Goals and Objectives

Goals	Objectives
1. Facilitate efficient movement of people within and through the City	1.1. Improve local roadway system connectivity to county roadways and state highways.
	1.2. Provide safe and efficient routes for emergency and public safety vehicles.
	1.3. Provide adequate capacity to manage congestion (including options other than construction of additional lanes).
	1.4. Encourage sound access management.
	1.5. Preserve necessary rights-of-way for the 20-year planning horizon and beyond.
2. Facilitate efficient movements of goods within and through the City	2.1. Maintain a safe and effective network of roadways for freight movement.
	2.2. Coordinate with MnDOT, Ramsey County and Washington County to proactively address freight mobility and safety.
3. Provide a transportation system that is integrated with land use and development	3.1. Coordinate transportation system investments with the City of North St. Paul Land Use Plan.
	3.2. Connect land use districts and provide safe access to major activity areas.
	3.3. Design, construct, and maintain roadways that fit the character of the adjacent land use.
	3.4. Encourage private residential streets be designed to City standards where appropriate.
4. Improve transportation safety for all users and modes of transportation	4.1. Implement safety improvements to address high crash locations.
	4.2. Proactively address bicycle and pedestrian safety concerns along roadways and at crossings.

	4.3. Bring sidewalks, trails, and intersections into compliance with ADA.
	4.4. Support traffic calming and design to minimize speed on minor City collectors and local roadways.
5. Develop a multimodal transportation network	5.1. Invest in multi-modal transportation solutions including bicycle and pedestrian infrastructure.
	5.2. Consider a "complete streets" approach to designing and constructing roadways in high pedestrian and bicycle traffic corridors.
	5.3. Preserve adequate right of way for sidewalk and trail construction.
6. Conserve and enhance environmental resources	6.1. Support investments in bicycle, pedestrian, and transit infrastructure to reduce environmental impacts of transportation.
	6.2. Manage storm water effectively and minimize the construction of new impervious surfaces.
	6.3. Support native plant landscapes and urban forestry along roadways.
	6.4. Design new roadways to preserve natural features.
7. Maintain the Existing Transportation System	7.1. Regularly assess transportation maintenance needs and include roadway, trail pavement, and other transportation infrastructure maintenance in the City of North St. Paul Capital Improvement Program.

8.2. Multimodal Strategies

The multimodal strategies listed in this section are specific, actionable steps that the city can take in support of the goals of this Plan. These strategies are based upon existing and future transportation needs as described in detail in the previous sections of this Plan.

The multimodal strategies are broken into several categories:

1. Programmed Improvements and Studies
2. Congested Roadway Corridors
3. Intersection Improvements
4. Traffic Calming/Streetscaping
5. Freight
6. Turnback
7. Transit
8. Bicycle and Pedestrian
9. Citizen-based Concerns/Community Café Input

Each strategy is tied to one or multiple goals; however, not all goals are associated with a specific strategy. In these cases, the city's goals apply across individual projects, and the city will identify opportunities to achieve them throughout its existing project and policy development processes. Table 8 on the following pages describes each strategy, notes which goal(s) is/are related to each strategy, and identifies the lead agency for the strategy. Figure 12 following the tables illustrates the strategies geographically.

Strategies: Programmed Improvements and Studies

Roadway: TH 120/Century Avenue
Lead Agency: MnDOT (or Ramsey/Washington County)
Type of Improvement: Pavement

Goals Addressed: 1, 2, 7
Strategy: TH 120/Century Avenue through the City of North St. Paul is programmed as a pavement preservation project somewhere between the years of 2019 and 2024 in the Metropolitan Council TPP. The City of North St. Paul should coordinate with MnDOT as this project approaches regarding city concerns or needs that could potentially be addressed as part of this project. An important reference document to consider, as these discussions take place, would be a December 2013 TH 120 Access Recommendations Study completed along this corridor.

Depending on timing and the availability of funding, the City should also coordinate with MnDOT regarding the potential opportunity to complete this project in concert with the proposed interchange construction project at TH 36 and TH 120/Century Avenue, along with associated 7th Avenue improvements. Coordination between these efforts could help address concerns that have been raised regarding increased traffic, safety, and access to downtown businesses in this part of the City.

Roadway: TH 36
Lead Agency: MnDOT
Type of Improvement: MnPASS

Goals Addressed: 1, 2
Strategy: MnDOT is currently studying the feasibility and benefits of adding MnPASS lanes along TH 36 from Interstate 35E to the west, through Roseville, into downtown Minneapolis. The City of North St. Paul should coordinate with the Cities of Maplewood and Oakdale to discuss with MnDOT and Metropolitan Council if there would be value in exploring the extension of this MnPASS study at some point in the future east of Interstate 35E, through the cities of Maplewood and North St. Paul, to Interstate 694.

Strategies: Congested Roadway Corridors

Roadway: TH 120/Century Avenue
Lead Agency: MnDOT (or Ramsey/Washington County)

Type of Improvement: Capacity

Goals Addressed: 1, 2
Strategy: Existing traffic volumes along TH 120/Century Avenue currently range from slightly over 10,000 AADT to slightly under 14,000 AADT. Metropolitan Council TH 120/Century Avenue forecasted 2040 traffic volumes along this corridor range from slightly under 12,000 AADT to slightly over 16,000 AADT. Although a variety of variables in addition to traffic volumes, such as access, cross street volumes, percent of truck traffic, on street parking etc. contribute to the actual capacity of any roadway, as a general rule of thumb, the planning threshold Level of Service (LOS) F capacity for a 2-lane roadway such as TH 120/Century Avenue is approximately 12,000 AADT. Accordingly, with forecasted volumes ranging from 12,000 to 16,000 AADT for this corridor by 2040, it is expected that significant congestion will begin to be experienced by motorists as the 2040 forecast year approaches, especially during the AM and PM peak hours.

If constructed, the addition of a planned interchange at TH 120 and TH 36 will help with this congestion somewhat, however, it will not completely address the problem. Therefore, the City should engage MnDOT, Ramsey County and Washington County in a discussion of additional strategies to address this anticipated congestion as opportunities present themselves. As part of this discussion, particular attention should be put on access closure and consolidation strategies outlined in a December 2013 TH 120 Access Study, along with possible spot mobility, Intelligent Transportation Systems (ITS) or other measures, including a potential three-lane roadway section. The City desires to maintain TH 120/Century Avenue as a functional, safe, pedestrian and residential friendly roadway, as noted in the 2015–2030 Comprehensive Plan.

Roadway: Intersection of TH 36/TH 120 (Century Avenue)
Lead Agency: MnDOT

Type of Improvement: Interchange

Goals Addressed: 1, 2, 3, 4
Strategy: TH 36 is a heavily traveled regional roadway corridor traversing the Twin Cities Metropolitan Area. Existing traffic volumes in the City of North St. Paul along this corridor range from 34,500 to 43,000 AADT. Forecasted Metropolitan Council 2040 traffic volumes range from approximately 46,000 to 55,000 AADT. A considerable contributor to congestion along the TH 36 corridor is at-grade signalized intersections on the eastern border of North St. Paul, at TH 120 (Century Avenue), and just east of North St. Paul at Hadley Avenue.

In 2014, MnDOT partnered with the Cities of North St. Paul and Oakdale, Ramsey County and Washington County to study potential future safety and mobility improvements along TH 36. This study recommended construction of a tight diamond interchange at TH 36 and Hadley Avenue and at TH 36 and TH 120 (Century Avenue). Additionally, in 2017, Metropolitan Council recommended as part of a regional Principal Arterial Intersection Conversion Study that it was a high priority to grade separate TH 36 at TH 120 (Century Avenue).

The recommended Hadley Avenue interchange with TH 36 is funded and programmed for construction in 2019. The recommended TH 120 (Century Avenue) interchange with TH 36 is not currently funded, however, this interchange is a top priority for the City of North St. Paul and efforts are underway to secure funding as soon as possible. Since the TH 120 (Century Avenue) interchange is a high priority for Metropolitan Council, City leaders should coordinate with MnDOT and consider submitting this project as part of Metropolitan Council's federal project solicitation process. State bond funding or other State/federal project funding sources for large projects of this nature should also be aggressively pursued.

It will be important to consider a balanced approach to this project that improves safety and mobility with a new grade separated interchange, while also affording reasonable access for development and redevelopment of the adjacent properties to this intersection.

Roadway: TH 36

Lead Agency: MnDOT
Type of Improvement: Freeway Improvement

Goals Addressed: 1, 2
Strategy: As noted in the 2015–2030 Comprehensive Plan, the City of North St. Paul continues to support discussions with MnDOT and other stakeholders regarding a future upgrade of TH 36 from an at-grade expressway to a freeway east of Margaret Street through Division Street to Interstate 694. As part of any upgrade, it would be a priority for the City to maintain the existing westbound slip ramp at Margaret Street.

Strategies: Intersection Improvements

Roadway: 7th Avenue South and 3rd Street

Lead Agency: City of North St. Paul
Type of Improvement: Intersection Improvements

Goals Addressed: 4
Strategy: As noted in the 2015–2030 Comprehensive Plan, this intersection has a poor alignment and too many intersecting streets. A detailed traffic and operational study of this intersection should take place to evaluate current and forecasted conditions and make recommendations for improvements.

Roadway: 7th Avenue South and TH 120/Century Avenue

Lead Agency: City of North St. Paul
Type of Improvement: Intersection Improvements

Goals Addressed: 4
Strategy: As noted in the 2015–2030 Comprehensive Plan, this intersection has a poor alignment and too many intersecting streets. A detailed traffic and operational study of this intersection should take place to evaluate current and forecasted conditions and make recommendations for improvements.

Roadway: 17th Avenue and Margaret Street

Lead Agency: City of North St. Paul
Type of Improvement: Intersection Improvements

Goals Addressed: 4
Strategy: As noted in the 2015–2030 Comprehensive Plan, this intersection has functional problems and should be monitored for potential future improvements.

Roadway: Gateway Trail at South Avenue

Lead Agency: City of North St. Paul, DNR
Type of Improvement: Intersection Improvements

Goals Addressed: 4, 5
Strategy: As noted in the 2015–2030 Comprehensive Plan, this intersection has functional problems. A detailed traffic study of these intersections should take place to evaluate current and forecasted conditions and make recommendations for improvements.

Strategies: Traffic Calming/Streetscaping

Roadway: Various throughout the City

Lead Agency: City of North St. Paul

Type of Improvement: Traffic Calming

Goals Addressed: 4, 5
Strategy: Traffic calming measures should be considered in school zones, neighborhoods, park areas or other high pedestrian traffic areas on an as needed basis to address safety concerns.

Roadway: 7th Avenue

Lead Agency: City of North St. Paul

Type of Improvement: Streetscaping

Goals Addressed: 5, 6
Strategy: As noted in the 2015–2030 Comprehensive Plan, efforts should be

made to establish 7th Avenue as the city's foremost civic street, deserving the city's highest quality of roadway pavement, walks, crossings, trees and landscaping, decorative street lights and signage. This strategy will be implemented in a manner that is consistent with the recommendations of the approved North St. Paul Downtown Master Plan.

Strategies: Freight

Roadway: TH 36 and TH 120/Century Avenue

Lead Agency: MnDOT
Type of Improvement: Truck Mobility

Goals Addressed: 2, 3
Strategy: Support interchange improvements at TH 36 and TH 120/Century Avenue in a way that balances mobility and safety needs for the roadway system with economic development and redevelopment needs for the adjacent properties to this intersection.

Strategies: Turnback

Roadway: TH 120/Century Avenue

Lead Agency: MnDOT/Ramsey County/Washington County
Type of Improvement: Turnback from MnDOT to Ramsey/Washington County

Goals Addressed: 7
Strategy: MnDOT, Ramsey County, and Washington County should enter into a dialogue regarding the appropriateness of MnDOT turning back TH 120 (Century Avenue) to a county roadway.

Roadway: CSAH 23/17th Avenue

Lead Agency: Ramsey County/City of North St. Paul
Type of Improvement: Turnback from Ramsey County to City of North St. Paul

Goals Addressed: 7
Strategy: Ramsey County and the City of North St. Paul should enter into a dialogue regarding the appropriateness of Ramsey County turning back CSAH 23 (17th Avenue) to a city roadway.

Strategies: Transit

Location: TH 36
Lead Agency: Metropolitan Council
Type of Improvement: Bus Rapid Transit (BRT)

Goals Addressed: 1, 6
Strategy: The Metropolitan Council developed the Highway Transitway Corridor Study in 2014 to examine the potential for all-day, frequent, station-to-station highway bus rapid transit service along eight highway corridors throughout the Twin Cities. The Highway 36 Corridor between downtown Minneapolis and Hadley Avenue was one of the corridors evaluated in the study. This corridor would have nine stations and would be 17.7 miles long. The estimated end-to-end travel time during peak periods would be 47 minutes. Based on the preliminary station locations included in the study, the only station within the City of North St. Paul would be located at TH 120 (Century Avenue). Based on the evaluation results, the Highway 36 corridor was one of four that received a "High Potential" rating. Additional and more detailed study is necessary, along with vetting with local communities and policymakers prior to moving forward. The corridor was included in the Increased Revenue Scenario for the transitway vision in the TPP. The City of North St. Paul should stay in close contact with Metropolitan Council, adjacent communities along TH 36 and State Legislators to continue to evaluate the feasibility and benefits of this project to the City and the entire Twin Cities Region.

Location: McKnight Road (CSAH 68)
Lead Agency: Metropolitan Council
Type of Improvement: Fixed Route Bus Transit Line

Goals Addressed: 1, 6
Strategy: Existing fixed route bus transit lines traverse the City of North St. Paul along 11th Avenue East, 7th Avenue East and Century Avenue. McKnight Road is an A-Minor Arterial roadway corridor with considerable existing urban development (and planned redevelopment) that ties into a regional roadway network north and south of the City. City leaders should engage Metropolitan Council in a conversation regarding the need and benefits of adding McKnight Road to Metropolitan Council's fixed route bus transit network. The next closest north/south fixed route line is currently one mile east of McKnight Road at TH 120 (Century Avenue).

Location: City-wide
Lead Agency: City of North St. Paul
Type of Improvement: Access to Transit Facilities

Goals Addressed: 1, 6
Strategy: Improve non-motorized access to bus stops, particularly along Route 64. Explore the demand for park-and-ride areas and the potential for shared use parking facilities to serve as park-and-ride facilities.

Strategies: Bicycle and Pedestrian

Location: McKnight Road (CSAH 68) Corridor from South City Boundary to North City Boundary

Lead Agency: Ramsey County/City of North St. Paul

Type of Improvement: Regional Bicycle Transportation Network (RBTN)

Goals Addressed: 5, 6
Strategy: Metropolitan Council has identified a general corridor along McKnight Road extending to Aerial Street to the west and to Helen Street to the east as part of the Twin Cities Regional Bicycle Transportation Network (RBTN). The City of North St. Paul should coordinate with the City of Maplewood that shares this proposed RBTN corridor to the north and south of North St. Paul to identify a specific alignment and involve Metropolitan Council in this discussion. After a specific alignment has been confirmed, North St. Paul and Maplewood should collaborate and submit a proposed RBTN project to Metropolitan Council for funding consideration.

Location: McKnight Road (CSAH 68) South of 7th Avenue to South City Boundary

Lead Agency: Ramsey County

Type of Improvement: Four-to-Three Lane "Road Diet"
Goals Addressed: 4, 5
Strategy: McKnight Road south of 7th Avenue is a four-lane undivided roadway with an existing AADT of 14,900 and a Metropolitan Council 2040 forecasted AADT of 18,331. To make this corridor more bicycle and pedestrian friendly and potentially improve landscaping and other amenities, Ramsey County should explore a four-to-three lane "Road Diet" for this segment of McKnight Road. A three-lane design would also improve safety because left-turning vehicles would be removed from the through lanes.

Location: 11th Avenue East from McKnight Road to Aerial Street

Lead Agency: City of North St. Paul

Type of Improvement: Four-to-Three Lane "Road Diet"
Goals Addressed: 4, 5
Strategy: 11th Avenue East between McKnight Road and Aerial Street currently is a four-lane undivided roadway with an existing AADT of 8,700 and a Metropolitan Council 2040 forecasted AADT of 13,120. To make this corridor more bicycle and pedestrian friendly, and possibly improve landscaping and other amenities, the City of North St. Paul should explore a four-to-three lane "Road Diet" for this segment of 11th Avenue. Part of this evaluation would require input from Ramsey County to verify whether dual northbound left turn lanes are necessary at the intersection of McKnight Road and 11th Avenue. A three-lane design would also improve safety since left turning vehicles would be removed from the thru lanes.

Location: TH 120 (Century Avenue) from Gateway State Trail to North City Boundary

Lead Agency: City of North St. Paul, City of Maplewood, MnDOT (or Ramsey/Washington County)

Type of Improvement: Separated Bicycle/Pedestrian Trail
Goals Addressed: 5, 6
Strategy: As outlined in the February 2014 Highway 36 Corridor Study, the City of North St. Paul should pursue a separated bicycle and pedestrian trail along TH 120 (Century Avenue) from the existing Gateway State Trail to the North City Boundary. As this project is developed, the City of North St. Paul should coordinate the scheduling of this trail project with the City of Maplewood to determine if the extension could continue into the City of Maplewood, to Joy Road, adjacent to Joy Park.

Location: City-Wide

Lead Agency: City of North St. Paul/Ramsey County/MnDOT/DNR

Type of Improvement: Pedestrian and Bicycle Facilities
Goals Addressed: 5, 6
Strategy: Continue developing the local non-motorized transportation network by constructing additional facilities, particularly around key generators of bicycle and pedestrian traffic, including parks, schools, and churches, and to complete gaps in the existing sidewalk network. Enhance access to the Gateway Trail and signage/wayfinding to and from downtown North St. Paul.

As outlined in the 2015–2030 Comprehensive Plan, continued efforts should be made to make the following bicycle/pedestrian trail improvements to address disconnects in the system:

- An east-west route between Casey Lake Park and Silver Lake Park
- A trail around Silver Lake (long-term objective)
- A trail on the west side of TH 120/Century Avenue
- A trail along the north side of TH 36 from the west side of McKnight Field to Division Street, if sufficient space
- A trail from Southwood Park through Cowern Elementary School site and north on Helen to Seppala Boulevard
- An improved Gateway State Trail—make it more park-like and use it effectively in redevelopment
- A complete north-south trail link on 2nd Street North between the High School and 17th Avenue
- Extend the pedestrian-way on 7th Ave to South Avenue

Strategies: Citizen-based Concerns/Community Café Input

Location: City-Wide

Lead Agency: City of North St. Paul/Ramsey County

Type of Improvement: Sidewalks
Goals Addressed: 5, 6, 7
Strategy: Improve sidewalks and sidewalk connections, fill existing gaps in the network and connect major destinations. Fix broken, uneven and narrow sidewalk segments. Develop and implement an ADA compliance plan. Explore options for city snow plowing on sidewalks and improve maintenance of sidewalks. Improve signage and visibility to increase pedestrian safety.

Location: City-Wide

Lead Agency: City of North St. Paul/Metro Transit/Ramsey County

Type of Improvement: Fixed-Route and Dial-a-Ride Bus Service
Goals Addressed: 1, 6
Strategy: Improve fixed route bus service to some key locations and improved dial-a-ride or on-demand transit mobility services.

Location: City-Wide

Lead Agency: City of North St. Paul/Ramsey County/MnDOT

Type of Improvement: Pedestrian Crossings
Goals Addressed: 5
Strategy: Address pedestrian safety at intersections through additional or improved crosswalk markings, signs or beacons, modified intersection controls, ADA improvements, crosswalk flags, school zones, and/or public awareness campaigns. In particular, improve crosswalk at location where Gateway Trail intersects with Margaret Street and Centennial Drive.

Location: Downtown

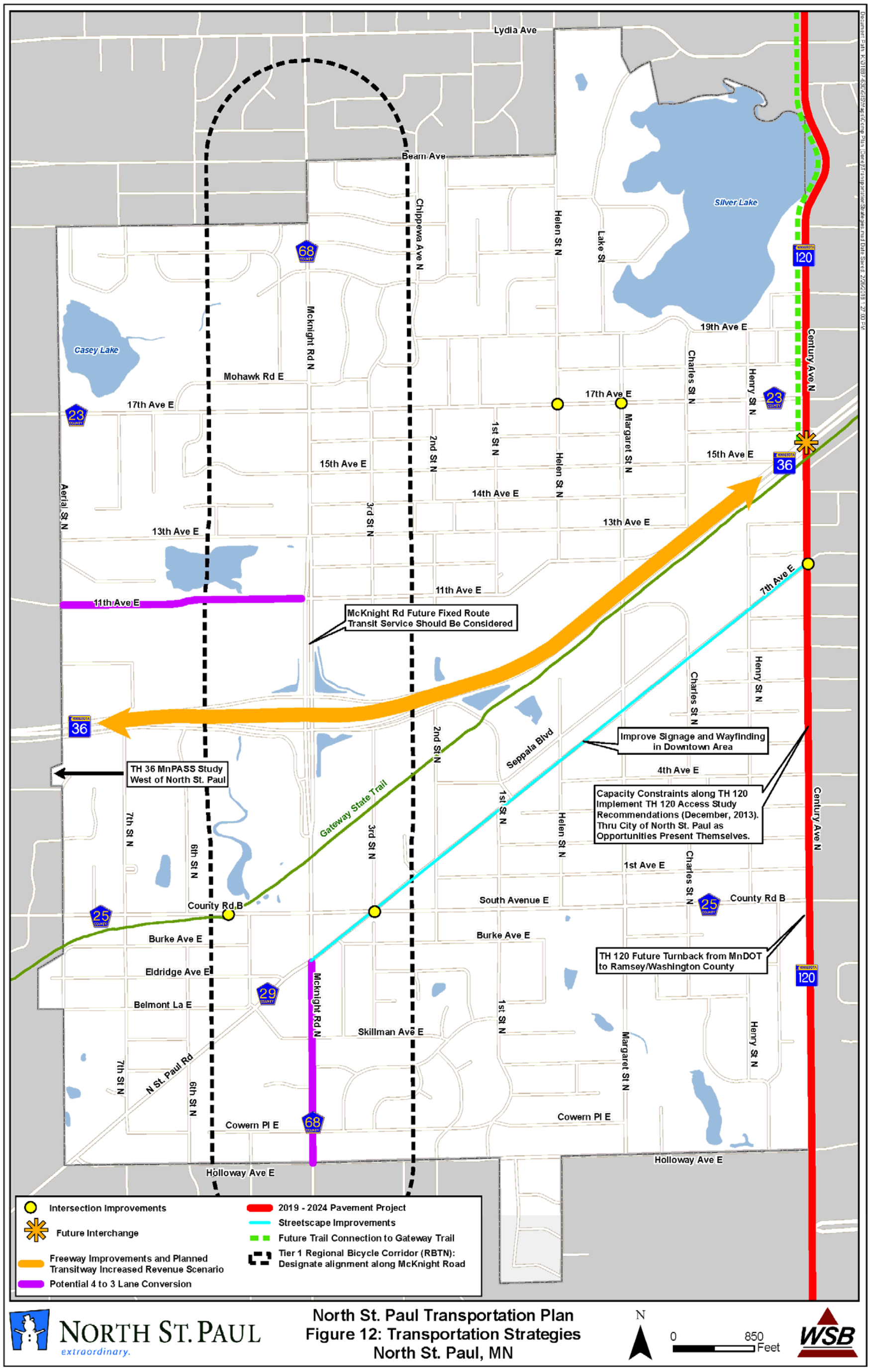
Lead Agency: City of North St. Paul

Type of Improvement: Signage and Wayfinding
Goals Addressed: 1, 3
Strategy: Improve signage and wayfinding to downtown area.

Location: 17th Avenue North and Helen Street

Lead Agency: City of North St. Paul

Type of Improvement: Intersection Control
Goals Addressed: 1
Strategy: Remove existing stop signs along 17th Avenue and keep existing stop signs along Helen Street.


Lydia Ave
Beam Ave
Chippewa Ave N
Helen St N
Lake St
Silver Lake
Century Ave N
Casey Lake
Mcknight Rd N
Mohawk Rd E
17th Ave E
19th Ave E
Charles St N
Henry St N
Margaret St N
15th Ave E
1st St N
2nd St N
Aerial St N
14th Ave E
13th Ave E
3rd St N
11th Ave E
McKnight Rd Future Fixed Route Transit Service Should Be Considered
7th Ave E
Improve Signage and Wayfinding in Downtown Area
TH 36 MnPASS Study West of North St. Paul
Seppala Blvd
4th Ave E
Gateway State Trail
Capacity Constraints along TH 120 Implement TH 120 Access Study Recommendations (December, 2013). Thru City of North St. Paul as Opportunities Present Themselves.
7th St N
6th St N
1st Ave E
County Rd B
South Avenue E
Burke Ave E
TH 120 Future Turnback from MnDOT to Ramsey/Washington County
Eldridge Ave E
Belmont La E
Skillman Ave E
N St. Paul Rd
Cowern Pl E
Holloway Ave E
Intersection Improvements
Future Interchange
Freeway Improvements and Planned Transitway Increased Revenue Scenario
Potential 4 to 3 Lane Conversion
2019 - 2024 Pavement Project
Streetscape Improvements
Future Trail Connection to Gateway Trail
Tier 1 Regional Bicycle Corridor (RBTN): Designate alignment along McKnight Road
NORTH ST. PAUL
extraordinary.
North St. Paul Transportation Plan
Figure 12: Transportation Strategies
North St. Paul, MN
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Feet
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9. Proposed Short and Long Range Roadway Projects

The sections below identify proposed short and long range roadway projects identified in the city's CIP and based on the proposed land use and redevelopment activities described in previous sections of this Plan.

9.1.1. Proposed Project from the TPP

The Metropolitan Council 2040 TPP identifies a pavement project along TH 120 (Century Avenue) programmed for the 2019-2024 timeframe. This project is anticipated to improve and maintain the roadway surface. The City of North St. Paul will coordinate with MnDOT as this project approaches regarding city concerns or needs that could potentially be addressed as part of this project. Two other projects are identified in the TPP that would occur within the City of North St. Paul (MnPASS lanes and a transitway along TH 36), however, these projects are not currently funded and only appear in discussion of the Increased Revenue Scenario.

9.1.2. Proposed Projects from City CIP and County Transportation Improvement Plan

The city's CIP identifies a number of street and utility projects programmed through 2020. These projects are primarily reconstruction projects intended to improve the roadway surface. Some of these projects also include sidewalk or trail replacement or maintenance. Ramsey County's 2017-2021 Transportation Improvement Plan (TIP) also includes several programmed maintenance projects within the city, including along South Avenue (CSAH 25/County Road B), McKnight Road (CSAH 68), and 17th Avenue (CSAH 23/County Road C).

9.1.2. Proposed Projects based on Land Use and Development

In 2012, the city prepared the North St. Paul Redevelopment Master Plan focused on several districts encompassing the downtown and 7th Avenue/TH 36 corridors within the city. Several potential transportation improvements were identified as part of this plan to support and enhance circulation and economic development in these areas. These include enhanced streetscape and gateway improvements, district parking, and modified street sections for various street types in the area. Implementation of these improvements will be considered as specific proposals for redevelopment move forward. Additionally, the plan recognizes the importance of accounting for a potential future interchange at TH 36 and Century Avenue, as well as potential future transit improvements along McKnight Road and TH 36.

10. Public Comments

The city has gathered public input through several "Community Café" meetings and a web-based "MySidewalk" site associated with the comprehensive plan update. Through these interactions, members of the public identified issues and opportunities related to transportation, with a strong focus on improving non-motorized transportation options within the city. Many comments were received relating to making the city more walkable by filling gaps in the sidewalk and trail network, maintaining sidewalk facilities, and making associated safety and streetscaping improvements along roadways and at intersections. Other comments received related to addressing the intersection of TH 36 and Century Avenue (TH 120) and improving transit connections and service.

The city also held a work session with the Planning Commission in order to further review and identify priorities for improvements to the non-motorized transportation network based on feedback from the public and previous planning efforts. As an outcome of this meeting, a number of gaps in the non-motorized transportation network emerged. Meeting attendees identified a number of locations within the city as priority areas for improvements, which served as a basis for developing the planned local non-motorized transportation network.

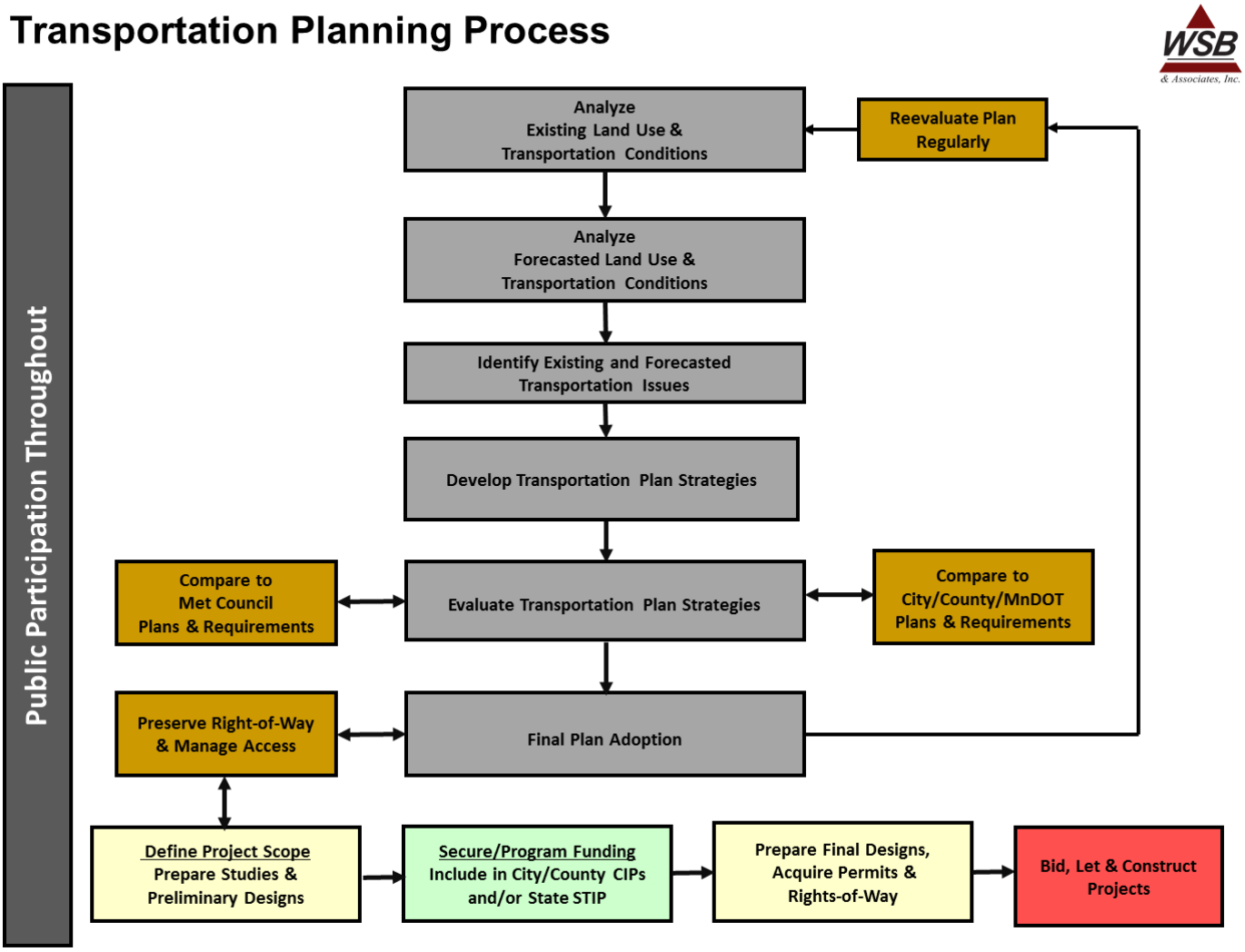
11. Conclusion and Next Steps

The purpose of this Transportation Plan is to set a multimodal transportation vision for the City of North St. Paul through the year 2040. Goals and specific strategies have been identified collaboratively by the city, Ramsey County, MnDOT, and members of the public within the framework of Metropolitan Council requirements. The vision and associated strategies outlined in this Plan were established by considering existing and forecasted conditions, North St. Paul priorities, regional travel patterns, and a variety of other factors.

As the owners of the transportation network in North St. Paul (i.e. City of North St. Paul, Ramsey County, MnDOT, and the DNR) advance their respective Capital Improvement Programs (CIPs), this Plan is intended to serve as an important resource and reference in establishing priorities and advancing transportation projects for implementation. Advancing these projects from a planning to implementation phase will require collaborative discussions among facility owners, adjacent communities, the Metropolitan Council, residents and others to conduct traffic studies, finalize designs, preserve rights-of-way, obtain

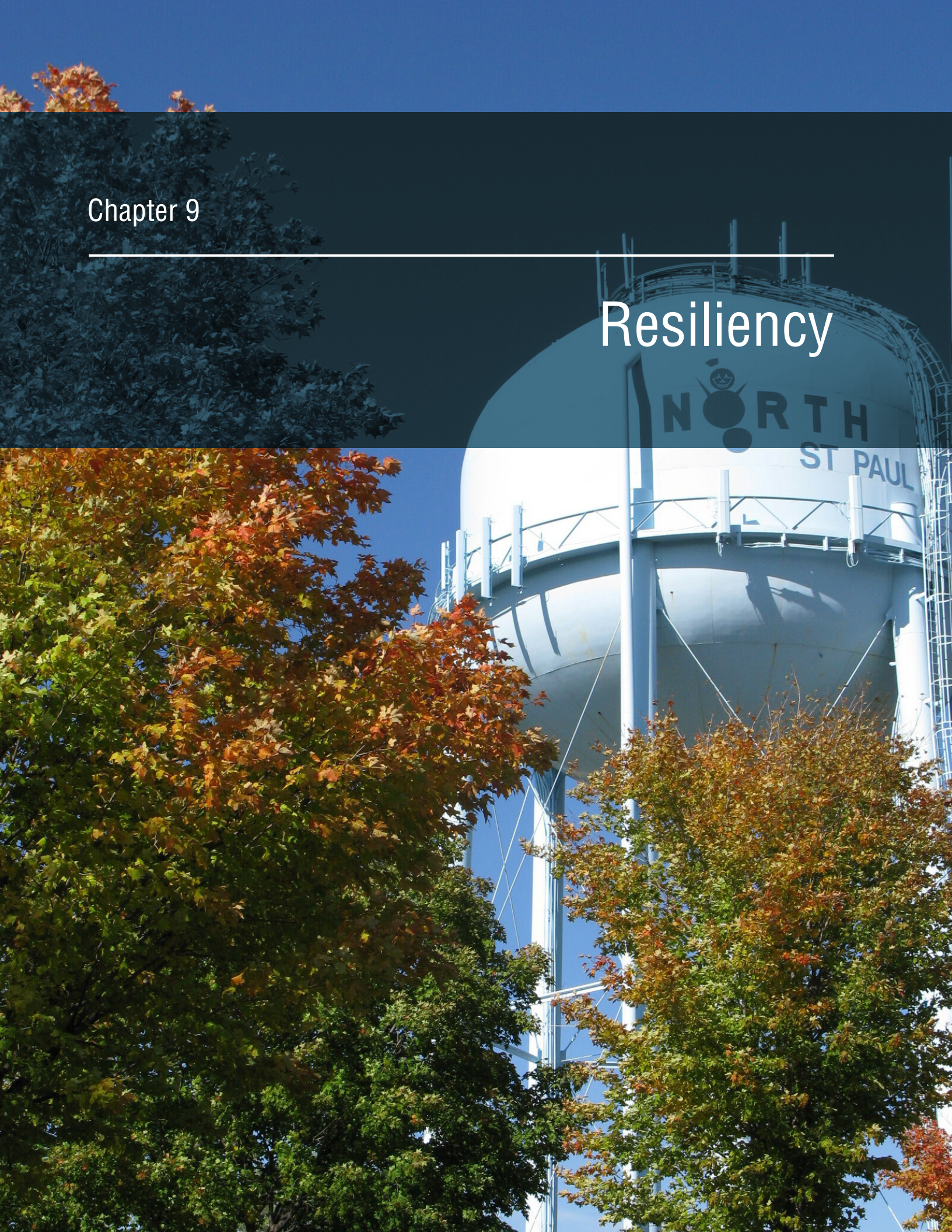
environmental clearances and leverage necessary financial resources. Figure 13 outlines the entire planning and project development process required for transportation projects from concept plans to construction implementation.

Figure 13: Transportation Planning Process



Chapter 9

Resiliency



CHAPTER NINE: RESILIENCY

INTRODUCTION

Resiliency means having the ability to recover quickly from difficulties. In the face of climate change, climate resiliency is the ability of a community to absorb the stresses and maintain function in the face of external pressures. This chapter focuses on the goals and strategies that North St. Paul will use to prepare for future pressures on the physical environment. A focus on sustainability, protecting and preserving natural resources, and energy conservation will allow the city to target and achieve resiliency goals. Sustainability is identified in *Thrive MSP 2040* as one of the Metropolitan Council's five key outcomes for the region to accomplish over the next decades. North St. Paul is known as "your favorite small town" and preserves its neighborhood and downtown values. The city promotes connectivity between people and places and encourages active lifestyles. North St. Paul has set the following environmental goals:

TO PROTECT AND ENHANCE THE LAKES, WETLANDS, WOODS, AND WILDLIFE AND PROMOTE ACTIONS, PRACTICES AND DEVELOPMENTS WHICH WILL SUSTAIN THE ENVIRONMENT.

TO BECOME MORE RESILIENT TO CLIMATE CHANGE THROUGH CLIMATE CHANGE MITIGATION AND ADAPTATION.

There are many considerations that can be made when planning to integrate resiliency into the community. Topics revolve around healthy communities, energy and renewable resources, infrastructure, environmental assets, economy, and society. This chapter discusses the sustainability practices that the City is currently implementing and incorporates several new goals and strategies that will guide the City to achieving resiliency.

WHAT WE HEARD

At the Community Cafes held during the planning process, there were several discussion topics surrounding resilience and the environment. Major themes that emerged from those discussions included:

- Parks, trails and open spaces are an asset to the community
- Keep water local
- Solar energy should be a priority—used for street lights, LED lighting
- Maintain parks, and increase the amount of park space as additional housing is built
- Balance sustainability and affordability

Natural Features

Pre-settlement Environment

As described by the Department of Natural Resources Ecological Classification System, North St. Paul is located within the Eastern Broadleaf Forest Province which serves as a transition zone between prairie lands and mixed conifer-deciduous forest. The pre-settlement vegetation of the northeast portion of the city near Silver Lake was mapped as wet prairie and the remainder of the city was mapped as oak openings and barrens according to the public land survey by Francis Marschner in 1930. Today, most of the city is urbanized and natural features are retained within open spaces and parks. According to the Minnesota Biological Survey, there are no sites of biodiversity significance within the city. Knowledge of the historic plant communities of the city is important when selecting sites for protection and preservation within the community. This knowledge also allows the city to make informed decisions about native vegetation management, selection of plantings, preparing for climate change, and invasive species management.

Lakes, Streams, and Wetlands

Water is an important resource to preserve and protect within the city, such as lakes, streams, wetlands, and groundwater. According to the National Wetlands Inventory, the largest wetland areas within the city are located at the Urban Ecology Center, Southwood Nature Preserve, and PCU Pond. Surface water features are described in detail in the Local Surface Water Management Plan (LSWMP). One DNR Public Water watercourse, Kohlman Creek, is located within the city at the west boundary. Major DNR Public Waters include:

- Casey Lake (62000500P)
- Silver Lake (620001000P)
- Unnamed Wetland (PCU Pond) (62014800W)
- Unnamed Wetland (Southwood Nature Preserve) (62023900W)
- Unnamed Creek (Kohlman Creek) (M-053.5-003)

Rare Features

The DNR Natural Heritage Information System revealed that the following rare features may occur within the city:

- Blanding's turtle (*Emydoidea blandingii*)

Environmental Advisory Commission

North St. Paul has appointed an Environmental Advisory Commission (EAC) responsible for advising the council on decisions impacting the ecological health of the city. The EAC works to advance the city's environmental stewardship and to promote awareness of environmental issues through community outreach and education.

In the past, the EAC has focused on topics including:

- Tree adoption and Arbor Day events
- Tree City USA
- Environmental newsletter
- Living Streets
- Pollinators
- Urban forestry
- Invasive species control
- LED light bulb retrofits
- MnDOT Landscape Partnership Program
- Recycling
- Environmental Education
- GreenStep Cities

The EAC plans to continue to support past environmental efforts while focusing on new areas of improvement within the city. Items that the EAC may pursue in the future include:

- Energy reduction goals
- Hosting an environmental fair
- Additional renewable energy use
- Green infrastructure
- Greenway connectivity and wildlife corridors

Sustainability Planning

Healthy Community

Developing a healthy community involves engaging a broad spectrum of people including citizens, government, and local businesses. Fostering a healthy community is an important step in developing local self-reliance through strategies that focus on food availability, trails and greenways, and advocating for active living lifestyles. Additional considerations regarding active lifestyles are included in Chapter 6 – Transportation of this comprehensive plan update. North St. Paul prioritizes the health and welfare of its residents and focuses on improving the health of the community. It is a part of the city vision to provide connectivity between people and places.

At a community level, healthy lifestyles can be reflected in: park and trail access, access to multi-modal transportation, availability of healthy food, walkability of the community, connectivity of green spaces, community aesthetics, outreach and education opportunities, waste and recycling services, Living Streets, encouraging local food resources, etc.

Energy and Renewable Resources

Energy planning plays a critical role in communities reaching their own sustainability goals. With the lingering threat of climate change, reductions in energy-related greenhouse gas emissions and reductions in energy consumption are important goals that the city should consider.

North St. Paul is unique in that the city purchases wholesale power through the Minnesota Municipal Power Agency (MMPA) which provides citizen owned and locally operated municipal utilities.

The City of North St. Paul has a good understanding of their baseline energy usage because of their wholesale power. This knowledge allows the city to set achievable goals and strategies related to energy use. A variety of energy planning tools and services are available to assist communities in developing baseline data, goals, and strategies, such as through the GreenStep Cities Program. Energy-related greenhouse gas emissions influence climate change which produces risks that may be detrimental to a community if not properly planned for.

Possible Climate Change Implications: extreme weather event clean-up and reconstruction, adverse effects on plant and wildlife habitats, threats to food and water supplies, management of snow and ice, temperature fluctuation, invasive plant and insect control, removal and replanting of trees, heat island effects, etc.

Much of the city is built-out, but North St. Paul can focus on reducing greenhouse gas emissions and reducing energy consumption at various levels throughout the community (Table 9-1).

TABLE 9-1. AREAS OF FOCUS AND CONSIDERATIONS FOR ENERGY CONSERVATION AND REDUCTION.

Focus	Considerations
Residential	Education campaigns that target households and students, recycling programs, efficient appliance incentives, LED lightbulbs, composting, native plant sales, cost-share opportunities.
Business and Institutional	Energy-efficient construction and demolition incentives, hosting energy workshops, lighting upgrades, encourage renewable energy subscription, encourage participation in Energy Smart.
Transportation and Land Use	Bicycling and walking trails, green transit, fuel efficient vehicles, electric vehicle plug-ins, open space retention, green infrastructure, urban forests, connectivity, shared parking to reduce impervious surfaces.
Renewable Energy	Update solar ordinances, encourage renewable energy subscriptions, educate residents on options.

North St. Paul currently offers an Electric Rebate Program to its residents and commercial customers receiving electric services from a local municipal electric utility. Residents are eligible for rebates under the following programs which are described in detail on the MMPA webpage:

- ENERGY STAR Appliance Rebate and Recycling Bonus Rebate.
- Central AC Tune-Up Rebate.
- Q.I. Air Conditioner/Air Source Heat Pump Rebate.
- Residential LED Rebate.

Business customers are also eligible for rebates under the following programs:

- Lighting Retrofit Rebate.
- Lighting New Construction Rebate.
- VFD Rebate.
- Vending Machine Controller Rebate.

In addition to energy conservation efforts, renewable energy resources provide options for reductions in energy related emissions. Solar development can bring environmental and economic benefits to a community through clean energy production, creation of local revenue, and improved property values. The city has already incorporated some renewable resources into the community and provides options for residents to support renewable energy production. Currently, rooftop solar is allowed within the city. The city should investigate additional methods to incorporate renewable energy and to incentivize residents to use renewable energy resources while taking into consideration the community municipal power supply and the maintenance of the energy infrastructure within the city. The Metropolitan Land Planning Act requires that this comprehensive plan shall contain "an element for the protection and development of access to direct sunlight for solar energy systems" (Minn. Stat. 473.859).

The Gross and Rooftop Generation Potential within the City of North St. Paul are estimates of how much electricity could be generated using existing technology and efficiency conversion. The estimates of the Gross and Rooftop Potential are derived from radiance penetration on a given area within the city and these estimates will not change drastically over time which provides a great planning tool for the city. The solar potential estimates are as follows:

TABLE 9-2. COMMUNITY SOLAR POTENTIAL FOR NORTH ST. PAUL.

Community[1]	Gross Potential (Mwh/yr	Rooftop Potential (Mwh/yr)	Gross Generation Potential (Mwh/yr)[2]	Rooftop Generation Potential (Mwh/yr)[2]
North St. Paul	3,359,717	476,945	335,971	47,694

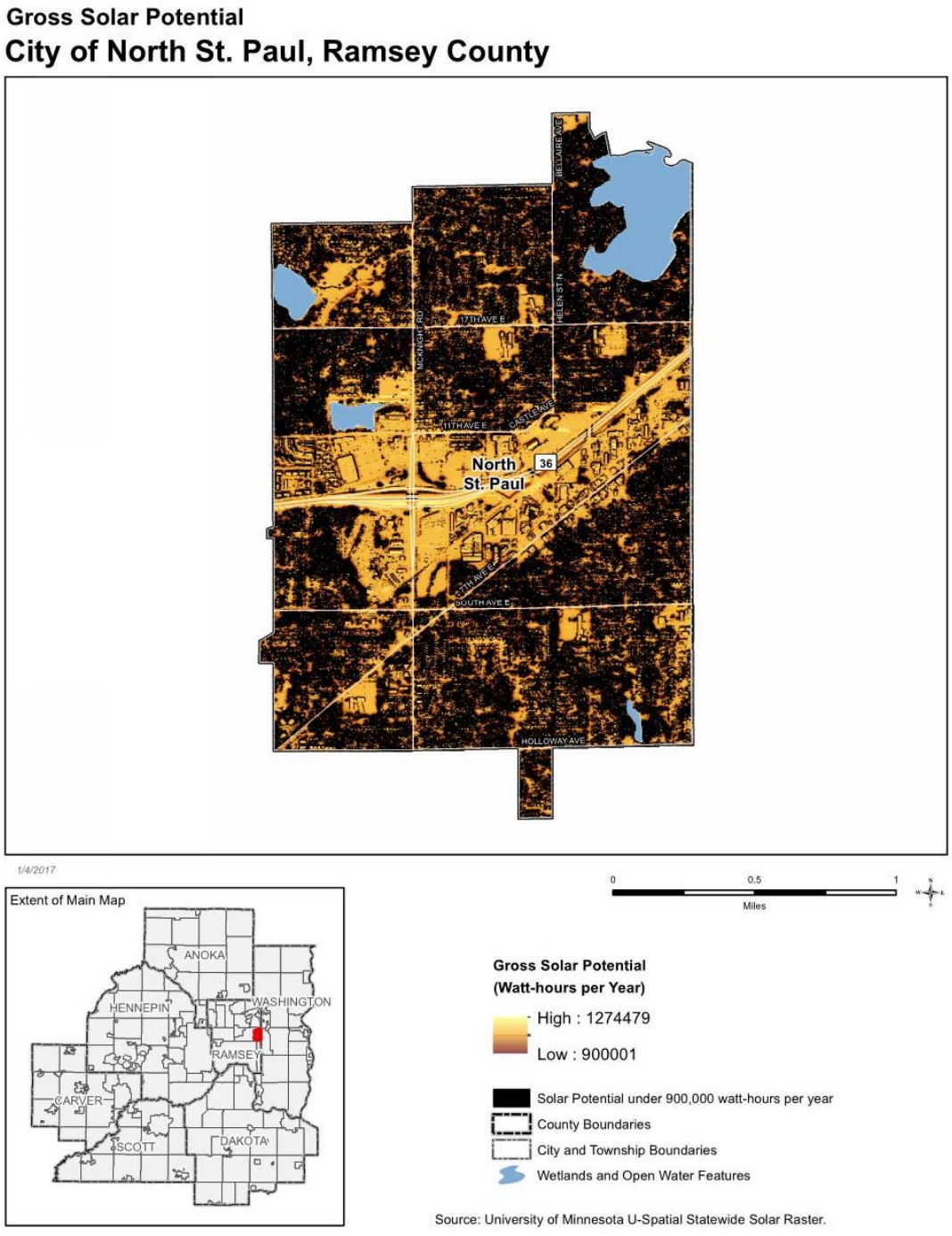
[1] There are a few communities where generation potential calculations could not be produced. There are areas within some maps where data was unusable. These areas were masked and excluded from gross rooftop potential and generating potential calculations.

[2] In general, a conservative assumption for panel generation is to use 10% efficiency for conversion of total insolation into electric generation. These solar resource calculations provide an approximation of each community's solar resource. This baseline information can provide the opportunity for a more extensive, community-specific analysis of solar development potential for both solar gardens and rooftop or accessory use installations. For most communities, the rooftop generation potential is equivalent to between 30% and 60% of the community's total electric energy consumption. The rooftop generation potential does not consider ownership, financial barriers, or building-specific structural limitations.

June 2017

An analysis of North St. Paul's solar energy capacity, based on exposure to sunlight, indicates that the Highway 36 corridor is the most suitable for solar energy potential. The city's solar suitability analysis is shown in Map 9-1. Overall, it will be important for the city to implement energy related conservation goals and assess its vulnerabilities in the face of climate change.

MAP 9-1. NORTH ST. PAUL SOLAR SUITABILITY ANALYSIS. SOURCE: METROPOLITAN COUNCIL.



Environmental Assets and Infrastructure

North St. Paul was historically populated by hardwood forest, such as oak, or by wet prairie. Today, most of the city is built-out but areas like PCU Environmental Learning Center, the Urban Ecology Center, Northwood Park, Southwood Nature Preserve, Casey Lake Park, Silver Lake Park and other open spaces within the city provide opportunities to preserve, protect, and enhance the natural environment. Balancing community infrastructure development with sustainable practices and natural resources preservation can be difficult when a community is fully developed and natural space is limited, but focus on incorporating green infrastructure in development and redevelopment, as well as preserving existing natural resources will be important as the community continues to grow.

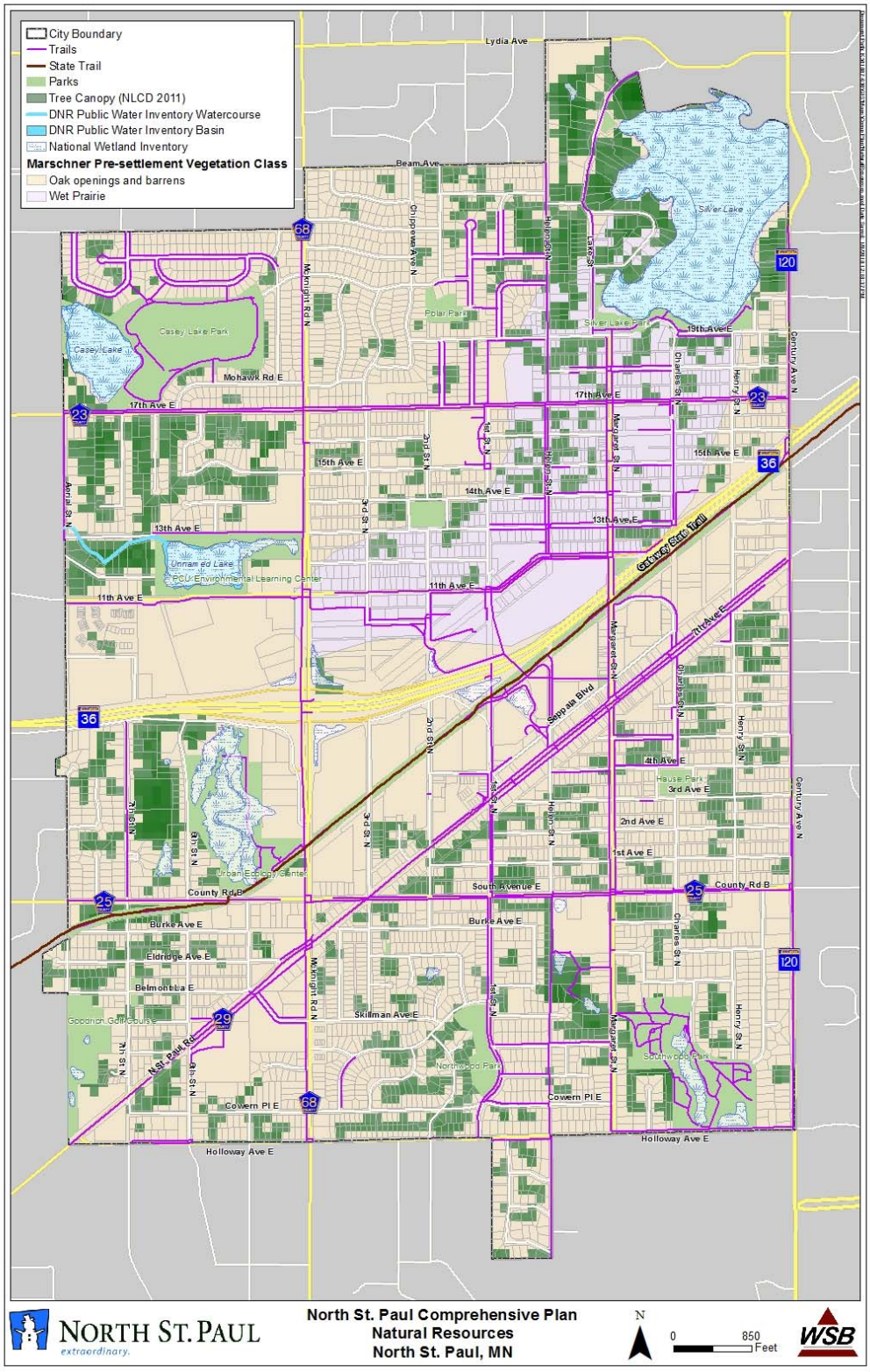
North St. Paul has begun to enhance its natural resources by protecting areas like PCU Environmental Learning Center and the Urban Ecology Center which include wetland restorations and the establishment of native upland buffers. These resources are extremely valuable for both functional and aesthetic purposes. For example, wetlands serve as natural storm water retention areas during runoff periods, but they also serve as natural habitats for numerous species of plant and animal life. These two areas are supported by the Ramsey-Washington Metro Watershed District and are made available to the public for recreation and environmental learning opportunities.

Nature has a positive influence in residential areas and promotes healthy living. The combination of functional and aesthetic values can be applied to most natural resources including wetlands, woodlands, water resources, and prairies. North St. Paul will continue to develop and redevelop as the community grows and it will be important to focus on preserving and protecting the natural environment in a way to promote native vegetation, wildlife habitat, and green space corridors or connectivity in the city. Connectivity of green spaces and the creation of green corridors for wildlife will also be important in preserving the ecology of the city.

Planning for future development should consider native vegetation as a type of infrastructure that is just as important as the other components of a development. Urban forests are becoming increasingly important because they provide shade to reduce heat island effect, shield from snow drifts, produce oxygen and sequester carbon, produce biomass for fuels, provide aesthetic and calming values, increase habitat for wildlife, and increase real estate values. The planting of a diversity and age range of native trees will increase the urban forest and protect trees against threats of disease and invasive pests. A focus on creating green spaces with native vegetation plantings will also be important to support local pollinators. Pollinators support biodiversity and the production of foods, fibers, oils, and medicines. The greatest support for the pollinators is

to plant as much habitat as possible to create areas for feeding and lifecycles. Climate change will cause changes to the weather, and will increase threats from storms, heat, disease, and

MAP 9-2. NATURAL RESOURCES WITHIN NORTH ST. PAUL.



invasive species. It will be imperative to plan for these changes into the future by developing or amending ordinances or zoning codes that increases tree preservation and native plantings.

The city has adopted a Living Streets Plan which provides guidelines for developing streets where people are active and nature is accommodated. These streets are multi-purpose and may include: sidewalks, bike lanes, parking, rainwater gardens, trees, vegetation, etc. One of the major benefits of Living Streets are that vegetated areas filter runoff and reduce pollution within local bodies of water, such as in Kohlman Lake and Silver Lake. One way to increase infiltration is through the installation of rain gardens.

Other environmental benefits of Living Streets include:

- Improved air quality.
- Reduced urban heat island affect through tree shading.
- Reduced raw material and energy used in street construction.
- Improved infiltration by increasing non-impervious ground surface.
- Improved resiliency of soil to extreme rain events, where one mature tree can capture over 5,000 gallons of water in a year.

Many of the streets in North St. Paul will be replaced or resurfaced soon, and with the Living Streets Plan, street improvements will integrate transportation, environmental, and healthy community needs into the design.

Green infrastructure can also be included in developments and redevelopments within the city such as green roofs, permeable pavement, rainwater harvesting, rain gardens, planter boxes, and urban tree canopy. New developments are encouraged to consider sustainable green building design, conserve valuable energy and environmental resources, and protect air and water quality for future generations. The Leadership in Energy and Environmental Design (LEED) program can help guide the creation of municipal programs that facilitate the community-wide application of sustainable design practices.

Economy and Society

Climate change poses a substantial threat to the health, prosperity, and security of the community. Climate change can lead to extreme weather event clean-up and reconstruction; adverse effects on plant and wildlife habitats; threats to food and water supplies; management of snow and ice; temperature changes for the city and residents; invasive plant and insect control and removal or replanting of trees; and human health concerns such as new diseases or sicknesses. It will be important to consider climate resiliency in city planning. Input from residents who would be most affected by climate change (vulnerable populations such as low-income families, minorities, handicapped, etc.) will become increasingly important to develop

local sustainability. Preparation and planning for these extreme changes will allow the city to preserve and protect the beauty, economy, and reputation that has been established and highly regarded.

Goals and Strategies

Implementation strategies for each goal provide a road map for the community to follow in order to become more resilient to climate change and to protect and sustain the environment.

Healthy Community

Goal: North St. Paul supports the health and welfare of its residents.

Strategies:

- Develop policy or actions that minimizes the production of waste and increases recycling, composting, and reuse.
- Support and encourage local food access by focusing on food proximity, prevalence, types, sources, and reliability of sources.
- Work with the Environmental Advisory Commission to develop specific healthy community initiatives and strategies.
- Support community-wide environmental education and recreation.

Energy and Renewable Resources

Goal: North St. Paul actively focuses on energy conservation and energy-related emissions reductions while supporting a municipal power system.

Strategies:

- Protect access to direct sunlight for solar energy systems.
- Investigate additional renewable energy options within the city.
- Consider the use of renewable energy on municipal buildings.
- Investigate ways to support community solar while protecting the municipal power grid.
- Develop an education campaign for residents regarding energy conservation.
- Encourage residents and businesses to use energy-efficient appliances.
- Consider developing an energy-related greenhouse gas emissions reduction goal and an energy consumption reduction goal.

Environmental Assets and Infrastructure

Goal: North St. Paul will protect and enhance the lakes, wetlands, woods, and wildlife of the city.

Strategies:

- Continue the GreenStep Cities program.
- Identify locations in the city to plant pollinator habitat such as native forbs.
- Prioritize the removal of invasive plant species from public open spaces.
- Implement best management practices in the use of plantings and pesticides in all public spaces within the city.
- Encourage residents to plant native trees to increase the urban forest.
- Continue to implement the Living Streets Plan and encourage vegetation as a part of street projects.
- Promote species diversity and age variation of future tree plantings that increase the resiliency of the urban forest against tree pests and diseases.
- Consider identifying and enhancing green corridors throughout the city which provide connectivity for local wildlife.
- Consider developing a Natural Resources Management Plan which identifies natural resources which should be preserved, enhanced, and protected.
- Identify funding sources or partnerships for natural resources restoration projects within the city.

Economy and Society

Goal: North St. Paul incorporates resiliency into planning, policy, and community decisions to plan for climate change and crisis.

Strategies:

- Integrate climate resiliency into planning, policy, operations, and budgeting processes.

Chapter 10

Parks

Chapter 10: Parks

In This Chapter

In this chapter, park benefits are described, a system of classifying parks is presented, and the City's parks are inventoried. Park issues are presented based on an analysis. Park policies are listed from which a plan and program are derived.

Introduction

Parks, open spaces and trails and associated open water, lakes and wetlands contribute significantly to North St. Paul's image. Enhancing the City's image is addressed in Visions and Goals.

Park and open spaces provide opportunities for recreation and scenic views, break-up the development pattern, and some are critical to the drainage system such as Casey Lake Park, Silver Lake Park, and Southwood Nature Preserve.

The City of North St. Paul will continue to identify the changes in demographics and needs within the community to make sure the current trends of parks, open spaces and trails adapt to the City's changing population.

What we Heard

Parks and open spaces are a cherished part of the North St. Paul Community. During the Community Cafes, residents spoke to us about their ideas, concerns and priorities regarding the parks system. The highlights from those discussions are as follows:

- A new park/open space amenity is needed downtown
- Accessibility in parks and access to parks should be a priority
- Trails all the way around Casey and Silver Lakes
- Suggestions for recreational programming included:
    - Adult organized game leagues
    - Tennis/racquet courts
    - Cross country ski trails
    - Kids sports
    - Soccer or lacrosse fields

Classification System

Parks, open spaces and trails are divided into categories based on a combination of function and size. Table 8-1 is the classification system.

Park Inventory

According to the 2016 Met Council land use data, 173 acres are in park, recreational or preserve land and 10 acres are in golf course. Table 8-2 provides an inventory of the parks and open spaces. Several of the City's most important parks are described below. The City also completed a Park Improvement Plan in 2013.This document outlines all the amenities in each park and identifies a timeline for when each one should be updated.

Silver Lake Park

This park, donated by Henry Castle in 1889, is located on the south side of Silver Lake. In early years, a broad boulevard was graded around the entire lake. The steamboat Morton docked on the south shore and transported people across the lake for 25 cents. Concerts, boating, swimming and winter recreation (including construction of a 40-foot high ice palace in 1893), were some of the principal uses of the park in the 1800s. The park now provides picnic areas and facilities, a swimming beach, play equipment, tennis, and volleyball courts, fishing pier, restrooms and trails.

Figure 10-1 Silver Lake Park

Casey Lake Park

This community park was purchased in 1961 and is on land originally owned by Hugh Casey. This is the City's largest park – 36 acres, of which 13.5 is in water. Major activities are picnicking and recreation. Recreational activities include: baseball, softball, hockey and general skating, volleyball, exercising, walking and enjoyment of the natural wildlife area and a fishing pier. Two recreational buildings are located on the site as well as the new addition of Janie's playground in 2016.

Figure 10-2 Casey Lake Park

Northwood Park

This 6.5 acre park was part of a 134 acre purchase by the Northwood Company which opened a golf course on the property in 1915. The name of the golf course changed from Northwood Country

Club and Golf Course to Woodlawn Golf Course. The course was sold to a developer in the early 1940s. The caddy house was moved to Colby Hills Park. The City obtained part of the park in 1946 and purchased the remainder in 1958. The water tower was constructed in 1960. The park provides playground equipment, picnic areas, a ball field, skating rink and a warming house.

FIGURE 10-3 NORTHWOOD PARK

Table 10-1
CLASSIFICATION OF PARKS, OPEN SPACES AND TRAILS

	TYPE	DESCRIPTION	USUAL SERVICE AREA	APPROX SIZE	EXISTING PARKS
NEIGHBORHOOD	Mini-Park	Small park providing a specialized service for special age groups or, at times, providing a special space for a broader group.	½ mile	1 acre	- Country Club Park - Central Park (Downtown)
	Neighborhood Park or Neighborhood Playground	Park area for intense active use by the abutting neighborhood – usually involving play of outdoor sports and craft activities.	¼ to ½ mile	4-12 acres	- Colby Hills Park - Dorothy Park - Hause Park - Northwood Park - Polar Park - Tower Park
	Trail	A facility for pedestrians and bikes to be used for enjoyment or to provide access to neighborhood areas and facilities, businesses and downtown.	Varies	5-8+ feet wide	
CITY WIDE	Community Park	Usually a natural park area for a variety of active and passive recreation, including swimming, picnicking, hiking, and outdoor sports.	City	20-100 acres	- Casey Lake Park - Silver Lake Park
	Play Fields	Park area for intensive, usually highly organized athletic activity, lighted fields, parking, bleachers, and other equipment for watching usually provided or planned.	Citywide, usually 1 per 3-4 neighborhoods	10-40 acres	- McKnight Field
	Special Purpose	Park area established and maintained to provide a special service, that usually dominates the entire park. Examples: Historic site, nature center (where the natural flora and fauna are to be preserved.)	Citywide	Varies	- Veterans Park - Urban Ecology Center - Southwood Nature Preserve - Rotary Park
NEIGHBOR-HOOD AND CITY WIDE	Open Spaces	Park area that essentially remains undeveloped to serve as an area for drainage, water storage, or that may contain tails, wetland, poor soil, and/or natural vegetation that is to be left open.	Varies	Varies	- Environmental Learning Center - Pond between 6th and 7th Streets north of South Avenue
REGIONAL	Special Parks	Park area that provides space and facilities for active and passive recreation, including golf courses.	Metro	100+ acres	- Goodrich Golf Course
	Trail	A facility for pedestrians and bikes to traverse and enjoy.	Varies	5-8+ feet wide	- Gateway State Trail

Table 10-2
PUBLIC PARKS, OPEN SPACES AND TRAILS

NAME or LOCATION	TYPE	ACRES
CITY PARK and OPEN SPACE		
Casey Lake Park	Community park	32.81
Central Park	Mini park	0.23
Colby Hills Park	Neighborhood park	0.85
Country Club Park	Mini park	0.19
Dorothy Park	Neighborhood park	0.90
Environmental Learning Center	Open space	12.79
Hause Park	Neighborhood park	2.96
McKnight Field	Play field	21.52
Northwood Park	Neighborhood park	6.42
Polar Park	Neighborhood park	2.83
Rotary Park	Special purpose park	2.17
Silver Lake Park*	Community park	6.99
Southwood Nature Preserve	Special purpose park	26.08
Tower Park	Neighborhood park	2.67
Urban Ecology Center**	Special purpose park	25.89
Veterans Park	Special purpose park	1.15
	SUBTOTAL	146.45
RAMSEY COUNTY		
Goodrich Golf Course***	Golf course	9.93
STATE		
Gateway State Trail***	Trail	22.79
	GRAND TOTAL= 182.69	

*The lake is 76 acres, almost all of which is within the City.
**Excluding 2.5 acres in the Gateway State Trail.
***Only the portion in North St. Paul.
Source: Met Council 2016 Existing Land Use GIS Data

McKnight Field

This community play field has 21.52 acres and is used primarily for organized sports and picnics. The fields include: baseball (1), softball (4), T-ball (2), and tennis courts (8). Also provided are a recreation/concession building, shelter building, warming house, picnic tables and drinking fountains. The park is located adjacent to the North High School.

Urban Ecology Center

This is a 25.89 acre special purpose park. The wetland is part of an old farm which became a sod farm around 1950. The park is a wetland restoration and nature center. The plan includes a modified wetland with a multi-cell wetland treatment system to improve water quality, native grasses, wild flowers and an

overlook hill made from materials excavated to create the basin and channel. This diverse wetland and upland plant community is used for environmental education and enjoyment.

Issues and Needs

Maintaining and improving parks, trails and open spaces is an on-going program/activity which has considerable demand on the City's human and financial resources. Recreation is important in the lives of most people. The expectation is that as public interest in outdoor recreation and open space changes, the City will make some changes to the system. And because the City is essentially developed, there is little opportunity to expand the system without incurring land acquisition costs.

The results from the Community Cafés state that the public would like to preserve and invest in existing recreational spaces, parks and lakes as well as improve upon trail connections throughout the city as currently outlined in Chapter 2. The City will monitor the demographic makeup of the community and how it will influence the future programming of the park and open space system by utilizing community outreach platforms such as online portals, regular public engagement opportunities and booths at organized community events.

Parks, open spaces and trails can be designed and used to achieve the communities active living goal. More specific issues and needs are listed below.

Water

Water is a key component to most of the City's parks. It intrigues people, attracts specific wildlife, and, in some cases, can be used for recreation such as boating, swimming and fishing. However, the ability to enjoy these activities is affected by the quality of the water.

The City's concern with water quality is more fully addressed in the Water Management Plan.

Image

Parks, trails and open spaces must be functional and aesthetically pleasing. This helps achieve the City's goal.

Gateway State Trail

Add supporting amenities including modern restroom facilities.

Optimum Use

Because there is little opportunity to expand the size of the park system at a reasonable cost, achieving optimum use of the existing parks and open spaces is a challenge which needs to be addressed.

Downtown

Develop a downtown park as part of the downtown redevelopment.

Unimproved and Under-Improved Parks

Some parks are unimproved, under-improved or somewhat obsolete in equipment layout and/or function. This includes: Colby Hills Park and Polar Park.

Enhancements and Replacement

Several parks need to be enhanced. Some equipment and buildings are aging to the point where replacement needs to be considered. Since this Comprehensive Plan extends to the year 2040, virtually all parks and open space will need some improvement. All city tennis courts need to be resurfaced. This improvement will be a substantial cost.

Links

Use parks, trails and open spaces to establish links to neighborhoods, community facilities, Silver Lake, and to downtown is critical to establishing more community cohesiveness, identity and a more favorable image.

Small Parks

A couple parks are small, making it difficult to establish a park presence on the sites along with a meaningful use of benefits. These parks may need special attention to reconfigure, reuse or otherwise modify the park. Example could include Colby Hill Park. The right-of-way between the two parcels comprising Colby Hill Park could be converted to park use.

Active Living

Park, open space and trails are important to active living components. Parks, trails, benches, play equipment and scenic walks to bus stops, schools, downtown and other places of interest can be an alternative transportation mode.

POLICIES

The policies which follow are based on the inventory, issues and needs, the City's vision and goals, especially Parks, Open Space, and Trails Goal which is **"Enhance and expand the park, open space and trail system, especially in the downtown** redevelopment area."

1. **Balance System** – Provide and maintain a balanced system of parks, trails and open spaces which provides a wide variety of opportunities for the diverse needs of the community.

2. Enhancement – Enhance the system through making functional and aesthetic improvements and by expanding the system into redevelopment areas.

3. Preservation – Preserve and protect the natural amenities especially the lakes, ponds, drainageways, woods and desirable flora and fauna.

4. Water Bodies – Refer to "*Surface Water Management Plan"*

5. Trails – Construct, maintain and enhance trails throughout the community to:

    a. Link – Link neighborhoods to the community and to provide access to community facilities.

    b. Image – Use trails and the links to improve the City's image and identity, to provide more cohesiveness, and to enhance the appearance of nearby development.

    c. Access – Use trails to provide an alternative transportation mode and to provide a safe space for walking, biking and jogging.

6. Urban Ecology Center and Environmental Learning Center – Preserve and enhance these parks as environmental/educational parks and initiate practices which foster native species and their associated habitats.

7. Environmental Learning Center –

    a. Continue to plant and improve the site with native species.

    b. Consider adding a peripheral trail.

8. Park-School – Promote shared use of park and open spaces where schools and parks are adjacent or nearby such as:

    a. McKnight Field and North High School

    b. Southwood Nature Preserve and Cowern Elementary School and the open space adjacent to the school.

    c. Richardson Elementary & Community fields

9. Identity – Improved parks, trails and open spaces to give neighborhoods and the City more identity.

10. Hause Park– Make this park a neighborhood focal point because of their relationship to the street system and the neighborhood in which they are located. Improvements are currently underway at the indoor park shelter.

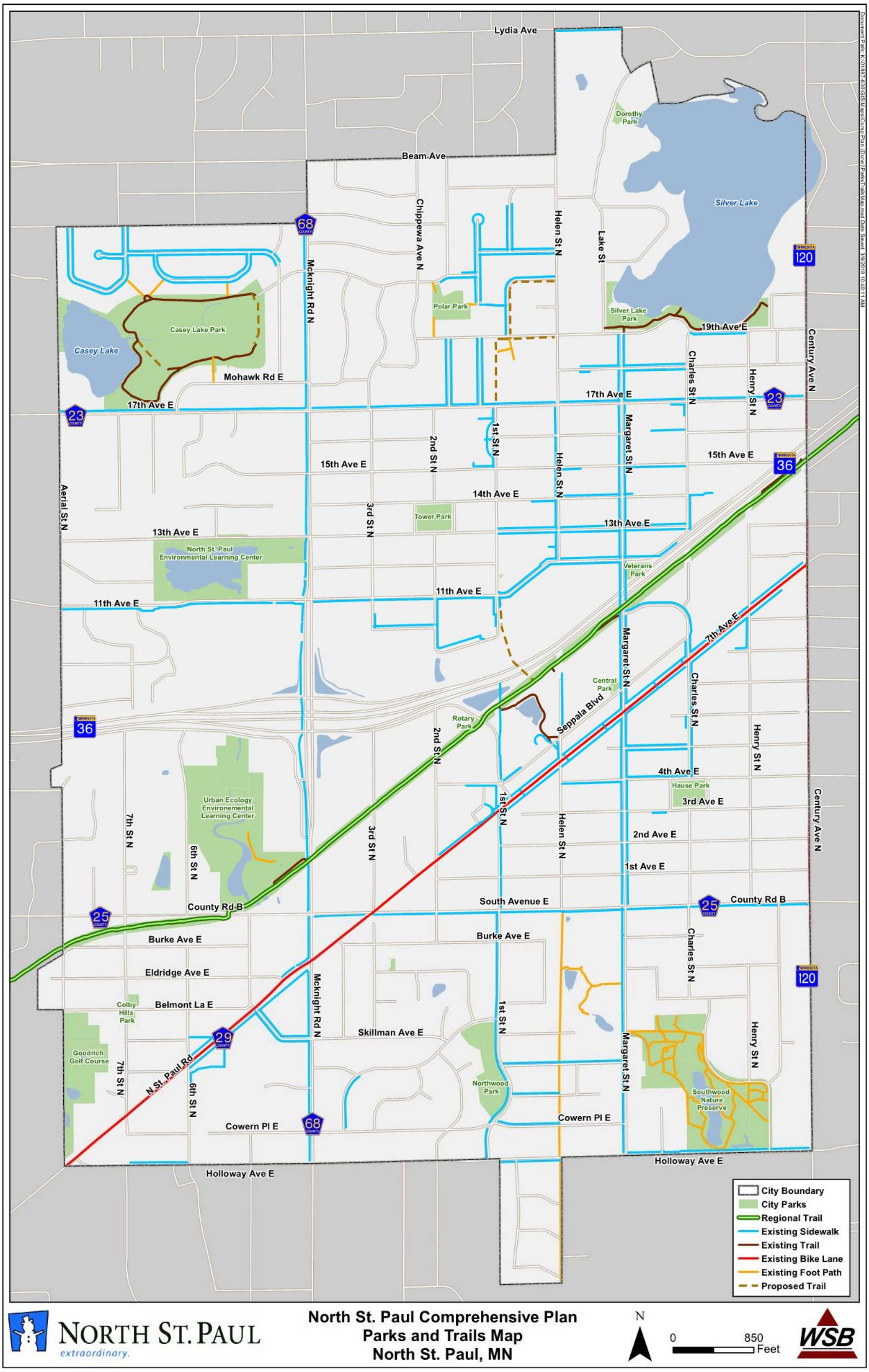
11. Silver Lake Park, Casey Lake Park – Preserve and enhance these parks as community parks with diverse opportunity for active and passive recreation and develop a trail link between these parks.

12. Water Quality – Refer to "Surface Water Management Plan"

Plan and Program

The programming for the future park and open space systems will be guided by information continuously gathered from key leaders and stakeholder groups such as athletic and cultural associations, Lions Club, Business Association, and other specific user groups. There will be greater efforts to obtain information and solicit input from the public at community functions such as the summer Car Shows, public open houses, surveys, etc. The demographic trends and characteristics of the City of North St. Paul will need to be periodically reviewed and interpreted while integrating the information that is received from the various community functions previously noted.

The plan for parks, open spaces and trails is illustrated in the North St. Paul Transportation Plan Draft Non-Motorized Transportation Network on the follow page.


Lydia Ave
Beam Ave
Dorothy Park
Silver Lake
Silver Lake Park
Polar Park
Casey Lake Park
Casey Lake
Mohawk Rd E
17th Ave E
19th Ave E
Chippewa Ave N
Helen St N
Lake St
Mcknight Rd N
Century Ave N
Charles St N
Henry St N
Margaret St N
1st St N
2nd St N
3rd St N
15th Ave E
14th Ave E
13th Ave E
11th Ave E
Aerial St N
Tower Park
North St. Paul Environmental Learning Center
Veterans Park
7th Ave E
Central Park
Seppala Blvd
Rotary Park
4th Ave E
Hause Park
3rd Ave E
2nd Ave E
1st Ave E
Urban Ecology Environemental Learning Center
7th St N
6th St N
South Avenue E
County Rd B
Burke Ave E
Eldridge Ave E
Belmont La E
Colby Hills Park
Skillman Ave E
Goodrich Golf Course
N St. Paul Rd
Northwood Park
Southwood Nature Preserve
Cowern Pl E
Holloway Ave E
68
120
23
36
25
29
City Boundary
City Parks
Regional Trail
Existing Sidewalk
Existing Trail
Existing Bike Lane
Existing Foot Path
Proposed Trail
NORTH ST. PAUL
extraordinary.
North St. Paul Comprehensive Plan
Parks and Trails Map
North St. Paul, MN
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850
Feet
WSB

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Program

The program consists of the following:

1. Improve Water Quality – Improve the water quality in the lakes, ponds and creeks within the parks or which flow into the parks and open spaces by:

    - Erosion Control – Strictly require erosion control measures on all construction sites and on other sites with similar activities.
    - Plans – Applying proper site planning and construction of improvements which foster protecting or improving water quality.
    - Education – Provide on-going education to the public about the impact of fertilizers, chemicals, and outdoor waste have on water bodies
    - Buffers – Establish vegetation buffers adjacent to water bodies with some exception, e.g. swimming beach at Silver Lake.

2. Park Equipment and Surfacing (All Parks) – Since 2008, all but two parks have had replaced and upgraded play equipment. Following the completion of the remaining two parks, upgrading and replacing equipment becomes necessary.

3. Casey Lake Park - Extend the park and trail system along the south and west side of Casey Lake.

4. Urban Ecology Center – Continue to implement the restoration plan. Consider construction of a shelter/educational building.

5. Silver Lake Park – Maintain and upgrade the park on an on-going basis. Expand the park and extend the trail on the east shore (a segment of the Lakes Links Trail network) if the area is redeveloped/ re-platted. Enhance connection between Silver Lake Park, Dorothy Park, and Joy Park.

6. McKnight Field – Continue to provide a high level of maintenance and make improvements as appropriate.

7. Gateway State Trail – Protect this trail, enhance its appearance by making it more park-like, and use it effectively to support redevelopment.

8. Colby Hills Park –

    - Replace playground equipment.
    - Develop a new neighborhood park plan. Consider converting the street between the two park parcels to park use.

9. Dorothy Park – Maintain and make minor upgrades when the trail is constructed.

10. Hause Park – Maintain and upgrade to keep the park the neighborhood focal point.

11. Polar Park – Maintain and upgrade to keep the park the neighborhood focal point.

12. Tower Park – Maintain and upgrade to keep the park the neighborhood focal point.

FIGURE 10-6 DOROTHY PARK

13. Southwood Nature Preserve – Maintain facilities, improve the creek bed by encouraging natural habitat and removal of debris. Consider additional uses.

14. Northwood Park – Maintain and upgrade the facilities and park land on an ongoing basis. Construct a new shelter building.

15. Environmental Learning Center (Spirit Basin) – Make the drainage basin located between 11th and 13th Avenues more park-like by constructing a perimeter trail, and increase the number, size and types of native species while reducing potential erosion.

16. Veterans Park – Maintain and upkeep park.

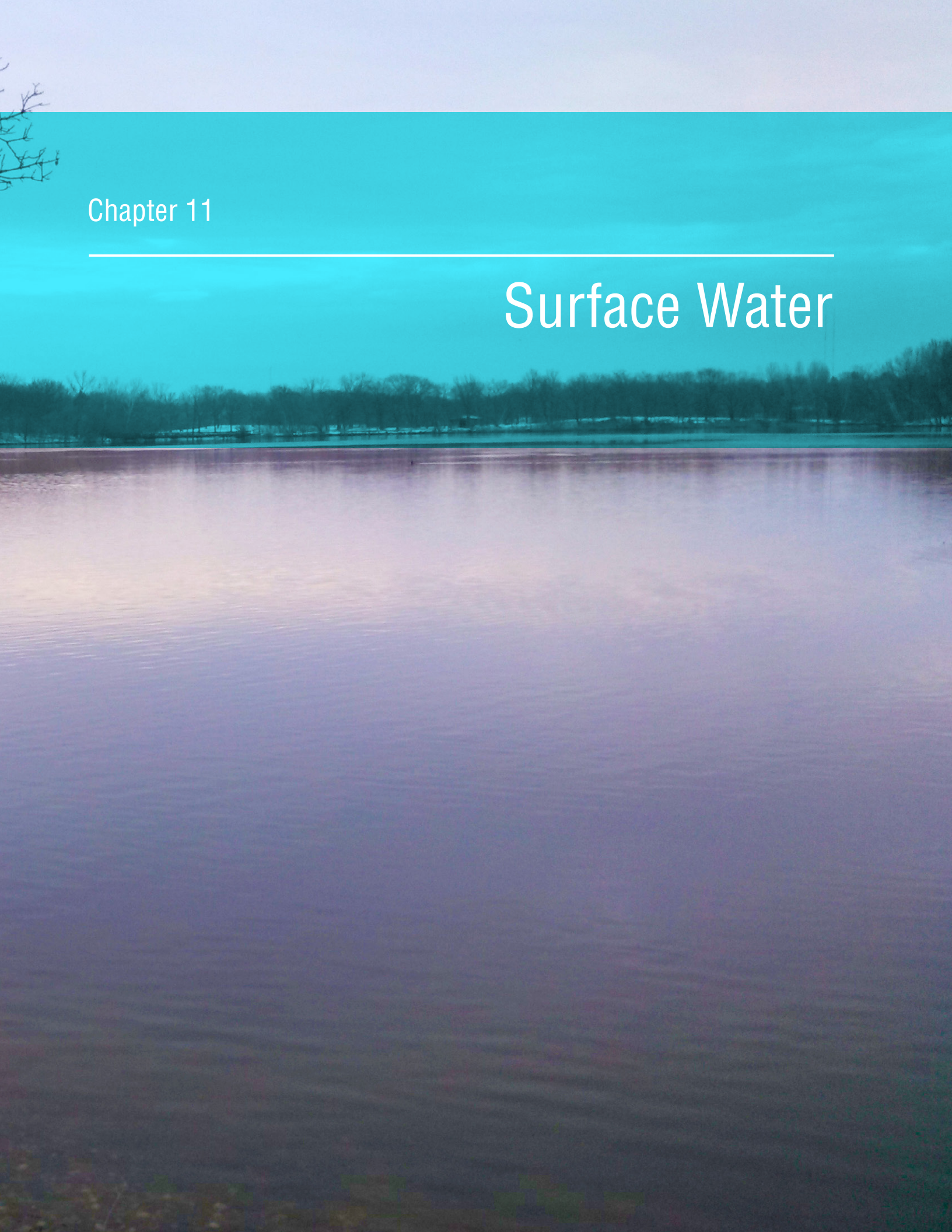
17. Country Club Park – Consider alternatives including maintaining and upgrading the park, or selling the land to build a house.

18. Central Park– Modify and upgrade consistent with changes on Seppala and downtown redevelopment.

19. Rotary Park – Maintain and upkeep park; consider adding modern restrooms.

20. Cowern Elementary School – Southwood Park Link (Proposed) – Prepare a plan, acquire property, improve the site by protecting the creek and natural amenity and construct a trail from Helen Street and the school site to Margaret Street.

21. Proposed Trails – Construct the proposed trails as generally shown on the plan.



Chapter 11

Surface Water

CHAPTER 11: SURFACE WATER

INTRODUCTION

This chapter consists of the Executive Summary of the City's Surface Water Management Plan (WMP). The WMP is located in its entirety in Appendix ____ of this Comprehensive Plan.

LOCATION AND HISTORY

The City of North St. Paul (the City) (approximate population 12,338 in 2016) is located in the seven county Twin Cities metropolitan area on the eastern border of Ramsey County. The City covers approximately 2,000 acres (3.1 square miles) and its boundaries are shown in Figure 1-1. By 2030, the population of North St. Paul is forecast to increase to 13,400. North St. Paul is bounded to the east by the City of Oakdale, and to the north, west, and south by the City of Maplewood. T.H. 120 (Century Avenue) forms the City's eastern border and Ariel Street forms the City's western border. Holloway Avenue is the City's approximate southern border and Beam Avenue is the approximate northern border. T.H. 36 runs east-west through the City.

The City of North St. Paul lies in two watershed districts: the Ramsey-Washington Metro Watershed District (RWMWD) and Valley Branch Watershed District (VBWD). The majority of the City is in the RWMWD (1,770 acres), with the northeast corner of the City (230 acres) in the VBWD, as shown in Figure 1-2. Land development is nearly complete with only a few parcels in the city that are undeveloped. Section 2.3 of this plan discusses land use in North St. Paul.

PURPOSE AND SCOPE

The City of North St. Paul Water Management Plan (North St. Paul Plan, City Plan, North St. Paul WMP, or WMP) is a local water management plan meeting the requirements of Minnesota Statutes 103B.235, Minnesota Rules 8410, the 2017 Ramsey-Washington Metro Watershed District Watershed Management Plan (RWMWD Plan), and the 2015 Valley Branch Watershed District Watershed Management Plan (VBWD Plan).

Minnesota Statutes 103B.201 states that the purposes of the water management programs required by statute 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.
8. Secure the other benefits associated with the proper management of surface and groundwater.

The North St. Paul Plan addresses these purposes.

Several planning documents have guided development of the North St. Paul Plan, including:

- Wellhead and Source Water Protection Plan – Parts I (2009) and II (2010)
- City of North St. Paul Water Management Plan (1998 and 2008 versions).
- City of North St. Paul Comprehensive Plan 2008 – 2040 (2017 draft).

Water Resources-Related Agreements

The City has entered into multiple water resource management related agreements:

- Two Joint Powers Agreements (JPA), one with RWMWD, one with VBWD, concern designating the watershed districts as the local government unit (LGU) for the Wetland Conservation Act (WCA).
- A Memorandum of Understanding (MOU) regarding SWPPP requirements with RMWMD.
- A Cost-Share Agreement with RWMWD regarding installation of porous concrete parking stalls.
- A Memorandum of Agreement (MOA) regarding the City's participation in the Ramsey-Washington Public Works Forum with RWMWD.
- An MOU regarding participation in the Ramsey County Cooperative Weed Management Area, with RWMWD and other partners.
- An MOU regarding maintenance of the Silver Lake Bioretention Basin with VBWD.

Copies of these agreements are included in Appendix A. Future agreements are likely between the City and the watershed districts concerning maintenance issues and addressing respective water management responsibilities.

Plan Organization and Summary of the City's Goals, Issues, and Potential Solutions

Plan Organization

The WMP sets the course for the management of the water resources and stormwater within the City. The WMP sets goals and policies for the City and its resources, provides data and other background information, outlines the applicable regulations, assesses city-wide and specific issues, and lists implementation tasks to achieve goals. The WMP also provides information regarding the funding of the implementation program. The WMP is organized into six major sections, summarized as follows:

Section 1. Executive Summary provides basic information about the City's natural setting and summarizes the highlights of the WMP, including the purpose and scope, goals, policies, and implementation tasks.

Section 2. Physical Setting provides technical information describing the surface and subsurface conditions of the City. Most of Section 2 presents a city-wide inventory including climate and precipitation, topography, land use, public utilities, soils, geology, groundwater, public waters, wetlands, surface water quality monitoring information, water quantity and floodplain information, major basins and overall drainage patterns, recreational features, aquatic habitat information, unique features and scenic areas, and pollutant sources. Section 2 also includes city-wide maps of land use, public waters, wetlands, and drainage basins, and maps showing the drainage patterns for each major drainage basin. This section also includes tables showing precipitation information and water quality information.

Section 3. Agency Cooperation lists the local, state, and federal agencies whose rules and regulations also govern the management of water resources in North St. Paul. Section 3 summarizes the regulatory control of water resources at the city level by referencing the City Code, compares regulatory standards between the City and the watershed districts, and refers readers to other agencies whose rules are applicable.

Section 4. Assessment of Issues assesses the issues, challenges, and problems the City faces in managing stormwater on behalf of the public. City-wide and specific issues are presented and discussed. This section examines issues related to water quality, stormwater runoff rates and volumes (water quantity), erosion and sediment control, and groundwater quality, the adequacy of existing programs, and the opportunities available to assist in implementing the North St. Paul Plan.

Section 5. Goals and Policies presents the City's water resource vision in the form of its goals and policies. Goals are defined for surface water quality; surface water quantity; wetlands; groundwater; erosion and sedimentation; recreation, habitat, and shoreland management; education and public involvement; and funding. For each goal area, the policies intended to accomplish the goal are defined.

Section 6. Implementation Program describes the significant components of the City's WMP implementation program including its NPDES program,

operation and maintenance of its stormwater system, education and public involvement, funding, ordinance implementation and official controls, implementation priorities, and a detailed implementation plan. This section also discusses the process for revising and amending the North St. Paul WMP.

Section 7. References lists the documents and other references used in the preparation of the WMP.

City Goals

Section 5 of the North St. Paul Plan outlines the City's goals and policies pertaining to water management. The goals are as follows:

Water Quality: Maintain or improve the water quality of lakes, wetlands, and detention basins, and watercourses in the City of North St. Paul necessary to support designated beneficial uses and improve the quality of surface water discharged to water bodies downstream of the City (per TMDL requirements).

Water Quantity and Flooding: Preserve, maintain, and improve the stormwater storage and detention systems to control excessive volumes and rates of runoff, control flooding, to protect public health and safety, and to prevent the inundation of occupied structures.

Wetlands: Achieve no net loss of wetlands including acreage, functions, and values. Where practicable, improve the functions, values, biodiversity, and acreage of wetlands.

Groundwater: Protect the quality and quantity of groundwater resources to preserve it for sustainable and beneficial purposes.

Erosion and Sediment: Protect the capacity of the stormwater system, prevent flooding, and maintain water quality by preventing erosion and sedimentation from occurring. Correct existing erosion and sedimentation problems.

Recreation, Habitat, and Shoreland Management: Protect and enhance fish and wildlife habitat and recreation opportunities and manage watershed projects and programs to achieve healthy ecosystems.

Education and Public Involvement: Increase public awareness, understanding, and involvement in water and natural resource management issues. Increase public interaction with water resources and healthy ecosystems.

Financing: Minimize and fairly distribute public expenditures for plan implementation, with emphasis on using the City's stormwater utility to finance projects and collaborating/partnering with other entities.

Summary of Issues

Section 4 of the North St. Paul Plan outlines the issues the City faces. The significant issues are:

- Water Quality
    - Reducing phosphorus loads in stormwater runoff. As a fully developed city, reductions can be achieved through redevelopment; however, the scale and pace of redevelopment activity may not be practical or sufficient to meet the reduction goals of RWMWD and others. The City will need to explore opportunities for regional treatment and/or retrofit of existing developed areas.
    - The City will also maintain its NPDES permit and follow Best Management Practices (BMPs) for the control or reduction of pollutants in stormwater.
    - Implementing the action steps of completed TMDL studies, in cooperation with other agencies.
    - Management of Silver Lake through control of aquatic plants and chemical treatments to maintain recreational use.
- Water Quantity and Flooding
    - Improve and expand the existing stormwater system to minimize the duration and impact of localized flooding. It is also important to limit additional volume and increases in flow rate of water into the existing stormwater system to prevent flooding.

Summary of Potential Solutions

Section 6 of the WMP presents the City's water resource related implementation program. The significant implementation activities are:

- Water Quality
    - Work closely with the RWMWD to achieve the load reductions proposed by the TMDL study for Kohlman Lake and any other TMDL studies affecting North St. Paul.
    - The City will explore and identify new stormwater treatment facilities to achieve load reduction goals.
    - The City will seek opportunities to incorporate runoff control, infiltration, and other BMPs into infrastructure and redevelopment projects as a means to improve stormwater management within a highly-developed area.
    - Use development review and approval process to ensure that minimum standards are met and explore achievement of higher standards through BMPs to achieve water resource goals.
    - Study the feasibility of in-lake water quality treatments for Silver Lake, as well as continue to work with VBWD and other partners on aquatic plant management and water level management.
- Water Quantity and Flooding
    - The City will continue to implement a pond maintenance plan that incorporates procedures for monitoring water and sediment depth, outlet and inlet conditions, criteria for maintenance, and funding needed to restore the ponds to their original condition.
    - Implement upgrades to the City's stormwater system recommended in the 2017 Flood Control Study to improve drainage and reduce issues related to localized flooding.

Chapter 12

Water Supply

CHAPTER 12: WATER SUPPLY

EXECUTIVE SUMMARY

Introduction

The City of North St. Paul's Comprehensive Water Supply Plan evaluates the City's existing water distribution system and water demands, projects future water demands through the year 2040, and proposes infrastructure improvements to satisfy the future demands. This report has been prepared according to the guidelines established by the Metropolitan Council and the Minnesota Department of Natural Resources (DNR). The Water Supply Plan immediately following this report follows the template provided by the DNR, while this Comprehensive Water Supply Plan expands upon the template and provides further information for City and Metropolitan Council planning.

Existing System

The City of North St. Paul's water distribution system provides approximately 350 million gallons of water each year to a population of 14,300 people through 4,650 service connections, a portion of which are located in the City of Maplewood where the system extends to the north. The system currently has one single pressure zone with five active production wells and two water towers.

Population and Water Demand

The population of the City of North St. Paul has fluctuated from year to year since 2005, but has stayed fairly constant over the long term. Total water use has fluctuated up and down as well over that time, although a slight decreasing trend has emerged in the last few years. Over the last five years, the system's average day demand was 1.07 million gallons per day (MGD) and maximum day demand was 3.09 MGD. Per capita water demands have also shown a slight decreasing trend. High efficiency appliances, general attitudes toward conservation, rainfall, and climate likely all play a role in these trends.

Growth and Demand Projections

The Metropolitan Council projects that the City of North St. Paul's population will remain roughly constant over the lifetime of this Plan, and that its total per

capita water use will be constant. The population served by the City of North St. Paul's water distribution system, including the portion of the City of Maplewood supplied by the system, is projected to be 14,300 people in the year 2040. By that time, the projected total per capita water use of 74 gallons per capita per day will result in an average day demand of 1.06 MGD and a maximum day demand of 2.75 MGD.

Proposed Improvements

The City of North St. Paul's existing water system will require both rehabilitation and new installations to supply the projected population and its demands through the year 2040. By that time, the City plans to install chlorination equipment at its five well houses for disinfection, construct a new 750,000 gallon water tower for additional storage, and install a booster station to augment pressures in the northern part of the system. A more detailed discussion of these improvements, as well as planned rehabilitation work, follows in the Proposed Improvements section.

INTRODUCTION

Purpose

This Comprehensive Water Supply Plan is a section of the City's 2040 Comprehensive Plan. The purpose of the Comprehensive Water Supply Plan is to provide an overview of the City's current drinking water resources, infrastructure, policies, and challenges, and to present future plans. Water distribution maps are included in *Figure 1* and *Figure 2*, which depict the existing system and the proposed improvements.

This Comprehensive Water Supply Plan has been prepared according to the guidelines established by the Metropolitan Council and the Minnesota Department of Natural Resources (DNR) per Minnesota Statute 473.859, which requires water supply plans be completed by all local units of government in the seven-county Metropolitan Area. The attached Water Supply Plan conforms to the template provided by the DNR. This Comprehensive Plan expands upon that template and provides further information for City and Metropolitan Council planning.

Background

The City of North St. Paul, three square miles in area, is located in Ramsey County to the northeast of St. Paul. All of the properties within the City limits are currently serviced by the City's water utility. The City's population has remained roughly constant since the last Comprehensive Plan update, which was adopted in February of 2009.

This study uses the population projections from the City's overall comprehensive plan, consistent with the Metropolitan Council City System Statement, to project water system demands for the City of North St. Paul through the year 2040. The 2040 service area was defined based on the Land Use Plan prepared for the City's 2040 Comprehensive Plan. Existing and future water demands were calculated for the City based on the historical data and population projections.

Policies

1. Water Quality – Provide the highest quality potable water possible to meet the domestic and business needs of those connected to the City's system.
2. Distribution System – Provide a system which has adequate pressure for existing and future development and for fire protection.
3. City Wells and Pumps – Monitor the capacity of the City wells and pumps to ensure that an adequate supply can be provided.
4. Conservation – Encourage conservation and use the system efficiently to reduce costs and to minimize the need to add more improvements.
5. Cost – Monitor the cost to provide a quality water supply and adjust the rates as needed to cover capital cost and operating costs.
6. Cooperative Agreements – Continue the agreement with Oakdale to receive water service on the east side of Silver Lake. (If the area is redeveloped, extending the water service may be cost effective.) Continue the agreement with Maplewood to provide water service to the area north of North St. Paul and south of I-694.

Data Available

The following sources of information were used to prepare this report:

- Water Supply Plan for the City of North St. Paul, prepared by WSB & Associates, Inc.

- MCES System Statement for the City of North St. Paul
- MCES Community Profile for the City of North St. Paul
- Water usage data as reported by the City to the DNR's Minnesota Permitting and Reporting System (MPARS)
- Wellhead Protection Plan for the City of North St. Paul

General Contact Information

City of North St. Paul Water System
DNR Water Appropriation Permit Numbers: 1977-6176
Ownership: Public
Metropolitan Council Area, Ramsey County
MDH Supplier Classification: Municipal

Nick Fleischhacker, Director of Public Works
2400 Margaret Street N
North St. Paul, MN 55109
Phone: (651) 747-2409

Water Use Categories and Definitions

General water use categories and definitions used in this report, as defined by the Department of Natural Resources, are as follows:

- *Residential* uses consist of water being used for normal household purposes, such as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and watering lawns and gardens.
- *Institutional* uses consist of those for hospitals, nursing homes, day care centers, and other facilities that use water for essential domestic requirements. This includes public facilities and public metered uses. Institutional water-use records are typically maintained for emergency planning and allocation purposes.
- *Commercial* uses consist of water used by motels, hotels, restaurants, office buildings, and commercial facilities.
- *Industrial* uses consist of water used for thermoelectric power (electric utility generation) and other industrial uses such as steel, chemical and allied products, food processing, paper and allied products, mining, and petroleum refining.
- *Wholesale deliveries* consist of bulk water sales to other public water suppliers.

- *Unaccounted water* is the volume of water withdrawn from all sources minus the volume sold.
- *Non-essential water uses* as defined by Minnesota Statute 103G.291, include lawn sprinkling, vehicle washing, golf course and park irrigation, and other non-essential uses. Some of the above categories also include non-essential uses of water.

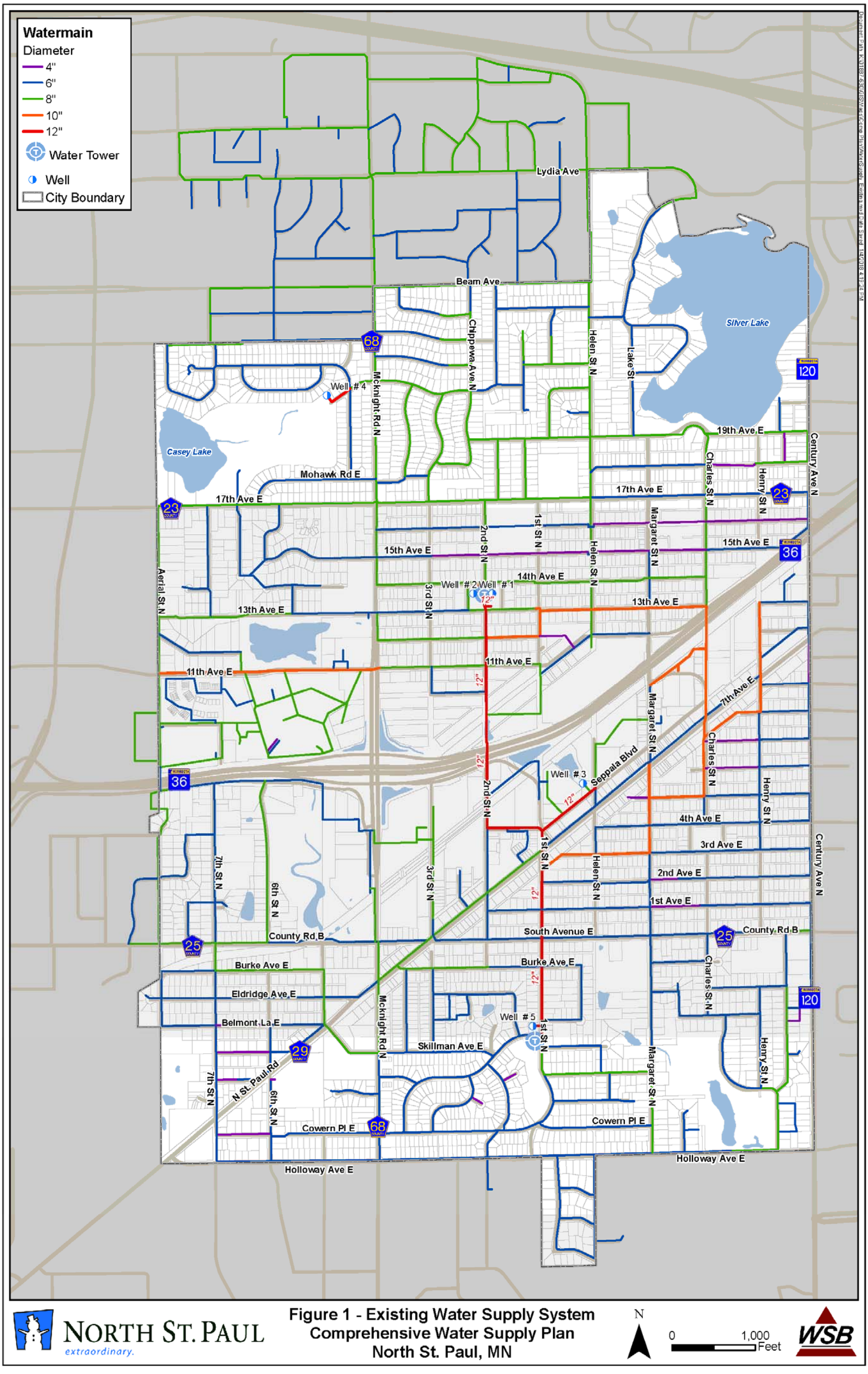


Figure 1 - Existing Water Supply System
Comprehensive Water Supply Plan
North St. Paul, MN

EXISTING SYSTEM

The existing water distribution system for the City of North St. Paul is shown in *Figure 1*. The north end of the system extends into the City of Maplewood and provides service to residential development there. Including that area, the network currently serves a total area of approximately 2,400 acres with about 4,650 connections.

Water Sources and Treatment

A summary of the public supply wells in the City of North St. Paul is provided in Table 1. The total well pumping capacity in the system is 6,400 gpm. The system's firm capacity, defined as its capacity with the largest well out of service, is 4,900 gpm with Well 4 or 5 out of service. Well logs and maintenance reports are included in *Appendix 1*, the City's water level monitoring plan is included in *Appendix 2*, and water level graphs for each well are included in *Appendix 3.* There is no water treatment plant in the City of North St. Paul. Instead, fluoride is applied at each well house to prevent tooth decay.

Table 1. Well Summary

Well Name and ID	Year Installed	Capacity (gpm)	Depth (feet)	Aquifer	Status	Treatment
Well 1 #208222	1935	1,200	470	Prairie du Chien - Jordan	Active	Fluoridation
Well 2 #208223	1942	1,200	470	Prairie du Chien - Jordan	Active	Fluoridation
Well 3 #208224	1957	1,000	479	Jordan	Active	Fluoridation
Well 4 #205744	1964	1,500	475	Jordan	Active	Fluoridation
Well 5 #112229	1977	1,500	531	Jordan	Active	Fluoridation

Water Storage

The City of North St. Paul has two elevated storage tanks, the North Tower and the South Tower. The North Tower is located at the intersection of 2nd Street

North and 14th Avenue East in Tower Park, and is a steel tower constructed in 1946 with a capacity of 300,000 gallons. The South Tower is located at the intersection of 1st Street North and Northwood Drive in Northwood Park, and is a steel tower constructed in 1960 with a capacity of 500,000 gallons. The total storage capacity of the system is thus 800,000 gallons.

Water Distribution

The City's water distribution system consists of approximately 60 miles of watermain ranging from 6-inch to 12-inch in diameter, most of the pipe being 6-inch and 8-inch. The larger 12-inch trunk main connects the two water towers along 1st Street North and 2nd Street North.

Computer Model

A computer model of the City of North St. Paul's water system was prepared to reflect the existing and future water demands and network configurations. The model was used to evaluate the capacity of the existing system and to verify the improvements that will need to be made through 2040.

System Pressures and Velocities

The Ten State Standards for water distribution system design recommend working pressures of 60 to 80 psi, with a minimum normal working pressure of 35 psi and a minimum at all times at all ground level points of 20 psi. A design target of 50 to 70 psi for working pressures is often used as well. The Minnesota Department of Health requires a minimum pressure of 20 psi during any fire or other emergency water use. Pressures above 100 psi are not recommended.

The City of North St. Paul's water distribution network has a single pressure zone. The overflow elevation of the City's two elevated storage tanks is 1,123 feet. Ground elevations within the network vary between 927 to 1,030 feet. Therefore, static pressures at ground elevations within the system when the tanks are full vary from 40 to 85 psi. A map of the existing steady state system pressures calculated by the model, with the tower levels set to the lowest level seen during maximum day demand, is shown in *Figure 2*. The model shows pressures below 40 psi in an area in the north of network and in the southeast corner of the network.

It is recommended that velocities in long watermain segments be less than five feet per second (fps) to avoid excessive energy loss and pressure reduction.

Under maximum day demand, the system's model indicates high velocities through the watermain connecting the production wells and water towers to the network. In particular, the model indicates high head loss through the 8-inch main connecting Well 3 to the system. Besides the watermain connecting wells and towers to the network, the only other notable modeled head loss exists in the 6-inch main along Gerald Avenue, just east of Well 4. The City may consider upsizing this watermain if it becomes an issue.

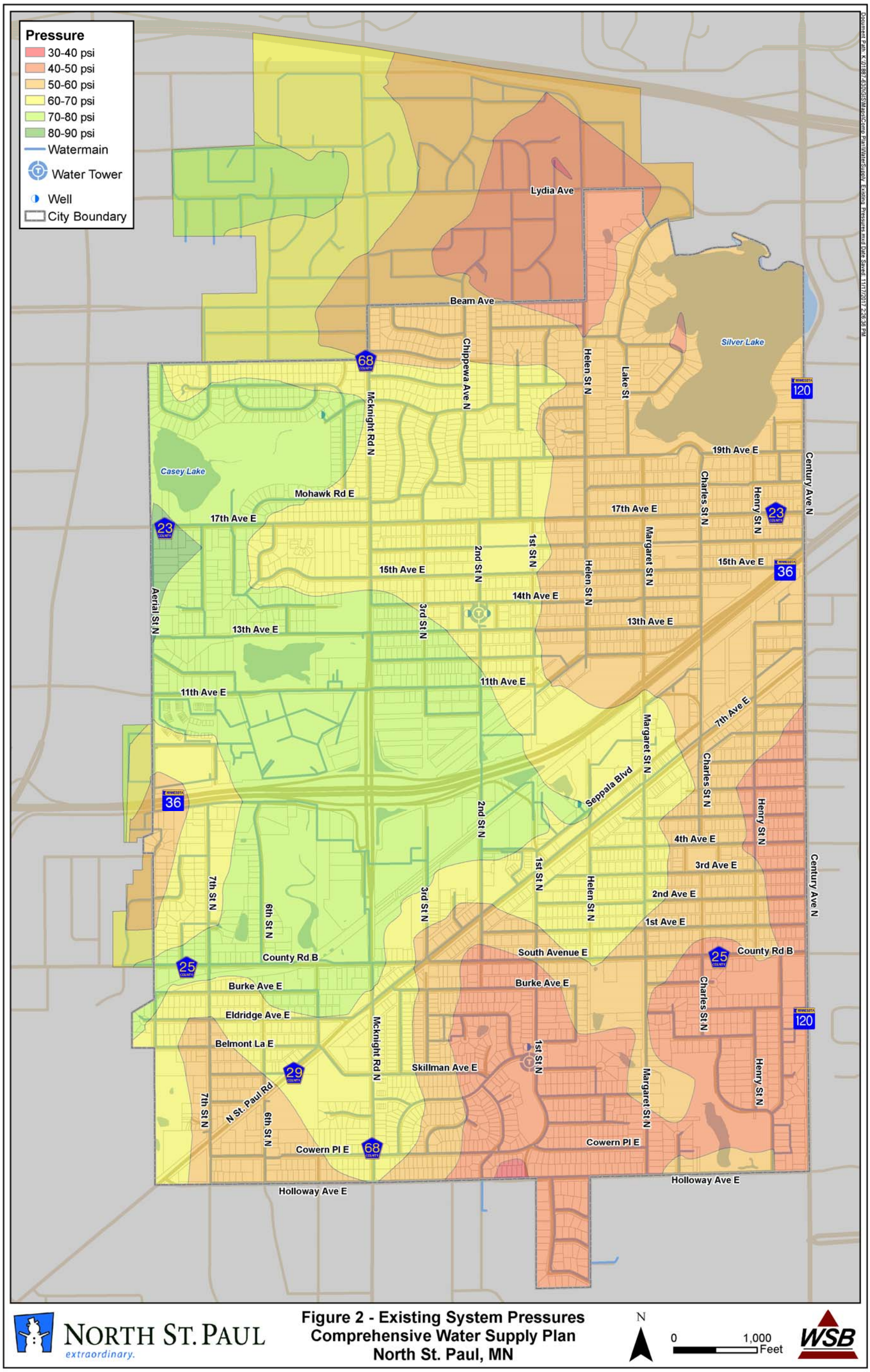
Fire Flow Capacities

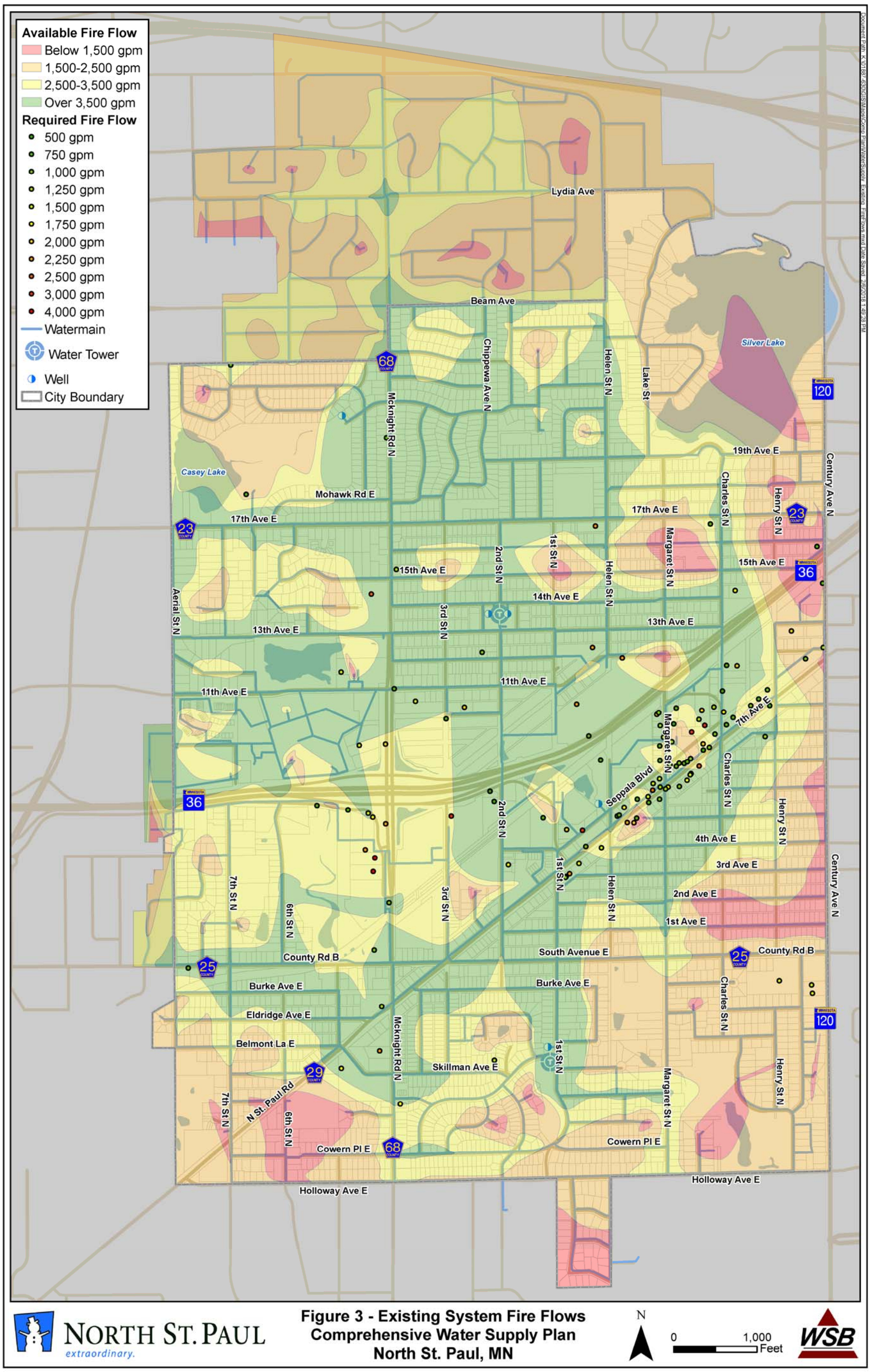
The Insurance Services Office (ISO) provides fire flow requirements for individual structures within a community. These requirements, which specify both the quantity and duration of fire flows, are typically focused on large commercial, industrial, and public buildings. The fire flows required for these structures usually fall between 2,500-3,500 gpm.

A map of the existing available fire flows throughout North St. Paul's water distribution system, with the tower levels set to the lowest level seen during maximum day demand, is shown in *Figure 3*. The three areas identified for fire flow consideration in this report include the Anchor Block development just south of MN State Highway 36 between McKnight Road North and 2nd Street North, the Commerce Park development just south of Highway 36 along Henry Street North, and the Downtown District along 7th Avenue East. From the map, it can be seen that the existing available fire flows in parts of the Anchor Black and Commerce Park areas fall below 3,500 gpm, which may not fulfill all building requirements. The network improvements that should be made in conjunction with the development of these areas to provide adequate fire flows are described in the Proposed Improvements section.

Interconnections

The only interconnection between the City of North St. Paul and a neighboring community is the northern part of the system which serves a portion of Maplewood. There are no interconnections between the City's system and a neighboring community's system through which the City could supply flow to or receive flow from another network.


Pressure
30-40 psi
40-50 psi
50-60 psi
60-70 psi
70-80 psi
80-90 psi
Watermain
Water Tower
Well
City Boundary
Lydia Ave
Beam Ave
Silver Lake
Casey Lake
Mohawk Rd E
17th Ave E
15th Ave E
14th Ave E
13th Ave E
11th Ave E
19th Ave E
Seppala Blvd
4th Ave E
3rd Ave E
2nd Ave E
1st Ave E
South Avenue E
County Rd B
Burke Ave E
Eldridge Ave E
Belmont La E
Skillman Ave E
Cowern Pl E
Holloway Ave E
Chippewa Ave N
Helen St N
Lake St
Century Ave N
Charles St N
Henry St N
Margaret St N
1st St N
2nd St N
3rd St N
6th St N
7th St N
Aerial St N
Mcknight Rd N
N St. Paul Rd
68
23
36
25
29
120
Figure 2 - Existing System Pressures
Comprehensive Water Supply Plan
North St. Paul, MN
N
0
1,000
Feet
NORTH ST. PAUL
extraordinary.
WSB



NORTH ST. PAUL
extraordinary.

Figure 3 - Existing System Fire Flows
Comprehensive Water Supply Plan
North St. Paul, MN

N
0 1,000 Feet

WSB

Population and Water Demand

The population served by the City of North St. Paul's water system has fluctuated considerably from year to year but remained roughly constant in the long term over the last ten years. The total population currently served by the City's water system, including service to the portion of Maplewood, is just over 14,300 people. Population and water use and demand data from the past ten years are listed in Table 2.

Although the total number of connections has been constant over the long term, the average and maximum day demands for water show a slight decreasing trend, aside from the maximum day demand in 2015. Both the residential and total per capita water demands also show a slight decreasing trend. It is likely that rainfall and climate play a large role in maximum day water usage.

Table 2 – Historic Water Demand

Year	Pop. Served	Total Connections	Total Water Use (MG)	Total Water Pumped (MG)	Percent Unmetered/ Unaccounted	Average Day Demand (MGD)	Max. Day Demand (MGD)	Date of Max. Demand	Residential Per Capita Demand (GPCD)	Total Per Capita Demand (GPCD)
2005	13,115	4,620	N/A	463.9	N/A	1.27	N/A	N/A	N/A	97
2006	14,000	4,575	427.3	483.1	11.6	1.32	N/A	N/A	62	95
2007	14,076	4,565	454.1	498.0	8.8	1.36	3.75	7/8/2007	68	97
2008	15,200	4,576	431.7	471.6	8.5	1.29	3.50	6/30/2008	59	85
2009	13,900	4,832	428.1	470.3	9.0	1.29	3.26	7/20/2009	63	93
2010	13,869	4,576	372.6	425.6	12.4	1.17	2.68	8/30/2010	54	84
2011	13,760	4,559	370.3	420.1	11.8	1.15	2.37	9/16/2011	55	84
2012	14,485	4,652	397.7	451.0	11.8	1.24	2.66	7/11/2012	56	85
2013	14,485	4,652	N/A	401.0	N/A	1.10	2.64	8/27/2013	N/A	76
2014	14,485	4,597	332.5	381.8	12.9	1.05	2.87	8/9/2014	46	72
2015	14,386	4,619	367.2	370.4	0.9	1.01	5.11	2/17/2015	50	71
2016	14,306	4,654	330.0	353.4	6.6	0.97	2.19	7/2/2016	46	68
Avg. 2012-2016	14,429	4,635	356.8	391.5	8.1	1.07	3.09	N/A	50	74

MG – Million Gallons per Day **MGD –** Million Gallons per Day **GPCD** – Gallons per Capita

Table 3 lists the top 10 water users by volume, from largest to smallest, for the City of North St. Paul.

Table 3 – Large Volume Users

Customer	Category	Use (gallons per year)	Percent of Total Water Use
Village on Woodlynn	Residential	2,138,737	0.58%
Polar Ridge (1)*	Residential	1,381,220	0.38%
Crestwood Townhomes	Residential	1,266,982	0.35%
Polar Ridge (2)*	Residential	1,249,822	0.34%
American Legion Post 39	Commercial	828,870	0.23%
Hub Management	Commercial	698,835	0.19%
Neumann's Vintage Speakeasy	Commercial	666,370	0.18%
Paolee Vang	Residential	625,200	0.17%
Jacob Hirak	Residential	527,820	0.14%
US Bank	Commercial	491,310	0.13%

**Customer(s) had multiple accounts that made up the top ten large volume users*

Existing Water Conservation Policies

Although Minnesotans benefit from the state's abundant water supplies, those supplies are finite and potential threats exist that could impact the quality of our drinking water. Factors that can potentially limit water supply include population increases, economic trends, uneven statewide availability of groundwater, climate change, and degraded water quality. There are many benefits to enacting water conservation policies and many practical, feasible objectives the City has already and will continue to pursue.

The average total water used per year in the City of North St. Paul from 2012 to 2016 was 356.8 million gallons, with an average of 8.1 percent of that usage being unmetered or unaccounted. The average residential per capita demand has fluctuated over the last ten years, but appears to exhibit a slight decreasing trend. From 2012 to 2016 the average residential per capita use was 50 gallons per day, which is within the DNR's recommended residential demand of less than 75 gallons per capita per day. The trend in residential per capita demand may be attributed to high efficiency appliances, general attitudes toward conservation, rainfall, and climate.

Wellhead Protection

Long-term preventative programs and measures for the City's existing water system will help reduce the risk of emergency situations. The City of North St. Paul has a number of programs to help reduce these risks. This includes a Wellhead Protection Plan (WHPP) that was adopted in April of 2010 and is due to be updated in April of 2020. It lists the following goals:

1. Maintain or improve the current level of water quality so that the municipal water supply will continue to meet or exceed all applicable state and federal water quality standards.
2. Provide information and promote activities that protect the source water aquifers that provide water to the municipal system. This will include increasing public awareness of the Wellhead and Source Water Protection Program and groundwater-related issues, and management of the identified potential contaminant sources within the DWSMA.
3. Continue to collect data to support future wellhead and source water protection efforts.

In order to achieve these objectives, the WHPP lists the following programs:

- Privately-owned water supply wells
    1. Encouraging the proper sealing of all unused wells within the DWSMA. This includes working with the neighboring jurisdictions into which the DWSMA extends to promote sealing of any unused wells within the DWSMA.
    2. Promoting proper management of existing active wells in the DWSMA. Again, this includes working with the neighboring jurisdictions into which the DWSMA extends to promote proper management of existing active wells in the DWSMA.
- Potential contaminant source properties
    1. Providing information to owners of properties that may contain Class V wells.
    2. Encouraging proper operation and maintenance of storage tanks.
- Public education
    1. Distributing the City's Drinking Water Consumer Confidence Report.

2. Distributing information on the proper operation and maintenance of private wells.
3. The City of North St. Paul website at http://www.ci.north-saint-paul.mn.us
4. Including wellhead and source water protection into the City's planning process.
5. Working with the cities of Lake Elmo, Mahtomedi, Maplewood, Oakdale, Pine Springs, St. Paul, and White Bear Lake to identify appropriate public education opportunities for any residents within the portions of the DWSMA that extend into these jurisdictions.

- Continued data collection
    1. Recording static and pumping water levels in the North St. Paul municipal wells.
    2. Collecting data on potential contaminant sources within the DWSMA.

Resource Sustainability

The City of North St. Paul's appropriation permit (1977-6176) from the Minnesota Department of Natural Resources (DNR) currently authorizes the City to pump 584 million gallons per year. Historically, the City has pumped between 350 million and 500 million gallons per year.

The Ramsey County District Court issued a ruling on August 30, 2017 that the DNR allowed over-pumping of the groundwater aquifer in the region of White Bear Lake. The judge ordered the DNR to review groundwater appropriation permits within five miles of the lake and to enforce a residential lawn watering ban when the lake water level drops below 923.5 feet above sea level. On September 26, 2017, the DNR issued a news release stating that it will appeal the Court's ruling. The DNR contends that restricting permits within five miles of the lake will halt important development, and that the watering ban will impose an undue burden on 500,000 White Bear Lake area residents.

The entire City of North St. Paul falls within five miles of White Bear Lake, including the City's five wells. Therefore, the City is closely following developments in this case and will coordinate with the DNR to ensure that it is complying with regional and state guidelines. The City of North St. Paul's Water Capital Improvement Plan will evolve as definitive conclusions become available

in this case. The City will continue water conservation programs throughout this process in an effort to reduce the consumption of water.

Growth and Demand Projections

The population of the City of North St. Paul is projected to remain roughly constant over the lifetime of this plan. The City's projected population and demands are listed in Table 4. The population projections were linearly extrapolated using Metropolitan Council (MCES) estimates for the years 2020, 2030, and 2040. It is assumed that, as of 2016, any new population growth will be serviced by the municipal water system. The demands (average day and max day peaking factors) were obtained from the MCES projections and the City's annual water use data. The maximum day demand is projected to be 2.75 MGD in the year 2040. Note that the projected population served is greater than the projected total population because North St. Paul's water system also serves a portion of the population of Maplewood to the north.

Table 4 – Projected Annual Water Demand

Year	Projected Total Population	Projected Population Served	Projected Total Per Capita Water Demand (GPCD)	Projected Average Day Demand (MGD)	Projected Maximum Day Demand (MGD)
2017	12,006	14,306	74	1.06	2.86
2018	12,004	14,304	74	1.06	2.82
2019	12,002	14,302	74	1.06	2.79
2020	12,000	14,300	74	1.06	2.75
2021	11,990	14,290	74	1.06	2.75
2022	11,980	14,280	74	1.06	2.75
2023	11,970	14,270	74	1.06	2.75
2024	11,960	14,260	74	1.06	2.74
2025	11,950	14,250	74	1.05	2.74
2030	11,900	14,200	74	1.05	2.73
2040	12,000	14,300	74	1.06	2.75

GPCD – Gallons per Capita per Day MGD – Million Gallons per Day

Future Water Conservation Policies

The Minnesota DNR has established eight water conservation objectives and strategies. These are listed below with comments on the City of North St. Paul's progress towards the completion of each.

1. Reduce unaccounted (non-revenue) water loss to less than 10 percent.
    - The City's average unaccounted water use from 2012 to 2016 was 8.1 percent, which is within the recommended target of 10 percent. The City plans to conduct a two-year leak detection survey in the near future.
    - There are a total of about 4,650 metered connections in North St. Paul that are tested as needed, except for commercial connections, which are tested every ten years. The City has nearly completed the installation of new water meters throughout the system.
2. Achieve residential demand of less than 75 gallons per capita per day.
    - The average residential per capita water demand for the City of North St. Paul from 2012 to 2016 was 50 gallons per capita per day (gpcd), which is lower than the 75 gpcd target.
    - In order to continue reducing residential demand, the City will review its ordinance to encourage water efficient landscaping 1-3 years following the adoption of this plan, review its ordinance to permit water reuse annually, review its ordinance to limit irrigation 3-6 years following the adoption of this plan, continue to make water system infrastructure improvements, consider applying for an MCES Water Efficiency Grant in 2017, and conduct water conservation education 1-3 following the adoption of this plan.
3. Achieve at least a 15 percent reduction in per capita daily demand across all customer categories over the next 10 years.
    - The City of North St. Paul will conduct facility water use audits annually, install enhanced water meters, install conservation fixtures and appliances, repair leaking system components, reduce outdoor water use, and train employees how to conserve water.
4. Achieve a decreasing trend in total per capita demand.
    - Water use in each customer category has fluctuated, but is showing a slight downward trend. A graph showing total per capita water demand by customer category is included in *Appendix 8.*
5. Reduce peak day demand so that the ratio of maximum to average day demand is less than 2.6.
    - The City's ten-year average (2007-2016) ratio of maximum to average day demand is 2.7, which is nearly within the recommended ratio. The City will continue efforts to reduce irrigation use on peak days.
6. Implement a conservation water rate structure.

- The water rates in North St. Paul are based on an increasing block rate structure. This rate structure promotes water conservation because the price is volume-tiered. Water billing in North St. Paul is on a monthly schedule, and the billing structure is evaluated as needed with the last change made in December of 2016. The current rate structure is included in *Appendix 9*.

7. Additional strategies to reduce water use and support wellhead protection planning:
    - The City of North St. Paul will continue participating in the GreenStep Cities program, adopt a water use restriction ordinance, and adopt an outdoor lawn irrigation ordinance.
8. Track success.

The City will continue to monitor water usage by customer category.

Regulation

The City of North St. Paul has implemented regulations to reduce demand and improve efficiency in its water system. Water efficient plumbing fixtures are required in new development, there are limitations on turf areas in new development, and there are minimum requirements for trees per square foot of lawn in new development. A summary of these regulations with links to more information on them is included in *Appendix 10.*

Retrofitting Programs

Both the Ramsey-Washington Metro Watershed District and the Valley Branch Watershed District offer financial and design assistance for the development of rainwater gardens. More information about their programs can be found on their websites (www.rwmwd.org and http://vbwd.org/)

Education and Outreach

The City has implemented, or plans to implement, the following education and outreach programs:

- Consumer Confidence Reports prepared annually
- Citizen's Academy community education classes conducted annually
- Information available on the City website (http://www.northstpaul.org/)

Proposed Improvements

The City of North St. Paul's existing water system will require maintenance and rehabilitation work to sustain existing infrastructure through the year 2040. The system's treatment, storage, and distribution components will also require investments to satisfy future demands through that time. Table 5 lists the significant, non-routine improvements proposed, along with the estimated dates of implementation and costs of those improvements, in order to maintain the City's system. The City's detailed Capital Improvement Plan for 2014-2020 is included in *Appendix 4*.

Table 5 – Proposed Capital Improvements

Year	Project	Estimated Cost*
2014	New Water Meters	$176,000
	2014 Street and Utility Improvements	$1,586,000
2015	New Water Meters	$121,000
2016	New Water Meters	$125,000
	Well House Rehabilitation	$80,000
	2016 Street and Utility Improvements	$829,000
2017	-	-
2018	2018 Street and Utility Improvements	$1,121,000
2019	-	-
2020	2020 Street and Utility Improvements	$1,318,000
2021-2030	Street and Utility Improvements	$7,875,000
	7th Avenue Reconstruction	$2,116,000
	12-inch Watermain along Gateway Trail	$450,000
	10-inch Watermain Loop	$683,000
	8-inch Watermain Loop	$300,000
	Install 750,000 gallon Water Tower	$2,415,000
2031-2040	Street and Utility Improvements	$8,269,000
	Margaret Street Reconstruction	$1,880,000
	North Pressure Zone / Booster Station	$650,000
	Chlorination at 5 Well Houses	$263,000

**Values listed include both direct and indirect costs, in 2018 dollars.*

Proposed Sources and Treatment

It is generally recommended that a City's production and treatment capacity be equal to at least the maximum day demand with the largest well out of service (firm capacity). The City of North St. Paul's existing firm capacity is 4,900 gpm, equal to 7.06 MGD. The projected maximum daily demand by the year 2040 of 2.75 MGD is well within the firm capacity, so it is projected that the City will not require additional production and treatment capacity over the lifetime of this plan. However, the City plans to add chemical dosing systems for chlorination at the system's five well houses to provide disinfection in addition to the existing fluoridation.

Proposed Storage

It is generally recommended that a City's storage capacity be equal to at least the average day demand plus a fire fighting reserve. The City's existing storage capacity is 0.8 million gallons, which has already been surpassed by existing average day demand. This deficiency is offset slightly by the system's high production capacity. It is anticipated that average daily demand will reach 1.06 MGD by the year 2040. The City plans to install a new 750,000 gallon elevated storage facility between 2021 and 2030. The location of this facility is provisionally set in the Commerce Park development area; however, the exact location will need to be determined with a tower siting study. The new facility will bring the system's total storage capacity to 1.55 million gallons, which will satisfy demands through at least the year 2040.

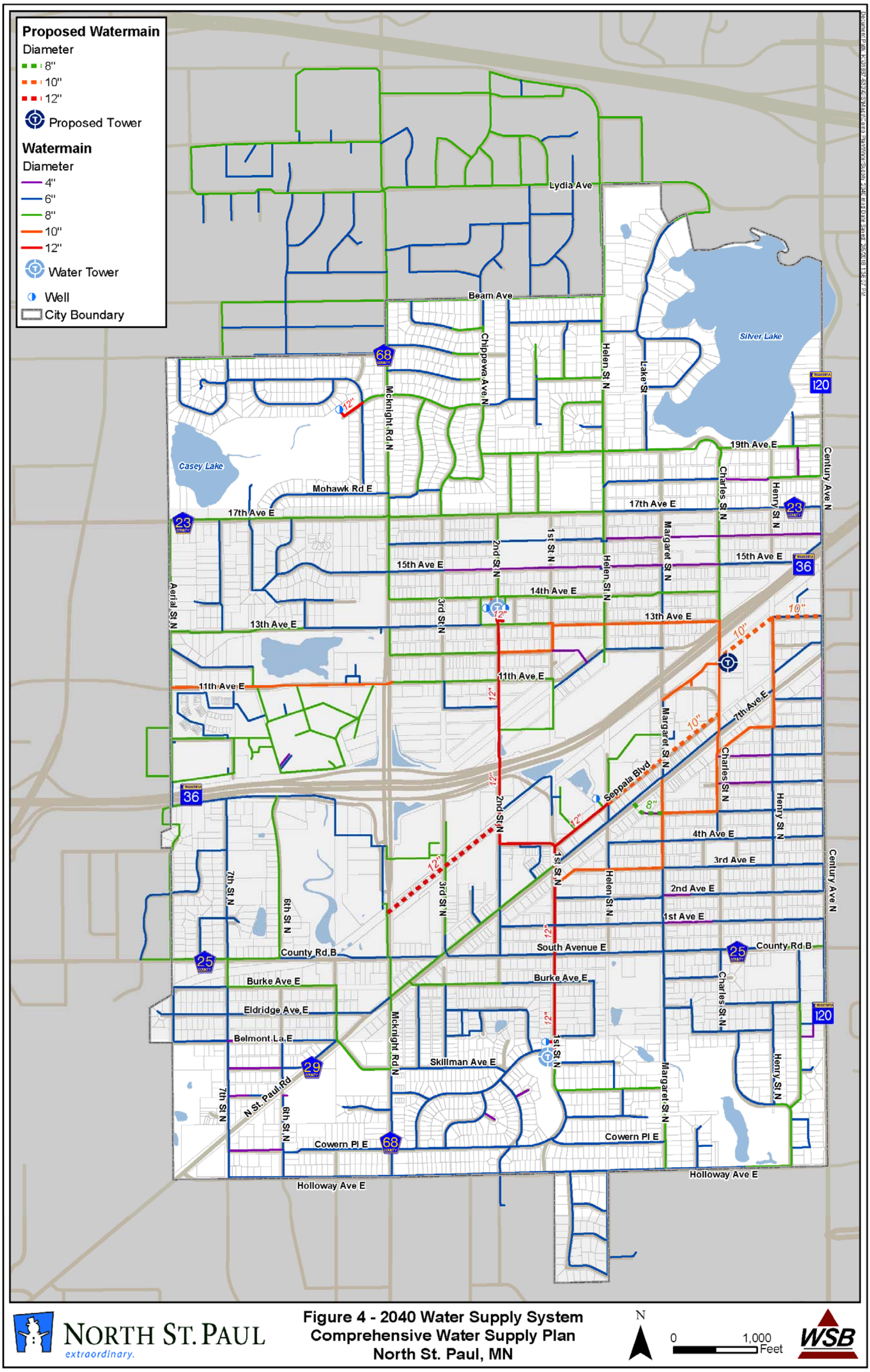
Proposed Distribution

The City plans to continue rehabilitating its water distribution system in conjunction with its biennial street and utility improvements projects. In addition, there are three distribution system improvements planned to satisfy fire fighting flow requirements in new developments as shown in *Figure 4*.

- In conjunction with the Anchor Block / North Brook Redevelopment, the City plans to install a new 12-inch watermain along the Gateway Trail from the existing 12-inch watermain on 2nd Street North to the existing 8-inch watermain on McKnight Road North.
- In conjunction with the Commerce Park Redevelopment, the City plans to complete the 10-inch watermain loop extending from the existing 12-inch watermain at Well 3 to the northeast along Seppala Boulevard

to Charles Street, and along the Gateway Trail between Charles Street and Henry Street North.

- In order to provide additional fire flow to the properties along 7th Avenue East between Helen Street North and Margaret Street North, it is proposed that the watermain stub to the south of this location in 5th Avenue East be upsized to an 8-inch watermain and extended to connect to the watermain in 7th Avenue East, as shown in *Figure 4*.


Proposed Watermain
Diameter
8"
10"
12"
Proposed Tower
Watermain
Diameter
4"
6"
8"
10"
12"
Water Tower
Well
City Boundary
Lydia Ave
Beam Ave
Silver Lake
Chippewa Ave N
Helen St N
Lake St
Century Ave N
Charles St N
Henry St N
Margaret St N
19th Ave E
17th Ave E
15th Ave E
14th Ave E
13th Ave E
11th Ave E
7th Ave E
4th Ave E
3rd Ave E
2nd Ave E
1st Ave E
South Avenue E
Seppata Blvd
Mohawk Rd E
Casey Lake
Aerial St N
2nd St N
3rd St N
1st St N
7th St N
6th St N
Mcknight Rd N
County Rd B
Burke Ave E
Eldridge Ave E
Belmont La E
Skillman Ave E
N St Paul Rd
Cowern Pl E
Holloway Ave E
12"
10"
8"
Figure 4 - 2040 Water Supply System
Comprehensive Water Supply Plan
North St. Paul, MN
N
0
1,000
Feet

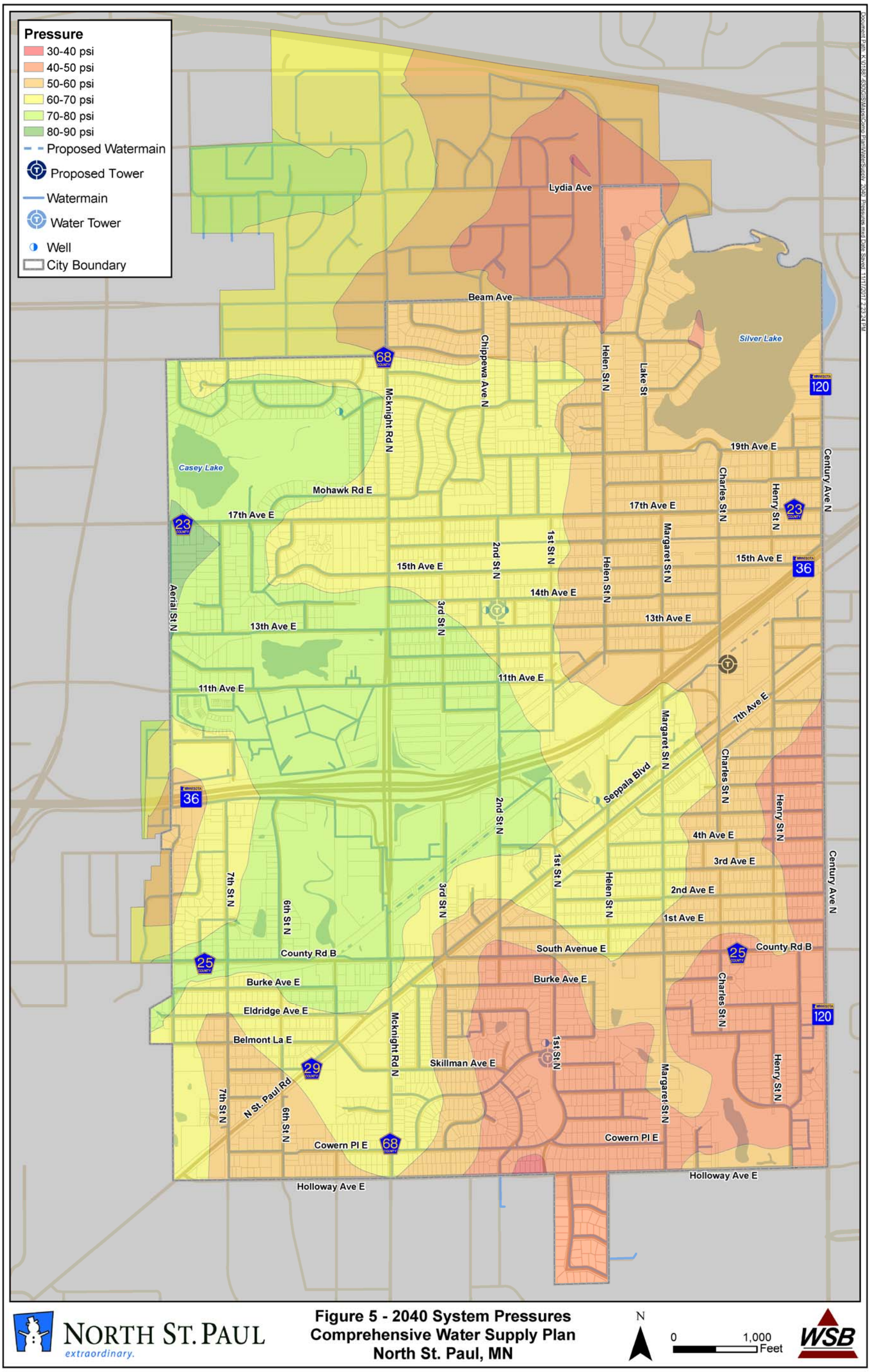
Future System Pressures and Velocities

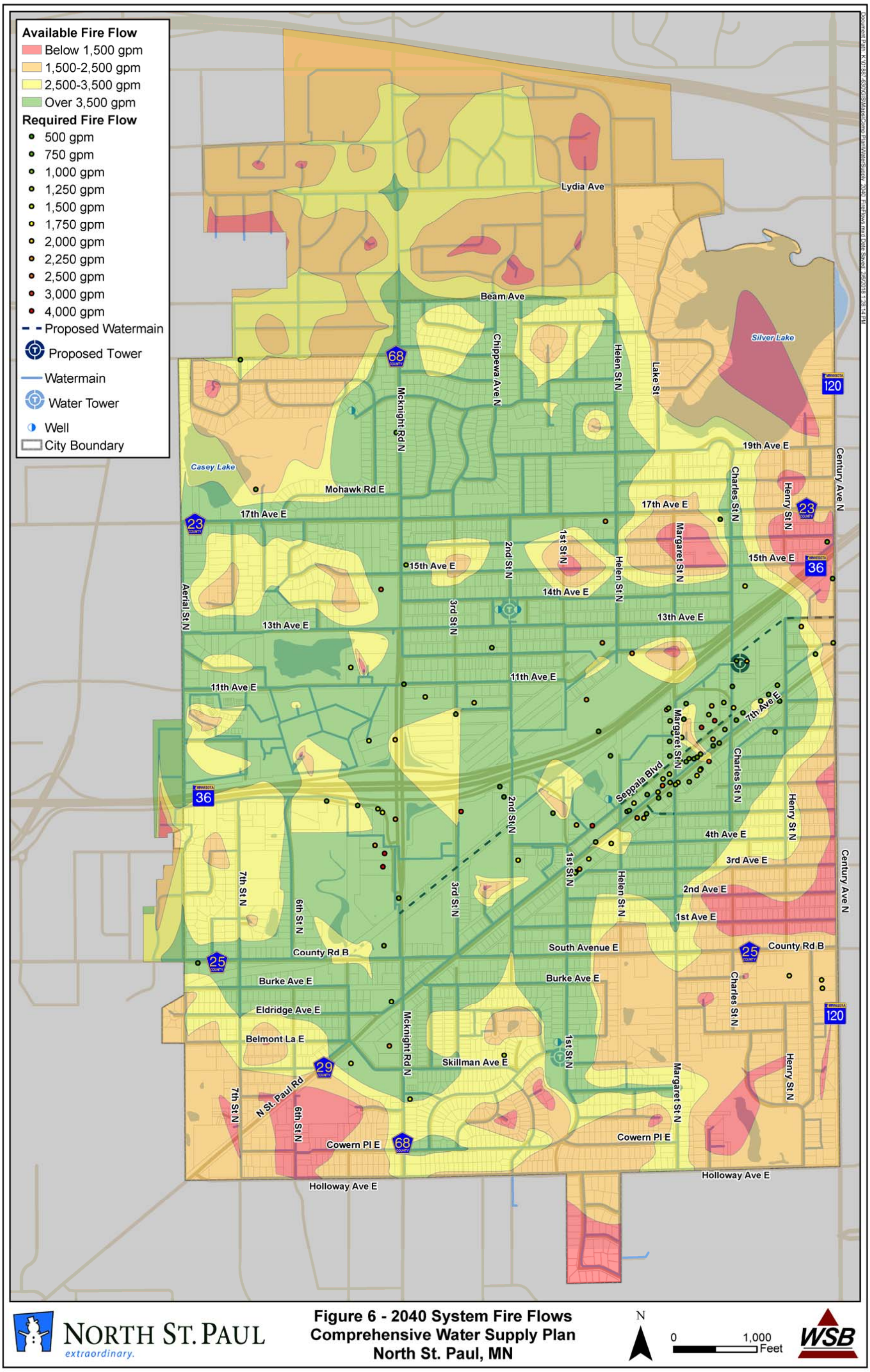
Given that there are no significant expansions or reconfigurations planned for the City's water distribution system, system pressures will not change significantly from existing conditions. In general, all points in the system will see slightly lower working pressures due to the slight increase in water demand from the projected population increase. A map of the 2040 build-out steady state system pressures calculated by the model, with the tower levels set to the lowest level seen during 2040 maximum day demand, is shown in *Figure 5*. The same regions in the north and southeast areas of the City show low pressures under the 2040 build-out.

The watermains that exhibit high velocities and head losses in the 2040 build-out are similar to those of the existing system. The 8-inch main connecting Well 3 to the system would still exhibit a high velocity, and the 6-inch main along Gerald Avenue would still exhibit a slightly high head loss, if neither are upsized before that time.

Future Fire Flow Capacities

A map of the 2040 build-out available fire flows, with the tower levels set to the lowest level seen during 2040 maximum day demand, is shown in *Figure 6*. From the map, it can be seen that the available fire flows in the Anchor Block and Commerce Park areas are above 3,500 gpm after the improvements to system storage and distribution. The eastern edge of the Commerce Park area still shows slightly lower fire flows since it is on the edge of the system, so additional watermain looping or upsizing may be required in that area pending a detailed analysis of individual building fire fighting requirements at the time of development.


Pressure
30-40 psi
40-50 psi
50-60 psi
60-70 psi
70-80 psi
80-90 psi
Proposed Watermain
Proposed Tower
Watermain
Water Tower
Well
City Boundary
Lydia Ave
Beam Ave
Silver Lake
Casey Lake
Mohawk Rd E
17th Ave E
15th Ave E
14th Ave E
13th Ave E
11th Ave E
19th Ave E
7th Ave E
4th Ave E
3rd Ave E
2nd Ave E
1st Ave E
South Avenue E
County Rd B
Burke Ave E
Eldridge Ave E
Belmont La E
Skillman Ave E
Cowern Pl E
Holloway Ave E
Chippewa Ave N
Helen St N
Lake St
Century Ave N
Charles St N
Henry St N
Margaret St N
2nd St N
1st St N
3rd St N
Aerial St N
Mcknight Rd N
7th St N
6th St N
N St. Paul Rd
Seppala Blvd
68
23
36
25
29
120
Figure 5 - 2040 System Pressures
Comprehensive Water Supply Plan
North St. Paul, MN
N
0
1,000
Feet
NORTH ST. PAUL
extraordinary.
WSB


Available Fire Flow
Below 1,500 gpm
1,500-2,500 gpm
2,500-3,500 gpm
Over 3,500 gpm
Required Fire Flow
500 gpm
750 gpm
1,000 gpm
1,250 gpm
1,500 gpm
1,750 gpm
2,000 gpm
2,250 gpm
2,500 gpm
3,000 gpm
4,000 gpm
Proposed Watermain
Proposed Tower
Watermain
Water Tower
Well
City Boundary
Lydia Ave
Beam Ave
Silver Lake
Chippewa Ave N
Mcknight Rd N
Helen St N
Lake St
Century Ave N
19th Ave E
Charles St N
Henry St N
Margaret St N
Casey Lake
Mohawk Rd E
17th Ave E
15th Ave E
14th Ave E
13th Ave E
11th Ave E
7th Ave E
4th Ave E
3rd Ave E
2nd Ave E
1st Ave E
Aerial St N
2nd St N
1st St N
3rd St N
7th St N
6th St N
Seppala Blvd
South Avenue E
County Rd B
Burke Ave E
Eldridge Ave E
Belmont La E
Skillman Ave E
N St. Paul Rd
Cowern Pl E
Holloway Ave E
Figure 6 - 2040 System Fire Flows
Comprehensive Water Supply Plan
North St. Paul, MN
N
0
1,000
Feet

Emergency Preparedness Procedures

Water emergencies can occur as a result of vandalism, sabotage, accidental contamination, mechanical problems, power failures, drought, flooding, and other natural disasters. The purpose of emergency planning is to develop emergency response procedures and to identify actions needed to improve emergency preparedness. In the case of a municipality, these procedures should be in support of, and part of, an all-hazard emergency operations plan.

Federal Emergency Response Plan

Section 1433(b) of the Safe Drinking Water Act, as amended by the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Public Law 107-188, Title IV – Drinking Water Security and Safety), requires community water suppliers serving over 3,300 people to prepare an Emergency Response Plan.

The City of North St. Paul has a Federal Emergency Response Plan. The contacts for this plan are:

Emergency Response Lead: Scott Duddeck
Phone: (651) 747-2436
Email: scott.duddeck@northstpaul.org

Alternate Emergency Response Lead: Nick Fleischhacker
Phone: (651) 747-2409
Email: nick.fleischhacker@northstpaul.org

Operational Contingency Plan

The State recommends that all utilities develop an operational contingency plan that describes measures to be taken for water supply mainline breaks and other common system failures, as well as for routine maintenance. A contact list for contractors and suppliers and a water emergency telephone list that act as an Operational Contingency Plan are included in *Appendix 5*.

Emergency Response Procedures

Quick access to concise and detailed information on water sources, water treatment, and the distribution system may be needed in an emergency. System operation and maintenance records should be maintained in secured central and back-up locations so that the records are accessible for emergency

purposes. A detailed map of the system showing the water sources, treatment plant, storage facilities, supply lines, interconnections, and other information that would be useful in an emergency should also be readily available. It is critical that public water supplier representatives and emergency response personnel communicate about the response procedures and be able to easily obtain this kind of information both in electronic and hard copy formats (in case of a power outage).

The City of North St. Paul maintains records and maps of the water system. City staff can access these resources from a central secured location in the event of an emergency, and appropriate staff know where these resources are located.

Procedures for Augmenting Water Supplies

The City of North St. Paul does not have any emergency interconnections with neighboring communities. In the case of a short-term emergency, the City would need to obtain and distribute bottled water. For a long-term emergency, the City will evaluate the cause of service disruption and will determine if a new water source or improved water treatment is necessary. The scale of the response will depend on the cause of the disruption. In this case, a feasibility study should be conducted to determine how to address the issue in the most cost-effective manner.

Allocation and Demand Reduction Procedures and Triggers

The City must prepare procedures to address gradual decreases in water supply, as well as emergencies and the sudden loss of water due to line breaks, power failures, sabotage, etc. These allocation and demand reduction procedures must be consistent with Minnesota State Statute 103G.261, that identifies and defines the priorities in which water usage will be allocated in the event of an emergency. They are defined as follows:

1. Domestic water supply only, excluding industrial and commercial uses of municipal water supply. The first priority also includes uses for power production that meet contingency requirements. Domestic use is defined by MN Rules 6115.0630, Subp. 9, as use for general household purposes for human needs such as cooking, cleaning, drinking, washing, and waste disposal, and uses for on-farm livestock watering excluding commercial livestock operations which use more than 10,000 gallons per day or one million gallons per year.

2. Consumption of less than 10,000 gallons per day.
3. Agricultural irrigation and processing of agricultural products of more than 10,000 gallons per day.
4. Power production in excess of the use provided for in the contingency plan.
5. All other water use of more than 10,000 gallons per day.
6. Non-essential uses. These uses are defined by Minnesota Statute 103G.291 as lawn sprinkling, vehicle washing, golf course and park irrigation, and other non-essential uses.

Table 6 lists the priority ranking, average day demand, and demand reduction potential for each customer category in the City.

Table 6 – Water Use Priorities

Customer Category	Allocation Priority	Average Day Demand (GPD)	Short-Term Emergency Demand Reduction Potential (GPD)
Residential	1	691,500	-
Commercial	2	254,700	-
Agriculture/Irrigation	3	6,800	-
Total	-	953,000	255,200*

GPD – Gallons per Day

**Calculated as the increase in summer demand across all customer categories in 2014 and 2015*

The City of North St. Paul will use the following conditions to trigger an emergency response:

- Contamination
- Loss of Production
- Infrastructure Failure
- Governor's Executive Order

The City of North St. Paul has identified the following short-term and long-term actions to be implemented as part of an emergency response:

Short-term Actions	Long-term Actions
▪ Adopt and enforce a critical water deficiency ordinance ▪ Meet with large water users to discuss their contingency plan ▪ Encourage voluntary reduction measures through public service announcements	▪ Adopt and enforce a critical water deficiency ordinance ▪ Meet with large water users to discuss their contingency plan

Notification Procedures

The City of North St. Paul has developed the following plan to inform customers regarding conservation requests, water use restrictions, and suspensions; with the support of City staff, neighboring communities, and local news outlets:

Short-term demand reduction declared (within one year)	Long-term demand reduction declared (over one year)	Governor's Critical water deficiency declared
Frequency: Monthly ▪ Website ▪ Social media (e.g. Twitter, Facebook) ▪ Direct customer mailing ▪ Press release (TV, radio, newspaper)	Frequency: Annually ▪ Website ▪ Social media (e.g. Twitter, Facebook) ▪ Direct customer mailing ▪ Press release (TV, radio, newspaper)	Frequency: As Needed ▪ Website ▪ Social media (e.g. Twitter, Facebook) ▪ Press release (TV, radio, newspaper)

Enforcement

Minnesota Statute requires public water supply authorities to adopt and enforce water conservation restrictions during periods of critical water shortages. As stated in Minnesota Statute 103G.291, Subdivision 1, regarding public water supply appropriation during deficiency, if the governor determines and declares by executive order that there is a critical water deficiency, public water supply

authorities appropriating water must adopt and enforce water conservation restrictions within their jurisdiction that are consistent with rules adopted by the commissioner. The restrictions must limit lawn sprinkling, vehicle washing, golf course and park irrigation, and other nonessential uses, and have appropriate penalties for failure to comply with the restrictions.

The City does not have a critical water deficiency ordinance in place. However, City Code Title V 51.04 gives power to a City Emergency Management Director appointed by the Mayor and approved by the City Council to coordinate emergency management activities. The City Council also has authority to implement regulations regarding emergency services under Title V 51.06. A copy of the City Code referenced above is included in *Appendix 7*.

Chapter 13

Sewer

CHAPTER 13: SEWER

EXECUTIVE SUMMARY

Introduction

The City of North St. Paul's Comprehensive Sanitary Sewer Plan describes the existing sanitary sewer system and outlines the timing and sequence of future improvements. The Sanitary Sewer Plan allows the City and the Metropolitan Council to build and improve their sanitary sewer collection and treatment systems so that development can occur in the most efficient and cost-effective manner.

Existing System

North St. Paul's sanitary sewer system currently consists of approximately 46 miles of gravity main, four lift stations, and 2,300 feet of forcemain. All of the lift stations were rehabilitated within the last five years. The City's sanitary sewer system collects and conveys wastewater to the Metropolitan Council Environmental Services (MCES) Meter M010A which discharges into MCES Interceptor 1-MW-413 and passes through the MCES system to the MCES Metropolitan Wastewater Treatment Plant (WWTP) located southeast of St. Paul on the Mississippi River.

Population and Flow

The population of the City of North St. Paul has fluctuated from year to year since 2005, but has stayed fairly constant over the long term. The wastewater flow generated in the City has also fluctuated from year to year, likely due to yearly climate conditions. Over the last five years, the City has generated an average of 1.12 million gallons per day (MGD).

Growth and Flow Projections

The Metropolitan Council projects that the City of North St. Paul's population will remain roughly constant over the lifetime of this Plan, and that its average wastewater flow will actually decrease slightly through the year 2040. In contrast, this Sanitary Sewer Plan considers each parcel of potential redevelopment and potential flow increases from that redevelopment to plan for required

infrastructure, so the projected 2040 average flow of 1.22 MGD is greater than the MCES projection.

Proposed Improvements

The City of North St. Paul is largely built out, so the improvements to its sanitary sewer system consist primarily of maintaining the existing system. This includes sanitary sewer lining and replacement as part of the City's annual street and utility improvement projects. A capacity analysis of the existing lift stations and trunk gravity main was completed to verify that the existing infrastructure has adequate capacity to convey projected wastewater flow, and no capacity exceedances are anticipated.

INTRODUCTION

The City of North St. Paul is required to prepare a Comprehensive Plan that aligns with the Metropolitan Council's Metropolitan System Plan every ten years per Minnesota Rule 473.858. An important part of the Comprehensive Plan is the Sanitary Sewer Plan, which describes the existing sanitary sewer system and plans for future improvements. The Sanitary Sewer Plan allows the City and the Metropolitan Council to build and improve their sanitary sewer collection and treatment systems so that development can occur in the most efficient and cost-effective manner. This document serves as the sanitary sewer component for the City of North St. Paul's 2040 Comprehensive Plan.

The City of North St. Paul's Sanitary Sewer Plan was developed to align with the Metropolitan Council's Thrive MSP 2040 Water Resources Policy Plan. The Thrive MSP 2040 Plan was approved in May 2015 and outlines regional goals for the wastewater system, including environmental sustainability, water reuse, and water conservation. Additionally, the Thrive MSP 2040 Plan includes population, household, and employment projections, and projected wastewater flows.

As a result of projected population and land use changes in North St. Paul, the Metropolitan Council estimates that sanitary sewer flows will decrease approximately 5 percent between 2010 and 2040. However, redevelopment of certain areas within the City may cause increased flows in those areas and the sewer system that serves them. This Sanitary Sewer Plan outlines the locations in which the Metropolitan Council can expect to see increased wastewater flows, allowing the Council to determine if capacity upgrades will be required at

regional wastewater treatment plants and interceptors. This plan also serves as a guiding document for City infrastructure improvements and expansion.

BACKGROUND

The City of North St. Paul is located in Ramsey County to the northeast of St. Paul. It is bordered by Maplewood to the north, west, and south, and by Oakdale to the east. The bulk of North St. Paul is residential, with some commercial, office, industrial, and utility land concentrated between State Highway 36 and 7th Avenue East. Approximately 5 percent of the area of the City is occupied by the lakes and wetlands.

North St. Paul has been designated entirely as an urban community. This designation indicates that the City has already experienced significant development. The Metropolitan Council expects North St. Paul to, "plan for forecasted population and household growth at average densities of at least 10 units per acre for new development and redevelopment … and to target opportunities for more intensive development near regional transit investments."

POLICIES

1. City Sewer – All developments must be served by City Sewer.
2. Trunk Lines – The City will provide trunk sewer lines of a size sufficient to handle existing and future wastewater flow consistent with redevelopment plans, and provisions in this Comprehensive Plan.
3. Standards – The system must meet Upper Midwest Ten States Standards.
4. Maintenance – The City will regularly inspect the system and perform preventative maintenance to reduce overall costs.
5. Inflow and Infiltration (I/I) – The City will reduce I/I through:
    - Enforcement of the sump pump ordinance,
    - Maintenance to the system,
    - Continuance of the annual I/I program, which includes sealing manholes and reconstructing or relining sewer pipe in

conjunction with the City's annual street and utility improvement projects.

6. Needs – The City will evaluate sanitary sewer system needs to ensure a continued high level of service.

EXISTING SANITARY SEWER SYSTEM

Public Collection System

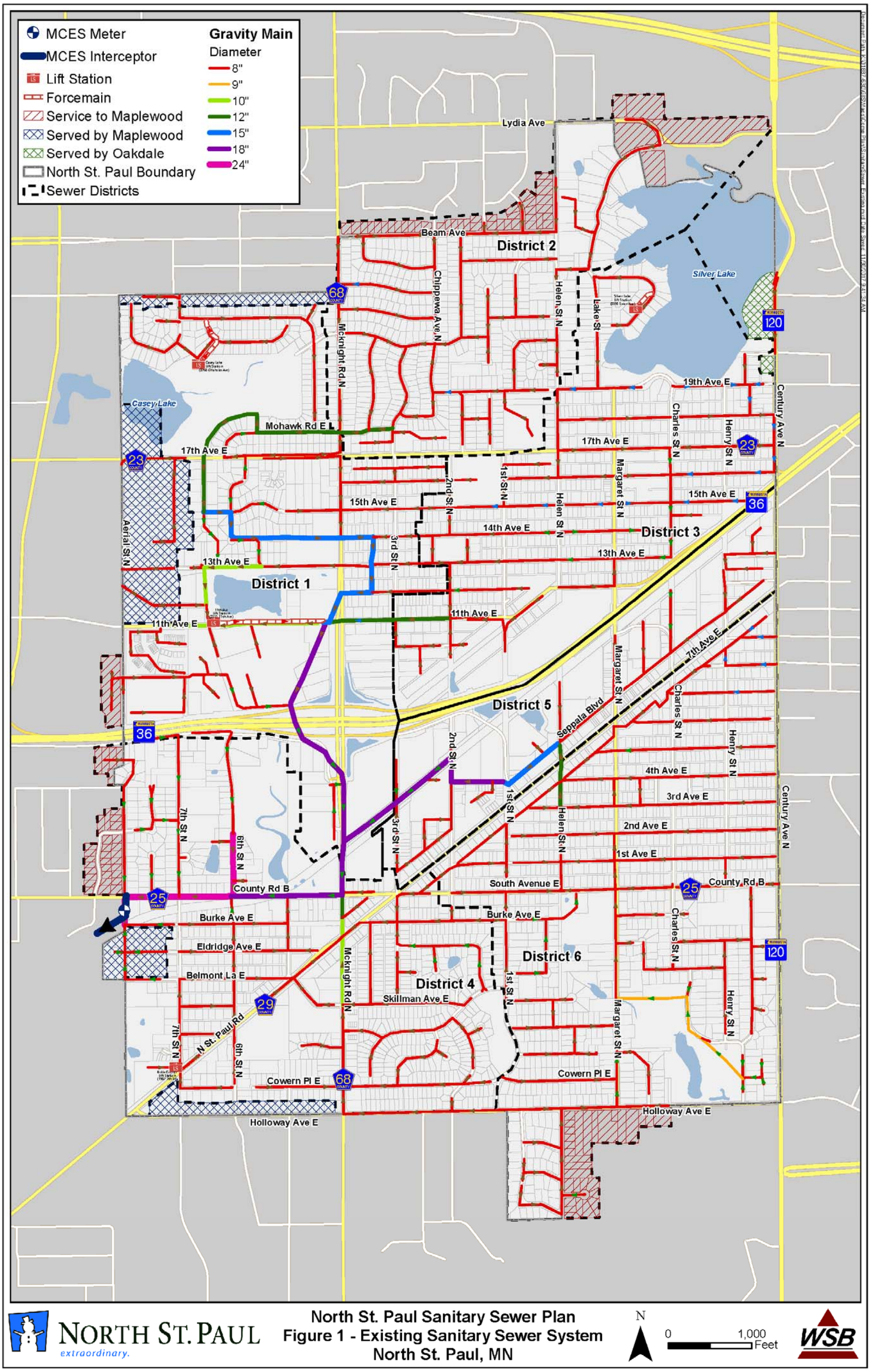
The City of North St. Paul's existing sanitary sewer system collects and conveys wastewater to the Metropolitan Council Environmental Services (MCES) Meter M010A and MCES Interceptor 1-MW-413. A summary of North St. Paul's existing lift stations is presented in Table 1, and a map of the existing sanitary sewer system is shown in *Figure 1,* as follows.

Table 1. Existing Lift Station Summary

No.	Lift Station	Year Rehabilitated	Pumping Capacity (gpm)
1	Kidde Corner	2012	100
2	11th Avenue	2016	200
3	Casey Lake Park	2016	200
4	Silver Lake	2016	100

Nearly all of the City of North St. Paul's sanitary sewer system is connected by one collective gravity main network. Wastewater from the north half of the City is collected along McKnight Road North and passes under State Highway 36 slightly west of the intersection. Wastewater from the south half of the City is collected along 7th Avenue East and McKnight Road North. Both streams ultimately travel west down South Avenue East to MCES Meter M010A where it discharges into MCES Interceptor 1-MW-413. The City's sanitary sewer system can be roughly divided into six sanitary sewer districts. A map displaying North St. Paul's sanitary sewer districts is shown in *Figure 2*.

The wastewater collected in the City of North St. Paul is conveyed through the MCES system to the MCES Metropolitan Wastewater Treatment Plant (WWTP) located southeast of St. Paul on the Mississippi River. The Metropolitan WWTP has a capacity of 251 MGD, provides advanced secondary treatment with chlorination/dechlorination, and discharges treated effluent to the Mississippi River. It also generates energy from residual biosolids for in-plant use.


MCES Meter
MCES Interceptor
Lift Station
Forcemain
Service to Maplewood
Served by Maplewood
Served by Oakdale
North St. Paul Boundary
Sewer Districts
Gravity Main
Diameter
8"
9"
10"
12"
15"
18"
24"
Lydia Ave
Beam Ave
District 2
Silver Lake
Chippewa Ave N
Helen St N
Lake St
Mcknight Rd N
19th Ave E
Century Ave N
Casey Lake
Mohawk Rd E
17th Ave E
Charles St N
Henry St N
Margaret St N
1st St N
2nd St N
15th Ave E
14th Ave E
District 3
3rd St N
13th Ave E
Aerial St N
District 1
11th Ave E
7th Ave E
District 5
Seppala Blvd
4th Ave E
3rd Ave E
2nd Ave E
1st Ave E
South Avenue E
County Rd B
7th St N
6th St N
Burke Ave E
Eldridge Ave E
Belmont La E
District 6
District 4
Skillman Ave E
N St. Paul Rd
Cowern Pl E
Holloway Ave E
68
36
23
25
29
120
NORTH ST. PAUL
extraordinary.
North St. Paul Sanitary Sewer Plan
Figure 1 - Existing Sanitary Sewer System
North St. Paul, MN
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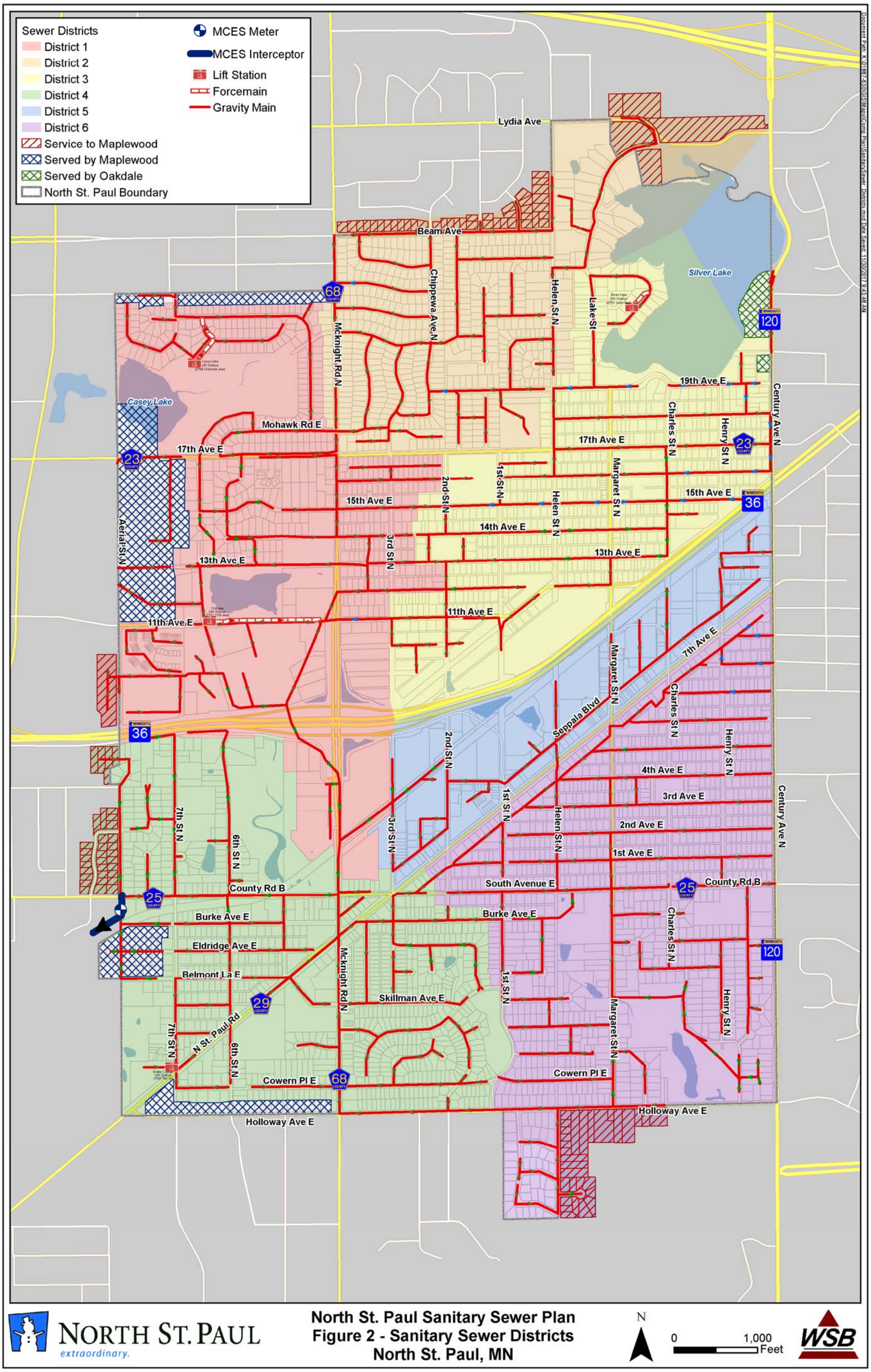
WSB


Sewer Districts
District 1
District 2
District 3
District 4
District 5
District 6
Service to Maplewood
Served by Maplewood
Served by Oakdale
North St. Paul Boundary
MCES Meter
MCES Interceptor
Lift Station
Forcemain
Gravity Main
Lydia Ave
Beam Ave
Silver Lake
Casey Lake
Mohawk Rd E
17th Ave E
15th Ave E
14th Ave E
13th Ave E
11th Ave E
19th Ave E
7th Ave E
4th Ave E
3rd Ave E
2nd Ave E
1st Ave E
South Avenue E
County Rd B
Burke Ave E
Eldridge Ave E
Belmont La E
Skillman Ave E
Cowern Pl E
Holloway Ave E
Mcknight Rd N
Chippewa Ave N
Helen St N
Lake St
1st St N
2nd St N
3rd St N
Margaret St N
Charles St N
Henry St N
Century Ave N
Aerial St N
7th St N
6th St N
N St. Paul Rd
Seppala Blvd
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North St. Paul Sanitary Sewer Plan
Figure 2 - Sanitary Sewer Districts
North St. Paul, MN
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Feet
NORTH ST. PAUL
extraordinary.
WSB

Individual Sewage Treatment Systems

The City's 2008 Comprehensive Sewer Plan listed two active individual sewage treatment systems (ISTS, septic systems, or on-site sewer treatment systems) at that time, one on a large residential lot and the other in Casey Lake Park. Both have since been eliminated. The section of North St. Paul City Code regarding ISTS, Title V: City Administration - Chapter 56: Sanitary and Storm Sewer System Utilities, is consistent with Minnesota Pollution Control Agency (MPCA) regulations (Minnesota Rules Chapters 7080-7083). The provisions specify septic tank permitting, maintenance and inspection procedures. If a connection to the City sewer service is available, then the installation of an ISTS is not permitted, as stated in the City Code excerpted below.

> *§ 56.52 PERMIT REQUIRED; APPLICATION.*
>
> *(A) No person shall install, alter, repair or extend any individual sewage disposal system in the city if connection to the city sewer service is available. If connection to the city sanitary and storm sewer system is unavailable, no person shall install, repair or extend any individual sewage disposal system in the city without first obtaining a permit therefor from the engineer for the specific installation, alteration, repair or extension.*

Community Treatment Systems

There are no public or private community treatment system within the City of North St. Paul. All properties within the City are served by the public collection system.

FORECASTS

Population

The Metropolitan Council publishes population and sewer usage forecasts for each city in the Metropolitan Area. These forecasts serve to help cities prepare infrastructure for growth and to promote continued maintenance of municipal infrastructure. The forecast data in Table 2 is from the Metropolitan Council's Local Planning Handbook Community Page for North St. Paul and includes both total and sewered population, households, and employment.

Table 2. Population Projections

	Total			Sewered		
Year	Population	Households	Employment	Population	Households	Employment
2010	11,460	4,615	2,942	11,460	4,615	2,929
2015*	11,730	4,808	3,071	11,730	4,808	3,060
2020	12,000	5,000	3,200	12,000	5,000	3,190
2025*	11,950	5,100	3,275	11,950	5,100	3,265
2030	11,900	5,200	3,350	11,900	5,200	3,340
2035*	11,950	5,300	3,425	11,950	5,300	3,415
2040	12,000	5,400	3,500	12,000	5,400	3,490

*Interpolated values

From the data in Table 2, it can be observed that from 2010 to 2040 the number of households in the City of North St. Paul is expected to increase by 17 percent. The employment population is projected to grow just slightly more by 19 percent by 2040. All of the population and households are sewered. Only a very small fraction of the employment population is not served by the City's sanitary sewer system, as can be seen by the slightly lower sewered values in that category. Nearly all of the sewered population falls within MCES Meter Service Area M010A, with a small portion in the northwest falling within M025A. The respective population projections for these two areas are given in Table 3.

Table 3. Projections by MCES Meter & Interceptor

	Meter M010A Interceptor 1-MW-413			Meter M025A Interceptor 7122		
Year	Population	Households	Employment	Population	Households	Employment
2010	11,224	4,520	2,929	236	95	0
2015*	11,498	4,713	3,060	232	95	0
2020	11,772	4,905	3,190	228	95	0
2025*	11,727	5,005	3,265	223	95	0
2030	11,683	5,105	3,340	217	95	0
2035*	11,736	5,205	3,415	214	95	0
2040	11,789	5,305	3,490	211	95	0

*Interpolated values

Wastewater Flows

All of the sewage flow from the City of North St. Paul is treated at the Metropolitan WWTP, and any increase in sewage flow will be treated at the Metropolitan WWTP as well. Table 4 lists the projected total average wastewater flow for North St. Paul from this Sanitary Sewer Plan and from MCES. Note that the projections used in this report are significantly greater than the MCES projections since they rely on flow estimates for each parcel of developable land.

Table 4. Total Wastewater Projections

	2020 Projected Flow (MGD)	2030 Projected Flow (MGD)	2040 Projected Flow (MGD)
MCES	1.03	0.99	0.97
Sanitary Sewer Plan	1.13	1.17	1.22

Sanitary Sewer Design Criteria

Land Use

The City's existing and 2040 land-use maps were used in the development of this plan. Detailed information and figures regarding North St. Paul's land use is included in the City's 2040 Comprehensive Land Use Plan. Using existing land-use, metering data, and future land use information, current and ultimate flows were calculated and divided by meter service area as described below.

Estimated Average Flows – Existing

To estimate the flows in trunk mains throughout the City, metering data was retrieved from the Metropolitan Council. Flows were assigned proportionally to each meter service area based on the acreage of park/recreational, institutional/governmental, retail/commercial/industrial, and residential land within each area and typical flows per acre for each particular land use.

Estimated Average Flows – 2040 Build Out

Once existing average flows were estimated, future flows were projected based on the 2040 Land Use Plan. Parcels that are planned to develop or redevelop were assigned wastewater flow rates in accordance to their land use type. Table 5 lists the assigned flows, which include design considerations for inflow and infiltration (I/I). Refer to the Inflow and Infiltration section of this report for more information about I/I as it relates to North St. Paul's sanitary sewer system. The residential densities used to calculate the assumed average flows for residential properties were calculated by WSB planning staff and are described in greater detail in the 2040 Land Use Plan.

Table 5. Assumed Wastewater Generation by Land Use Type

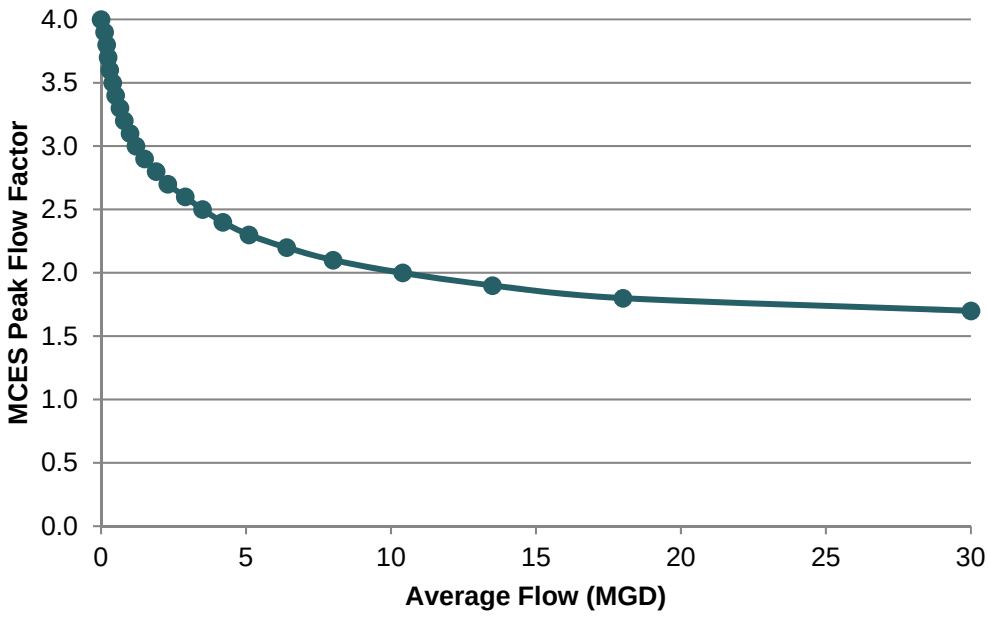
Land Use	Average Flow (gpd/acre)
Agricultural	0
Park/Recreational	0
Institutional/Governmental	600
Retail/Commercial, Office, Industrial	800
Residential – Low Density	765
Residential – Medium Density	1,584
Residential – Multi-Family	3,060

Future flows from areas of redevelopment were added to existing flows to determine if existing pipe capacities will be sufficient. In locations in which development will lead to pipes that are under capacity, recommendations are made to address the issue. Areas that will need to be served in the future were evaluated to determine the required sewer diameters and improvements to serve these areas.

Peak Flow Factors

To ensure that the sanitary sewer system is capable of handling flow fluctuations throughout the day, peak flow factors are assigned based on average flows. The peak factors are outlined by the Metropolitan Council and are based on average flow volumes. Pipes that serve small generator customers are more likely to experience large fluctuations in flows. Therefore, the peak factor decreases as average flow increases. The Metropolitan Council peak flow factors used in this report are shown in *Figure 3* below. These factors include consideration of inflow and infiltration.

Figure 3. MCES Peak Factors for Sanitary Sewer Design



Intercommunity Flows

The City of North St. Paul's sanitary sewer network receives flow from several properties within the City of Maplewood. There are also several areas along the

boundary of the City that discharge into systems in Maplewood or Oakdale. These areas are indicated in *Figure 1*.

SANITARY SEWER TRUNK RECOMMENDATIONS

The City of North St. Paul's existing sanitary sewer system has adequate capacity for future flows. No recommendations for infrastructure additions are being made at this time based on projected wastewater flow calculations through the year 2040. However, maintenance and rehabilitation work will be required to keep the system in good condition.

Lift Station Analysis

The City's sanitary sewer system includes four small lift stations which were all rehabilitated within the last five years. The capacities of these lift stations satisfy existing wastewater flows, and there is no new development expected within the areas that they serve. Therefore, there are no improvements planned for this infrastructure. The estimated 2040 flows to each lift station are shown in Table 6.

Table 6. Lift Station Capacity Analysis

No.	Lift Station	Pumping Capacity (gpm)	Existing Max Flow (gpm)	2040 Max Flow (gpm)
1	Kidde Corner Lift Station	100	49	49
2	11th Avenue Lift Station	200	72	72
3	Casey Lake Park Lift Station	200	36	36
4	Silver Lake Lift Station	100	3.6	3.6

gpm = gallons per minute

Trunk Sewer Analysis

As previously mentioned, the City's sanitary sewer system can be roughly divided into six sanitary sewer districts. The existing and projected maximum wastewater flows generated in each of these districts are shown in Table 7. These flows were used to verify the capacity requirements of the trunk gravity mains that serve each district or combination of districts.

Table 7. Trunk Sewer Capacity Analysis

District	Trunk Location	Trunk Diameter	Trunk Capacity (gpm)	Existing Max Flow (gpm)	2040 Max Flow (gpm)
1	McKnight Rd	18"	1,944	1,393	1,174
1	McKnight Rd	15"	1,045	1,022	832
2	Mohawk Rd E	12"	733	295	278
3	11th Ave E	12"	678	494	428
4	South Ave E (County Rd B)	24"	3,517	3,500	2,532
5	Gateway State Trail	18"	1,634	869	838
6	Helen St N	12"	750	599	534

gpm = gallons per minute

Note that the 2040 max flows listed in Table 7 are lower than the existing max flows. This is because the existing max flows were calculated with a peaking factor derived from MCES meter data from the last five years, which was greater than the standard MCES peaking factors. Standard MCES peaking factors were assumed for future flows.

The 15-inch trunk gravity sewer in Sewer District 1 located just north and upstream of the intersection of 11th Avenue E and McKnight Road N has been identified as a candidate for further investigation. As shown in Table 7, this pipe is estimated to be near capacity under peak flow conditions. If street and utility

improvements occur in this area, it is recommended that these pipe segments be reviewed for upsizing to 18-inch diameter. The City's continued efforts to reduce I/I will alleviate peak flows to this location, as demonstrated by the lower projected 2040 peak flow. The City can also review the routing of wastewater flow in the manhole upstream at the intersection of 12th Avenue E and 2nd Street N, two blocks to the east, which controls the transmission of Sewer District 3 flows to or past these 15-inch pipe segments.

Individual Sewage Treatment Systems

As mentioned previously, the last two remaining ISTS in the City were eliminated in the last ten years. Any new development or redevelopment within the City of North St. Paul will have access to City sewer service and will therefore, per City Code, be prohibited from installing an ISTS.

MCES Interceptor Facility Forecasts

The MCES interceptors used by the City of North St. Paul and the 2040 forecasted flow to those interceptors are listed in Table 8. Nearly all of the wastewater generated in the City of North St. Paul is discharged into MCES Interceptor 1-MW-413. The projected flows listed for this Interceptor also account for the properties within the City of Maplewood that discharge into the system.

The projected flows given for the other three MCES Interceptors are estimates based on the number of residential units and conservative flows per unit that discharge to those Interceptors, and they only include properties that fall within the boundary of the City of North St. Paul.

Table 8. Projected 2040 MCES Interceptor Use

MCES Interceptor	Sewershed	2040 Average Flow (MGD)	2040 Max Flow (MGD)
1-MW-413	North St. Paul	1.22	3.65
1-MW-414	Maplewood	0.018	0.071
1-SP-215	Maplewood	0.010	0.042
1-WO-501	Oakdale	0.0023	0.009
TOTAL	-	1.25	3.74

INFLOW AND INFILTRATION

General

Inflow is water, typically stormwater, which enters the sewer system through broken manhole covers, sewer cleanouts, sump pumps, foundation drains, and rain leaders. *Infiltration* is water, typically groundwater, which leaks into the sewer system through cracks in the sewer mains, laterals, joints, and manholes.

Water from inflow and infiltration (I/I) can consume available capacity in the wastewater collection system and increase the flow into treatment facilities. In extreme cases, the added flow can cause bypasses or overflows of raw wastewater. This extra flow also requires a larger capacity in the city's collection and treatment components, which results in increased capital, operation and maintenance, and replacement costs. As a sewer system ages and deteriorates, I/I can become an increasing burden on a City's system. Therefore, it is imperative that I/I be reduced whenever it is cost effective to do so.

In 2006, the MCES began an Ongoing I/I Program which requires communities within their service area to eliminate excessive I/I over a period of time. As part of this program, the MCES establishes annual I/I goals for each community discharging wastewater into the Metropolitan Disposal System (MDS) based on average daily flows, adjustments for community growth, and I/I mitigation peaking factors.

Flow metering data is available for the metersheds within North St. Paul, and an analysis of this data as it relates to I/I is presented on the following page. The

City's strategies, programs, investments, and goals for reducing I/I are listed in this section as well.

The City of North St. Paul contracted SEH to perform an analysis of its I/I in 2005-2006. At that time, North St. Paul had been identified as a community with excessive peak hour flow. The study measured groundwater levels at five locations and wastewater flows at eight locations throughout the system for six months in 2005. Peak hour inflow rates measured during the study did not exceed the maximum rate under the MCES surcharge program. However, it was recommended that the City continue efforts to reduce I/I, including cleaning and closed circuit television inspection, review of past building inspections, inspection and repair of service laterals, review of the maintenance of MCES Meter M010A, monitoring of MCES flow metering results, and documentation of all past and future I/I reduction efforts.

I/I Analysis

North St. Paul's sanitary sewer system currently consists of approximately 46 miles of gravity main, four lift stations, and 2,300 feet of forcemain. All of the lift stations and their associated forcemains were rehabilitated within the last five years. Approximately 61 percent of the residential housing in the City was built before 1970. Of the pre-1970 era private services, the majority have been evaluated for I/I as part of previous I/I studies conducted in 1974, 1982, and 2006 by SEH Inc.

The amount of clearwater flow generated within the City was estimated by calculating the average annual and peak month I/I rates, equal to the average wastewater flow minus the base wastewater flow, using data from 2012-2016. The average flow, both annual and monthly, was calculated from MCES meter data. The peak month flow was determined for each year from 2012-2016, and then those peak month flows were averaged to give the value listed in Table 9. The base flow was approximated as the winter water usage, which was calculated as the average water pumped in December through February, from 2012-2016, times a historical ratio of water used to water pumped (presented as Total Water Delivered divided by Total Water Pumped in the City's Water Supply Plan). Because a non-negligible portion of the City's water system provides service to Maplewood, the winter water usage was further adjusted to reflect just the portion within the City limits.

Table 9. Estimated I/I Rate

Parameter	Flow [MGD (%)]
Average Flow	1.117
Peak Month Flow	1.529
Base Flow (Winter Water Usage)	0.697
Average Annual I/I Rate	**0.420 (38%)**
Peak Month I/I Rate	**0.831 (54%)**

I/I Reduction

The City's strategy for preventing excess I/I is based on requiring all development to conform to City standards. City code prohibiting the discharge of storm water to the sanitary sewer system and requiring the disconnection of existing I/I sources is excerpted below.

§ 56.36 CERTAIN USES PROHIBITED.
The following substances shall not be discharged into any public sanitary sewer:
...
(B) No persons(s) shall make any connection from roof down spouts, sump pumps, foundation drains, area drains, cistern overflows, swimming pools or other sources of surface runoff or ground water to a building sanitary sewer or indirectly to the city's sanitary and storm sewer system. Dwellings and other buildings and structures which require a sump pump system to discharge excess water because of the infiltration of water into basements, crawl spaces and the like shall have a permanently installed discharge line which shall not at any time discharge water into the sanitary and storm sewer system. A permanent installation shall be one which provides for year-round discharge capability to either the outside of the dwelling, building or structure, is connected to the city storm sewer or discharges through the curb and gutter to the street. It shall consist of a rigid discharge line, without valving or quick connections for altering the path of discharge, and if connected to the city storm sewer line shall include a check valve:
(1) Every person owning improved real estate in the city shall allow an employee of the city of their designated representative to inspect the buildings to confirm that there is no sump pump or other prohibited discharge into the

sanitary and storm sewer system. Any person refusing to allow their property to be inspected within 14 days of the date city employee(s) or their designated representatives are denied admittance to the property shall immediately become subject to the surcharge hereinafter provided for. Any property owner whose property is found in violation of this portion of this chapter shall make the necessary changes to comply with this chapter and shall furnish proof of those changes to the city;

(2) If the city has reason to suspect that an illegal connection may exist in a premises, the property owner will receive written notice to comply with the provisions of this chapter. Should a property certified in compliance with this chapter later be found to have reconnected a roof drain, sump pump or any other form of natural precipitation to the sanitary and storm sewer system, the property owner will be subject to the surcharge for all months between the last two inspections;

(3) A surcharge of $100 per month is imposed and added to every sanitary sewer billing mailed on and after September 30, 1997, to each property owner not in compliance with this chapter. The surcharge shall be added every month until the property is in compliance with this chapter. The imposition of the surcharge shall not limit the city's authority to prosecute the criminal violations, seek an injunction in district court ordering the person to disconnect the nonconforming connection to the sanitary sewer or for the city to correct the violation and certify the costs of connection as an assessment against the property on which the connection is made;

(4) The Council may, by resolution, provide for waivers for hardships from the requirements of this section;

In addition, the City has routine activities directed at recognizing and correcting I/I. During the City's biennial street and utility improvement projects, selected segments are cleaned and televised to locate leaks or service connections with continuous flows. Appropriate corrective measures are then initiated with the affected property owner. The City also has an ongoing annual review of flows and discussions with consulting engineers to develop the next stage of improvement plans.

The bulk of the City of North St. Paul's work to identify and reduce I/I sources is completed as part of their street and utility improvement projects. The specific costs for sanitary sewer improvements within these and other recent projects are described in Table 10.

Table 10. I/I Activities Completed

Project	Cost
2014 Street and Utility Improvements	$544,000
2015 Sanitary Sewer Lining	$63,000
2016 Street and Utility Improvements	$805,000
2017 Sanitary Sewer Improvements	TBD

The City will continue its I/I reduction work as part of its street and utility improvement projects. The sanitary sewer budgets for these projects are listed on the following page. The City will also revisit the sump pump inspections completed previously and consider a sustained sump pump inspection program. The rehabilitation that has been completed to date has resulted in a reduction of I/I. However, the remaining I/I continues to be a concern and is being addressed.

Capital Improvements

Table 11 lists the capital improvements proposed for the sanitary sewer system and their estimated costs. As mentioned previously, no new lift stations or trunk sewers are projected to be necessary to accommodate future flows. However, maintenance and rehabilitation work is required and will be completed in conjunction with the City's street and utility improvement projects.

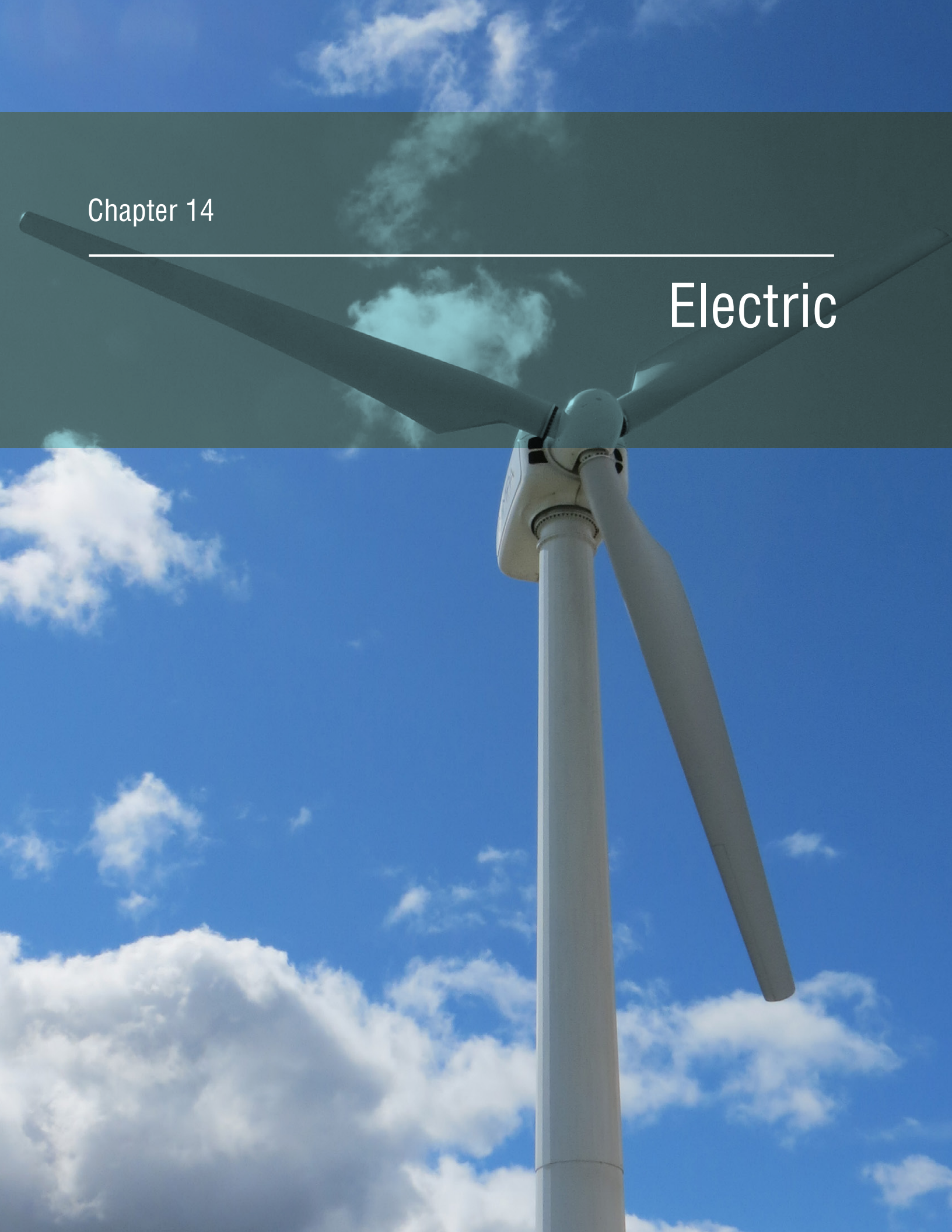
Table 11. Capital Improvements

Year	Item	Estimated Cost*
2018	2018 Street and Utility Improvements	$710,000
2020	2020 Street and Utility Improvements	$825,000
2021-2030	Street and Utility Improvements	$6,563,000
	7th Avenue Reconstruction	$1,554,000
2031-2040	Street and Utility Improvements	$6,957,000
	Margaret Street Reconstruction	$1,365,000

**Values listed include both direct and indirect costs, in 2018 dollars.*

Summary and Outcomes

The analysis provided in this Sanitary Sewer Plan is aimed to provide the City of North St. Paul and the Metropolitan Council assistance in planning for wastewater collection and treatment. It is anticipated that the design flows and criteria outlined will be used for utility planning as development continues within the City. Tables and figures can be utilized to create budget-level estimates and schematic representations of infrastructure improvements, with specific sizing and routing to be determined during the design phase.



Chapter 14

Electric

Chapter 14: Electrical

Introduction

This chapter of the Comprehensive Plan Update gives a brief history of the city's electric utility system, presents current renewable energy practices, as well as provides new goals and strategies for the electrical system.

History

In the early 1880s the city's factories had steam engines to generate their own power to run production equipment. Gas lights were used on the streets and in the homes for illumination. By the late 1880s a steam generator was set up on the south side of Silver Lake on the same site as the first water reservoir. Electricity produced by the generator was used to light the streets (the first 25 street lights were donated by the North St. Paul Land Company) and to provide electricity to the homes. In 1912 the city power plant failed, and a new electrical system was installed in 1914. In 1921 the city began purchasing electricity from St. Paul Gas and Light Company which later became Northern States Power Company and then Xcel Energy.

In 1992, North St. Paul and seven other communities joined together to form the Minnesota Municipal Power Agency (MMPA). North St. Paul is unique in that the city purchases wholesale power through the MMPA which provides citizen owned and locally operated municipal utilities.

Renewable Energy

In 2016, the city was selected to receive a Hometown Solar Grant which allowed the city to install educational solar panels at North High School for students to learn about renewable energy. North St. Paul also has a wind turbine which allows the city to generate clean energy through the Hometown Wind Power program. Rooftop solar is also an allowed accessory use within the city. With the platform for renewable energy established within the community, the city offers a Clean Energy Choice Program to residential electric customers which allows residents to

purchase and support renewable energy. In addition, the Minnesota Renewable Energy Standard (RES) requires that 25% of the MMPA energy comes from renewable sources by 2025. This goal is achieved through the efforts of the MMPA municipalities, such as North St. Paul.

Energy Efficiency

Energy conservation and energy rebate programs within the city are described in Chapter 9 – Resiliency.

Electric Utilities

Figure 14-1 shows the major services within North St. Paul and areas where undergrounding of existing major lines should occur. Above ground high-voltage lines which should be buried include:

- Seppala Boulevard – Above ground feeder lines at this location are not under the city's control and are dependent on the building owners. The city should continue to work with these building owners to encourage undergrounding of utilities.

Goals

The city will provide cost-effective electrical power that supports a planned vision for the community.

1. Service – Provide customers with a sufficient and reliable supply of electricity.

2. Safety – Promote safe behavior by the public when encountering downed lines and when near the system lines or equipment.

3. Distribution – Provide a distribution system which has the capability of serving the community consistent with the Comprehensive Plan.

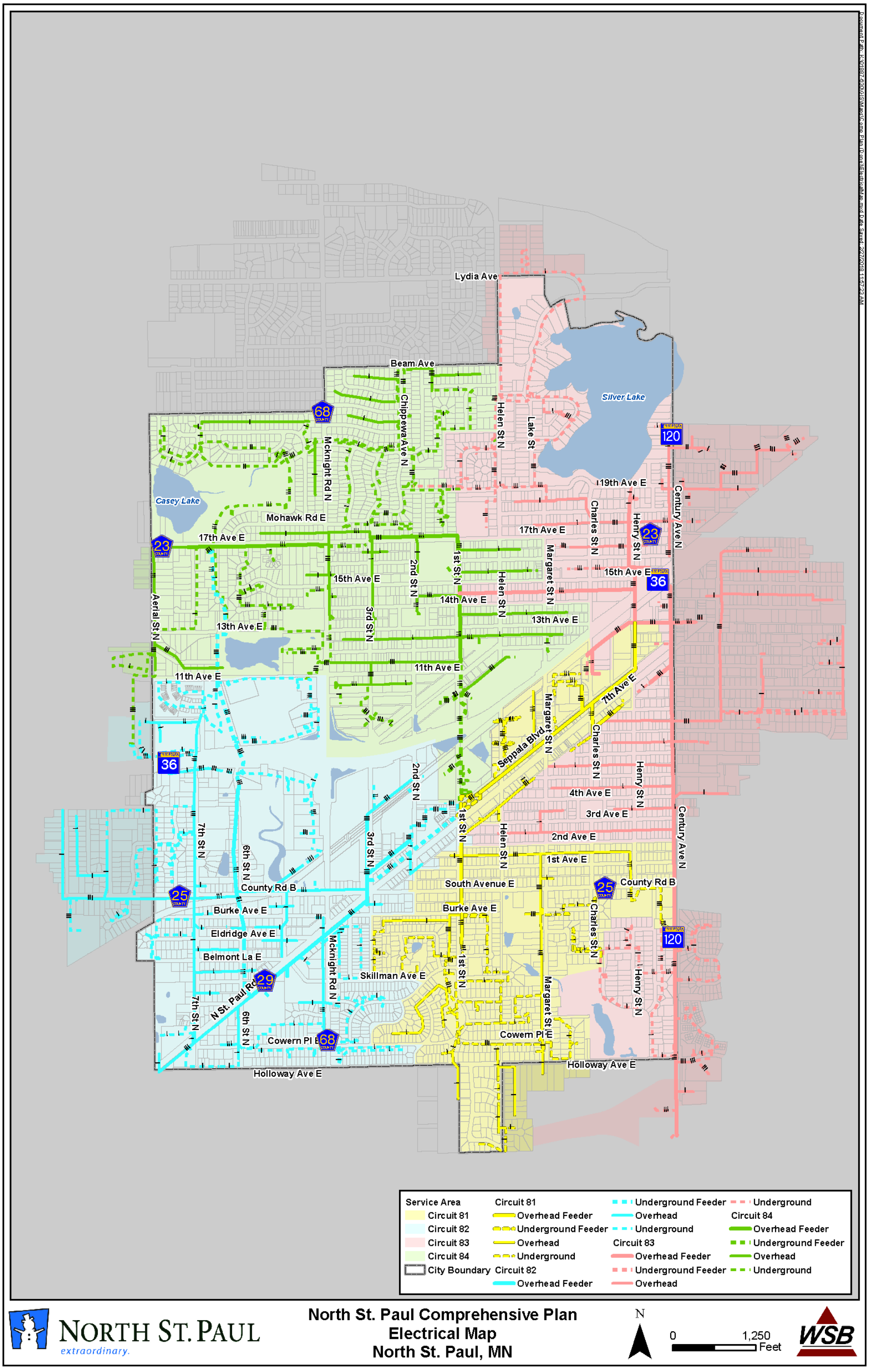
4. Utilities – Convert overhead utilities and high voltage lines to underground utilities during redevelopment, street reconstruction, or where feasible.

5. Maintenance – Repair, upgrade, and maintain the electrical system to provide quality, reliable service in a cost-effective manner as guided by the city's Capital Improvement Plan.

6. Renewable Energy – Continue to encourage local renewable energy use.

7. Energy Use – Promote energy efficiency and conservation practices throughout the community which reduce greenhouse gas emissions and energy consumption.

FIGURE 14-1 ELECTRICAL SYSTEM MAP



Chapter 15

Implementation

CHAPTER 15: IMPLEMENTATION

Without a specific course of action, it is difficult to achieve the goals and aspirations of any plan. Previous chapters provide the baseline information for understanding North St. Paul and the determined vision for the City's future. The goals explain what the City wants to accomplish and the vision desired as an outcome. This chapter outlines the specific actions that will be taken to achieve those goals.

Often, the most challenging part of the Comprehensive Plan is implementation. It is easy to write a plan and then watch it collect dust on a shelf. To increase the likelihood of its implementation, the following Implementation Matrix provides a recap of strategies and actions from the previous chapters as well as a timeline for their deployment. The implementation steps should be reviewed by the City periodically (annually or more often) to:

- Establish **priority work activities** for city staff and volunteers (and for city partner organizations) on an annual basis,
- Establish **priorities for annual city budget** (and for city partner organization budgets),
- Establish **priorities for 5-year capital improvement plans**.

VISION AND GOALS

The implementation action items outlined in this chapter should ultimately reinforce North St. Paul's Vision and Goals, which were established in Chapter 2 of this document. The vision and goals are broad and touch nearly every aspect of city activity and city life. No aspect of this Comprehensive Plan and its ultimate implementation will be at odds with the City's vision and goals.

IMPLEMENTATION MATRIX

The following implementation matrix describes the timeline for completing the strategies from the preceding chapters.

While the following lays out the action plan covering the years 2018-2040, it is to be expected that the task list will change. Priorities may also change and tasks will be moved up to be accomplished earlier. New ideas will be presented to accomplish the goals and vision citied here, will be added to

the implementation plan and new funding tools may be developed. This is all part of the cyclical process of implementation.

The timeframes for completion of the implementation items are organized into four classifications:

- Ongoing (an action that is already happening and will occur as needed or on a continual basis)
- Short-term (starting now, completed within the next five years)
- Medium-term (5 – 10 year completion)
- Long-term (10+ year completion)

An "X" in the "Ongoing" column indicates that the corresponding action or strategy item will not be completed as a discrete task, but will instead require periodic or continuous attention once the identified action or strategy has been initiated.

TABLE 15-1 North St. Paul Implementation Matrix

Land Use	Short Term	Medium-term	Long-term	Ongoing
Update the City's zoning ordinance to reflect uses and density ranges in the comprehensive Plan.	X			
Provide for a variety of housing types and densities to support a wide range of housing alternatives for current and future residents, including young families.				
Develop programs and policies to encourage the redevelopment and renovation of the housing stock in a way that maintains or enhances the integrity of existing neighborhoods		X		
Review and update the City's zoning code to reflect consistency with this Land Use Plan. Evaluate the zoning code language to ensure that the dimensional standards and zoning district regulations provide the opportunity for development to occur as guided		X		
Recognize the most likely opportunity sites for high density residential development and support projects on these sites that are well-designed, add value to the community landscape, and are located in areas connected to transitways and other community amenities.				X
Review the allowed uses and standards within the city's Mixed Use zoning districts to ensure that these zoning districts provide opportunities for the desired type, design, and diversity of development opportunities reflected in this Plan.	X			
Create design standards for both vertical and horizontal mixed use developments, so that not only are uses compatible, but the scale, mass, and feel of new development enhance both the existing and desired character of the City.		X		
Continue to use economic development incentives to achieve redevelopment goals				X
Continue to provide the resources and programming to maintain the city's parks and green space areas in recognition of their value as cherished community amenities				X

Land Use	Short Term	Medium-term	Long-term	Ongoing
Continue to develop and update park master plans, and allocate resources to implementing those plans				X
Prioritize the incorporation of communal amenities and gathering spaces into new development opportunities as they arise, to create public spaces for community building, particularly within the downtown area				X

Housing	Short Term	Medium-term	Long-term	Ongoing
Enhance neighborhood value with quality housing options and types at all price points.				X
Improve the quality and mix of the City's housing so that there is a wide variety of housing available for people of all incomes, ages, cultures and abilities. Consider new forms of housing where redevelopment is necessary.		X		
Revitalize and enhance the quality of the housing stock so that it is attractive and appropriate for new buyers.		X		
Explore opportunities to provide for smaller and more "non-traditional" housing development that enhances the character of the City, including opportunities to address the lack of housing in the "missing middle" styles.	X			
Anticipate the need for creative strategies to manage naturally-occurring affordable housing within all affordability bands. Focus on preserving the affordability North St. Paul's single-family housing stock.			X	
Support housing maintenance assistance programs, particularly for lower-income households.				X
Enable and encourage affordable housing units that relieve the cost-burden for households making less than 30% AMI.				X

Economic Development	Short Term	Medium-term	Long-term	Ongoing
Create a marketing plan that focuses on the location of the community and its proximity to Minneapolis and St. Paul.	X			
Target specific industries that fit with the community targets and available workforce.		X		
Assemble core stakeholder group, including the Economic Development Authority and NSP Business Association, to work with Economic Development staff to develop a marketing strategy.	X			
The marketing strategy should utilize social media and encourage tourism while promoting the City and its businesses.	X			
Develop and implement a comprehensive downtown master plan for public improvements, which promotes/encourages future investment and business growth in the downtown area		X		
Identify specific industries that fit with the community goals and available workforce.	X			
Review development requirements to make sure they are project friendly while still meeting the needs of the community. Consider adopting the Urban Land Institute's (ULI-MN) Redevelopment Ready and DEED's Shovel Ready programs	X			
Inventory, research and analyze land areas of the City that appear to be underutilized, underperforming or antiquated. Create effective land use strategies for economic sustainability of the City.	X			
Identify the types of land uses and related building types that promote job generation and job retention to encourage economic growth in the City. Establish a process by which the preservation or creation of job producing land uses is reviewed periodically by City staff.		X		
Identify additional districts in the community to focus on for redevelopment opportunities.			X	
Create and/or implement programs to facilitate the acquisition and redevelopment of the identified sites				X
Find funding sources and work with the partners to allow for the successful acquisition of additional resources projects.				X

Downtown	Short Term	Medium-term	Long-term	Ongoing
Make downtown visually interesting at a small town scale		X		
Ensure quality design and superior aesthetics of development				X
Possess a progressive image for redevelopment while maintaining a sense of the community heritage				X
Design transportation improvements to enhance the functional and aesthetic character of the road or facility.		X		
Enhance the appearance of streets through boulevard landscaping, careful placement of necessary signs, underground utilities when improvements are made and by providing decorative street lights	X			
Create user friendly edges and provide more form to downtown		X		
Include graphics to provide useful and appealing information, add street interest, and to celebrate downtown	X			
Create new landmarks and gateways to better signal the arrival into downtown	X			
Landscaping/streetscape – o establish more complete landscaping to enjoy and feature the four seasons o implement streetscape improvements, especially where downtown interfaces with redevelopment in the State Highway 36 corridor o Develop and implement a tree planting program along major streets and highways and in redevelopment areas. Also, coordinate this effort with the active living and bench locations o Create a strong place identity by providing uniformity and consistency in the character of the streetscape	X			
Signage – o Expand redevelopment district signage to include signage and wayfinding for trail users to better navigate to the downtown commercial district o Provide enhanced wayfinding and signage for visitors arriving via Hwy 36 and the Gateway Trail into downtown	X			
Provide adequate and convenient parking on streets, in lots and perhaps in small parking decks designed for visual and functional appeal		X		

Downtown	Short Term	Medium-term	Long-term	Ongoing
Allow and promote shared parking	X			
Support improvement, expansion and upgrades to the transit system and seek alignment for light rail or similar forms of new transit				X
Create functional and aesthetic transit stops which encourage transit use and compliment the area		X		
Enhance pedestrian and vehicle circulation in a friendly, functional and aesthetic manner				X
Balance and coordinate multiple functions within a right-of-way; for example, the road, boulevard, landscaping, pedestrian-way, sidewalk or trail, decorative street lighting, traffic control signage, transit stops, snow storage and, in some cases, on-street parking which all compete for space within the ROW.			X	
Use change and redevelopment to implement active living goals, especially as related to placement of sidewalks, benches and other street functions such as bike racks, lighting, bus stops				X
Develop a downtown park/square feature	X			
Transportation - o Construct a pedestrian link between downtown, the Gateway State Trail, State Hwy 36, North H.S. and McKnight Field. o Support construction of pedestrian and bike links for transportation and recreational use to and from neighborhoods, schools, Gateway State Trail, downtown, activity centers and community facilities.			X	
Parks, Open Spaces and Trails – o Enhance the (parks, open space and trails) system through making functional improvements and expanding the system into redevelopment areas o Construct proposed trails as shown on the Parks, Open Space and Trails Plan			X	

Downtown	Short Term	Medium-term	Long-term	Ongoing
Street Design – o Where possible, limit intersections to no more than 4 intersecting streets and improve the intersection design and safety features at problem intersections o Employ traffic calming methods o Incorporate amenities for the handicapped in transportation improvements o Design key intersections to accommodate future street types included in Living Streets Plan			X	
Incorporate runoff control, infiltration, and other BMPs into infrastructure and redevelopment projects as a means to improve stormwater management				X
Preserve, maintain and improve stormwater storage and detention systems to control excessive volumes and rates of runoff, control flooding, to protect public health and safety, and to prevent the inundation of occupied structures.				X
Utilize stormwater treatment as an amenity throughout the district				X
Initiate projects and programs consistent with the Surface Water Management Plan		X		
Encourage the use of rain gardens and similar techniques to reduce and control runoff and enhance water quality				X
Utilize boulevard filtration systems in planter boxes for public streets (approximately 5% of required volume).		X		
Modify facilities and provide underground electric service to accommodate redevelopment in downtown and expansion of downtown north on Margaret St.			X	
In concert with redevelopment, underground the feeder lines and services on Seppala			X	
Repair, upgrade and maintain the electricity system to provide quality, reliable service in a cost effective manner		X		

Downtown	Short Term	Medium-term	Long-term	Ongoing
Alternative Energy – o Seek out opportunities to generate electricity from wind and solar sources o Promote effective and aesthetic use of solar energy for certain public uses			X	
Consider establishing a special service district, supported by a levy, to maintain and enhance the downtown public areas			X	
Continue to achieve a high level of cleanliness and protect runoff quality on City streets through regular sweeping				X
Plan & Coordinate location and scheduling of capital improvements in an efficient manner		X		
Prepare and implement the CIP		X		

Transportation	Short Term	Medium-term	Long-term	Ongoing
Improve local roadway system connectivity to county roadways and state highways				X
Provide safe and efficient routes for emergency and public safety vehicles	X			
Provide adequate capacity to manage congestion (including options other than construction of additional lanes)	X			
Encourage sound access management				X
Preserve necessary rights-of-way for the 20-year planning horizon and beyond			X	
Maintain a safe and effective network of roadways for freight movement				X
Coordinate with MnDOT, Ramsey County and Washington County to proactively address freight mobility and safety		X		
Coordinate transportation system investments with the City of North St. Paul Land Use Plan		X		
Connect land use districts and provide safe access to major activity areas		X		
Design, construct, and maintain roadways that fit the character of the adjacent land use				X
Encourage private residential streets be design to City standards where appropriate				X
Implement safety improvements to address high crash locations	X			
Proactively address bicycle and pedestrian safety concerns along roadways and at crossings	X			
Bring sidewalks, trails, and intersections into compliance with ADA	X			
Support traffic calming and design to minimize speed on minor City collectors and local roadways				X
Invest in multi-modal transportation solutions including bicycle and pedestrian infrastructure		X		
Consider a “complete streets” approach to designing and constructing roadways in high pedestrian and bicycle traffic corridors		X		
Preserve adequate right of way for sidewalk and trail construction			X	
Support investments in bicycle, pedestrian, and transit infrastructure to reduce environmental impacts of transportation				X

Transportation	Short Term	Medium-term	Long-term	Ongoing
Manage storm water effectively and minimize the construction of new impervious surfaces				X
Support native plant landscapes and urban forestry along roadways				X
Design new roadways to preserve natural features		X		
Regularly assess transportation maintenance needs and include roadway, trail pavement, and other transportation infrastructure maintenance in the City of North St. Paul Capital Improvement Program.				X

Resiliency	Short Term	Medium-term	Long-term	Ongoing
Develop policy or actions that minimizes the production of waste and increases recycling, composting, and reuse.		X		
Support and encourage local food access by focusing on food proximity, prevalence, types, sources, and reliability of sources.		X		
Work with the Environmental Advisory Commission to develop specific healthy community initiatives and strategies.	X			
Support community-wide environmental education and recreation.				X
Protect access to direct sunlight for solar energy systems.			X	
Investigate additional renewable energy options within the city.	X			
Consider the use of renewable energy on municipal buildings.	X			
Investigate ways to support community solar while protecting the municipal power grid.		X		
Develop an education campaign for residents regarding energy conservation.	X			
Encourage residents and businesses to use energy-efficient appliances.	X			
Consider developing an energy-related greenhouse gas emissions reduction goal and an energy consumption reduction goal.		X		
Continue the GreenStep Cities program.				X
Identify locations in the city to plant pollinator habitat such as native forbs.	X			
Prioritize the removal of invasive plant species from public open spaces.	X			
Implement best management practices in the use of plantings and pesticides in all public spaces within the city.	X			
Encourage residents to plant native trees to increase the urban forest.		X		
Continue to implement the Living Streets Plan and encourage vegetation as a part of street projects.				X
Promote species diversity and age variation of future tree plantings that increase the resiliency of the urban forest against tree pests and diseases.		X		
Consider identifying and enhancing green corridors throughout the city which provide connectivity for local wildlife.		X		
Consider developing a Natural Resources Management Plan which identifies natural resources which should be preserved, enhanced, and protected.		X		

Resiliency	Short Term	Medium-term	Long-term	Ongoing
Identify funding sources or partnerships for natural resources restoration projects within the city.	X			
Integrate climate resiliency into planning, policy, operations, and budgeting processes.				X

Parks	Short Term	Medium-term	Long-term	Ongoing
Erosion Control – Strictly require erosion control measures on all construction sites and on other sites with similar activities.				X
Plans – Apply proper site planning and construction of improvements which foster protecting or improving water quality.				X
Education – Provide on-going education to the public about the impact of fertilizers, chemicals, road salt, and outdoor waste have on water bodies				X
Buffers – Establish vegetation buffers adjacent to water bodies with some exception, e.g. swimming beach at Silver Lake		X		
Park Equipment and Surfacing (All Parks) – upgrade and replace equipment as it becomes necessary				X
Casey Lake Park - Extend the park and trail system along the south and west side of Casey Lake		X		
Urban Ecology Center – Continue to implement the restoration plan. Consider construction of a shelter/educational building.	X			
Silver Lake Park – Maintain and upgrade the park on an on-going basis.				X
Silver Lake Park – Expand the park and extend the trail on the east shore (a segment of the Lakes Links Trail network) if the area is redeveloped/ re-platted.			X	
Silver Lake Park – Enhance connection between Silver Lake Park, Dorothy Park, and Joy Park.	X			
McKnight Field – Continue to provide a high level of maintenance and make improvements as appropriate.				X
Gateway State Trail – Protect this trail, enhance its appearance by making it more park-like, and use it effectively to support redevelopment.				X
Colby Hills Park – Replace Playground Equipment	X			
Colby Hills Park -Develop a new neighborhood park plan. Consider converting the street between the two park parcels to park use.		X		
Dorothy Park – Maintain and make minor upgrades when the trail is constructed.				X
Hause Park – Maintain and upgrade to keep the park the neighborhood focal point.				X

Parks	Short Term	Medium-term	Long-term	Ongoing
Polar Park – Maintain and upgrade to keep the park the neighborhood focal point				X
Tower Park – Maintain and upgrade to keep the park the neighborhood focal point				X
Southwood Nature Preserve – Maintain facilities, improve the creek bed by encouraging natural habitat and removal of debris. Consider additional uses.				X
Northwood Park – Maintain and upgrade the facilities and park land on an ongoing basis.				X
Northwood Park – Construct a new shelter building.			X	
Environmental Learning Center – Make the drainage basin located between 11th and 13th Avenues more park-like by constructing a perimeter trail, and increase the number, size and types of native species while reducing potential erosion.		X		
Veterans Park – Maintain and upkeep park.				X
Country Club Park – Consider alternatives including maintaining and upgrading the park, or selling the land to build a house.	X			
Central Park– Modify and upgrade consistent with changes on Seppala and downtown redevelopment.		X		
Rotary Park – Maintain and upkeep park;				X
Rotary Park - consider adding modern restrooms.		X		
Cowern Elementary School – Southwood Park Link (Proposed) – Prepare a plan, acquire property, improve the site by protecting the creek and natural amenity and construct a trail from Helen Street and the school site to Margaret Street.		X		
Proposed Trails – Construct the proposed trails as generally shown on the plan.			X	

Sewer	Short Term	Medium-term	Long-term	Ongoing
All developments must be served by City Sewer.				X
The City will provide trunk sewer lines of a size sufficient to handle existing and future wastewater flow consistent with redevelopment plans, and provisions in this Comprehensive Plan.			X	
The system must meet Upper Midwest Ten States Standards.	X			
The City will regularly inspect the system and perform preventative maintenance to reduce overall costs.				X
The City will reduce I/I through: o Enforcement of the sump pump ordinance, o Maintenance to the system, o Continuance of the annual I/I program, which includes sealing manholes and reconstructing or relining sewer pipe in conjunction with the City's annual street and utility improvement projects.		X		
The City will evaluate sanitary sewer system needs to ensure a continued high level of service.		X		

Water	Short Term	Medium-term	Long-term	Ongoing
Provide the highest quality potable water possible to meet the domestic and business needs of those connected to the City's system.				X
Provide a system which has adequate pressure for existing and future development and for fire protection.				X
Monitor the capacity of the City wells and pumps to ensure that an adequate supply can be provided.				X
Encourage conservation and use the system efficiently to reduce costs and to minimize the need to add more improvements.	X			
Monitor the cost to provide a quality water supply and adjust the rates as needed to cover capital cost and operating costs.				X
Continue the agreement with Oakdale to receive water service on the east side of Silver Lake. (If the area is redeveloped, extending the water service may be cost effective.) Continue the agreement with Maplewood to provide water service to the area north of North St. Paul and south of I-694.				X

Surface Water	Short Term	Medium-term	Long-term	Ongoing
Implement City-wide Maintenance Program	X			
City-wide Development and Permit Review - Review development plans, assist developers, coordinate permits.				X
Ordinance Review - Review city ordinances to ensure they comply with this plan, are consistent with the watershed district rules, NPDES general construction permit requirements, and the city's MS4 permit requirements.	X			
Implement Stormwater Asset Management Plan (SWAMP) - Inspect and survey all ponds in 2018 and 2019, perform pond cleanouts and sediment disposal in 2019 and 2020	X			
Silver Lake Alum Treatment - In partnership with VBWD, complete a feasibility study regarding improving water quality in Silver Lake via an in-lake alum treatment.		X		
Casey Lake Ponds - Design and install new stormwater ponds in Casey Lake Park to alleviate localized street flooding.		X		
Helen Street Basin Construction - Design and install a surge basin along Helen Street to alleviate localized street flooding.		X		
TH 120 (Century Avenue) Drainage Issues - Explore MnDOT storm sewer installation to route runoff to ponding area as part of roadway improvements.			X	
Evaluate Silver Lake Levels and Outflows - Support VBWD in future studies to evaluate impacts of alternative management of Silver Lake water levels.			X	
Education Program - Continue education program included in SWPPP program				X
EWM Monitoring and Control in Silver Lake- Monitor and control Eurasian watermilfoil and other nuisance aquatic plants.	X			
Committee Participation - Participate in RWMWD's Public Works Forum, Watershed Advisory Commission, and VBWD's Technical Advisory Committee	X			
Update Wellhead Protection Plan		X		
Implement Updated Wellhead Protection Plan			X	
Revise SWPPP - Revise SWPPP for reapplication for MS4 permit in 2020	X			
Impaired Waters Review - Continue to conduct impaired waters review and implement necessary BMPs				X

Surface Water	Short Term	Medium-term	Long-term	Ongoing
Urban Ecology Center Maintenance - includes mowing, trail maintenance, and assisting RWMWD when requested				X
Maintenance of Silver Lake Bioretention Site and Southwest Shoreline Stabilization Project (included in Item #1)				X
Waste Load Reductions to Kohlman Lake - In partnership with RWMWD		X		
Remove sediment at storm sewer inlets to Silver Lake	X			
Investigate and remove sediment from Southwood Park Wetland, as allowed	X			
Macrophyte Management for Casey Lake - including purple loosestrife and other invasive plants		X		
Maintenance Agreement for Silver Lake Outlet - Formalize maintenance agreement and designation of responsibilities for inspections of and maintenance of Silver Lake Outlet with the City of Oakdale, Ramsey County and VBWD.	X			