

Appendix I: Bicycle Planning Memo

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Subject: Washington County Bike/Trail Assessment

Introduction

This trails assessment is being conducted as part of the Washington County 2040 Comprehensive Plan update. Trail networks are important assets to the community, as they provide residents with recreational opportunities through walking and biking, allow for modal choice, and help ensure the overall health and wellbeing of residents of the county.

Non-motorized forms of transportation are becoming increasingly popular as more and more people choose to reduce their dependence on vehicular travel. Walking or biking as a primary form of transportation is not only good for the environment, but increases one's physical activity and helps to prevent chronic diseases such as obesity, diabetes, and heart disease.

It is important that Washington County's trail network provides these services to residents; therefore, it is critical to understand the trail network as it exists today, future trends and plans for the future. This assessment addresses the concerns noted through public engagement, gaps in the existing network, and possible paths forward as it relates to the trail network of Washington County. The term "trail" throughout this report is a generalized word used to reference all forms of non-modernized connections (e.g., sidewalks, bikeways, bike lanes and off-street recreational trails).

Public Input

The first phase of public engagement for the comprehensive plan update was carried out during the months of April and May (2017). One of the major themes collected as part of the public input focused on the parks and trail systems in Washington County. Table 1 highlights which amenities are most valued by the residents of Washington County. The top three responses are focused on parks, trails, and open space.

Many residents who participated in the public engagement activities stated they use the local parks and trails on a weekly basis. Most were happy of the current condition and status of these resources and amenities. However, many residents also expressed the need to expand the parks and trail systems. For example, residents see a strong need for better connection (via trails) to their place of residence, employment, parks, and commercial areas. One couple found it quite difficult and dangerous to bike along major roadways in Hugo to get to their favorite local park, but had no other alternative as there are no off-street trails available in that area. These concerns echo what can be seen in the existing network as gaps between parks and neighborhoods do exist.

Valued Amenities	Response Count
Parks	33
Trails	30
Open Space	12
Community Events	11
Public Libraries	10
Bike Trails	6
WIC Program	5
Amenities	4
Brown's Creek Trail	4
Lakes	4

Existing System

Note: Washington County recently compiled a GIS inventory of existing trail networks within the County. This data was used to inform this report. It should be noted this information is not complete and only depicts available data in a few communities. Based on the available data, Figure 1 displays the existing trail network throughout the county and the relationship to the parks system.

The existing trail system is spread throughout the county and is owned and operated by various agencies, such as Washington County, the Minnesota Department of Natural Resources (MnDNR), and local municipalities. Most of the trails accounted for in this report (505 miles) are bituminous (e.g., pavement), concrete, and natural covered trails.

The county itself maintains nearly 28 miles of trails, located within the boundaries of regional park systems. Based on the available data (see Table 2), nearly 60 percent of trails (459 miles) are located within three communities (i.e., Cottage Grove, Stillwater, and Woodbury) and four percent (18

miles) is owned by the MnDNR. This system will continue to expand over time with approximately 180 trails currently being planned within the county (see Figure 1).

Agency	Trail Miles
Baytown Township	3.17
Cottage Grove	80.42
MnDNR	18.06
Hugo	36.98
Lake Elmo	12.82
Newport	17.63
Oak Park Heights	16.69
Oakdale	25.53
Saint Paul Park	6.71
Stillwater	93.23
Washington County	27.80
Woodbury	117.39
Unknown	48.88
Total Within County	505.32

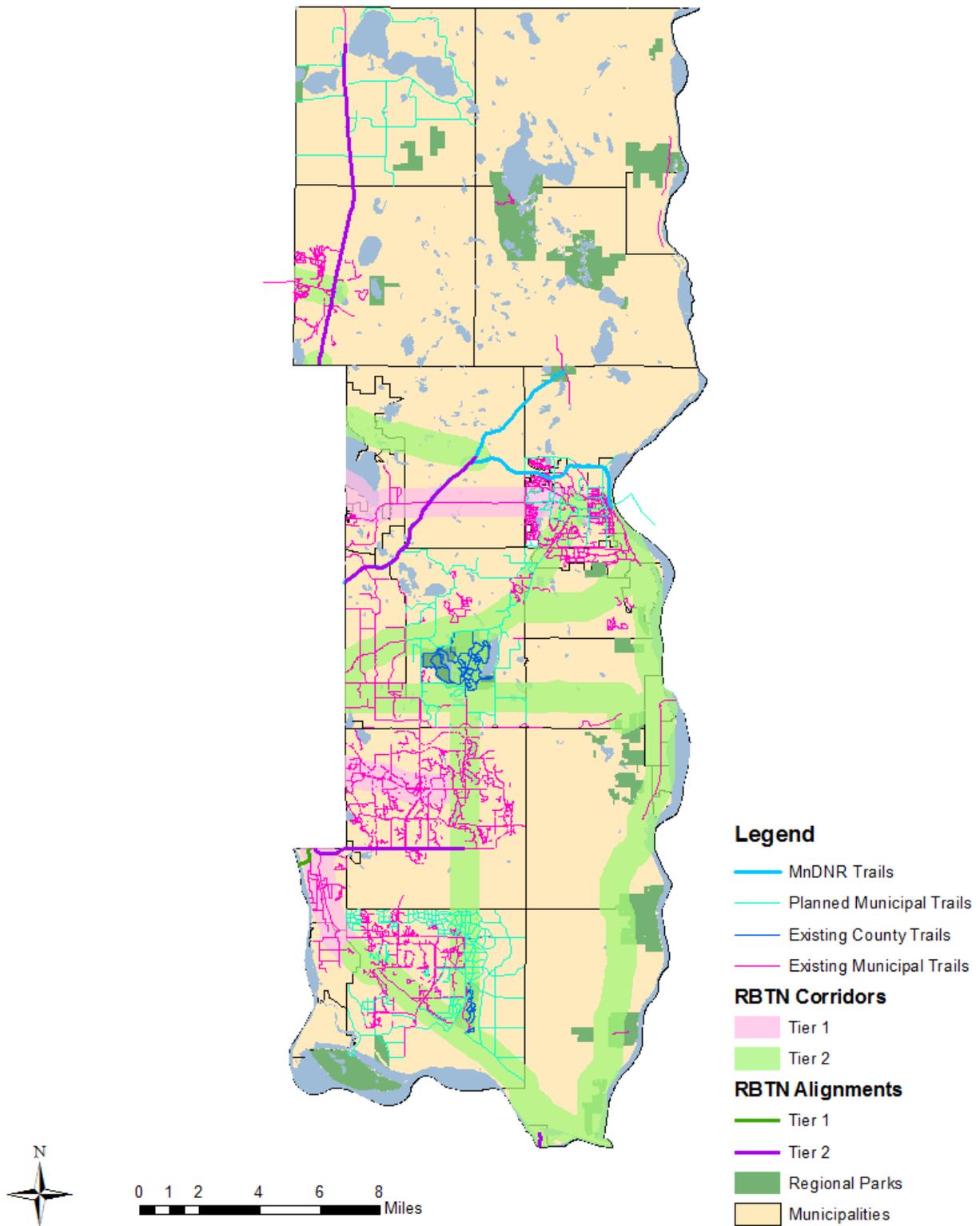


Figure 1. Trail system (existing, planned, and regional) and regional parks in Washington County.

The county and local trail network is supported and enhanced by the Regional Bicycle Transportation Network (RBTN), which is identified as part of the 2040 Transportation Policy Plan (TPP). The RBTN helps to define the region's on-street bikeways and off-street trail connections, and how the system works together to serve regional transportation trips by bicycle. Corridors and alignments are identified within the RBTN network. Two tiers have been developed within the system for regional planning and investment prioritization of the alignments and corridors. Tier 1 alignments and corridors are a higher priority than the Tier 2 network.

RBTN corridors are the highest priority for regional transportation planning and investment. These corridors represent areas that can attract the greatest ridership and provide effective mode choice in favor of walking and biking over driving. There are currently three Tier 1 and eight Tier 2 corridors within Washington County (see Figure 2).

RBTN alignments identify specific route alignments designated through the RBTN process through a local vetting process. Many of these alignments are based on local bicycle plans, and in many cases, represent existing trails. This network includes existing systems that can be easily improved for inclusion in the regional network. Trails that provide a direct connection to and between regional designations are identified as Tier 1 alignments. There are three identified Tier 2 alignments located within Washington County. Connections are provided between the Cities of Hugo and Forest Lake, Pine Springs to the Pine Point Regional Park, and a spur to Stillwater. Another alignment traverses east-to-west along Bailey Road in Woodbury.

The RBTN network will likely be expanded with the opening of the new St. Croix Crossing Bridge in 2017. This will provide cyclists and pedestrians to safely access the St. Croix Crossing Loop trail and bike trails in Wisconsin. The 2040 TPP has also recognized undefined alignments.

County Regional Trails System

The regional trails system in Washington County, and the greater region, provides a network connecting to and between regional designations. The regional trail system is managed by the Metropolitan Council, but the planning and implementation is delegated to park agencies like Washington County. Trails identified as part of the 2040 Parks Policy Plan serve the overall bicycle transportation and recreation needs of the region.

The regional trail system in the metropolitan area is like the highway system, with regional and local components. The regional component consists of trails in the regional trail system and state administered trails. These trails are complemented by shorter, local trails, which may eventually feed into units of the regional trail system. The Metropolitan Council has defined two major types of trails to serve the region: destination or greenway trails and linking trails. A destination or greenway trails typically follow along routes with high-quality natural resources that make the trail itself a destination. Linking trails, on the other hand, are predominately intended to provide connections between various Regional Parks System units, most notably regional parks or park reserves.

There are existing trails that contribute to the regional trail system in Washington County: Douglas Regional Trail and Hardwood Creek Regional Trail. Planned regional trails are also identified throughout the County. Future trails will help to connect residents to town centers, residential districts, recreational areas, and employment centers throughout the county and East Metro area.

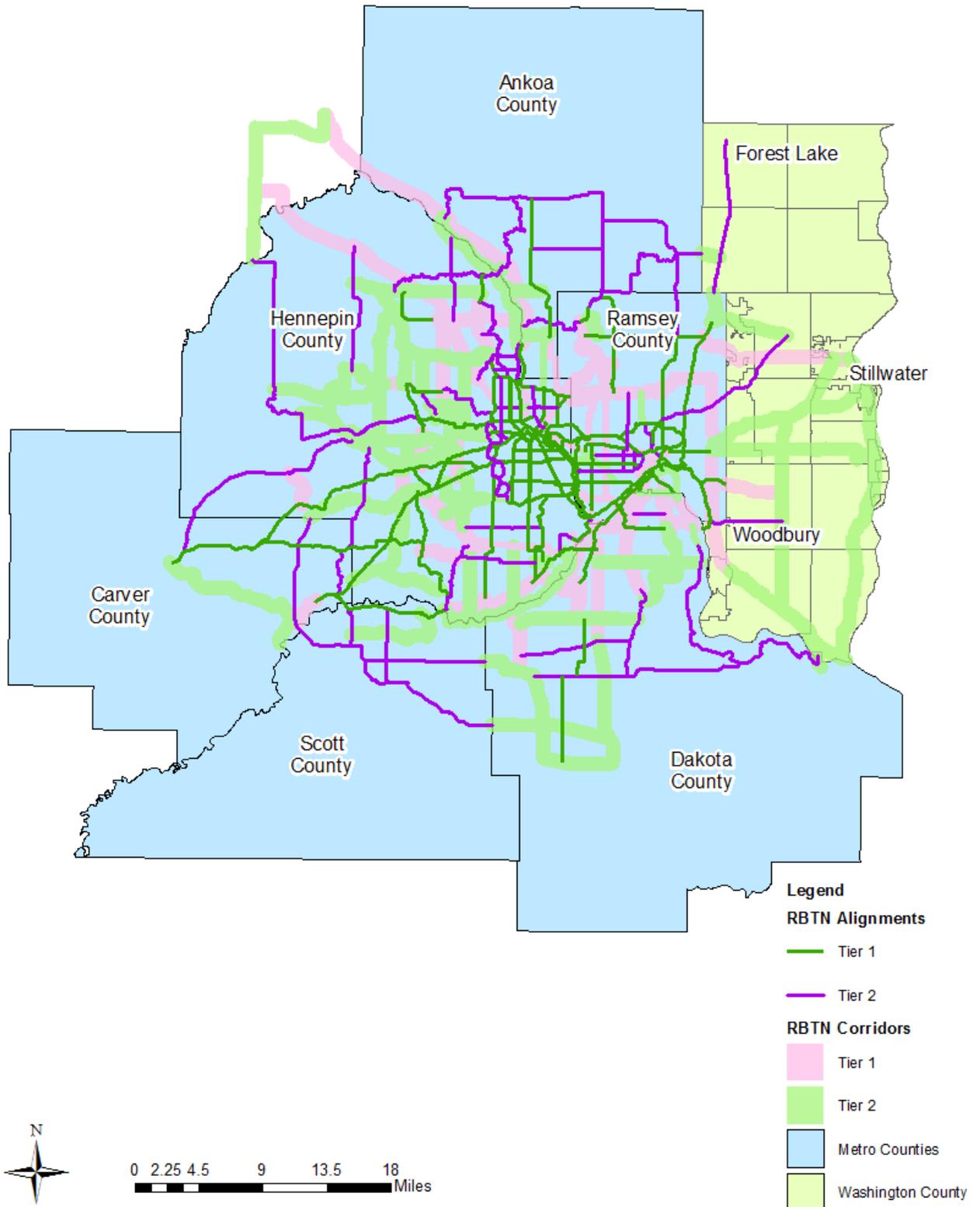


Figure 2. Regional Bicycle Transportation Network (RBTN) in the 7-county Metro region.

Required Master Planning Process

As part of the Metropolitan Region, Washington County complies to metropolitan system plans, is consistent with Metropolitan Council policies, and collaborates with adjacent and affected governmental units. To be prepared for regional assistance with funding and implementation of the trail network, a Master Plan must be prepared identifying the location of trails from a local level. This master plan must be consistent with regional policies and requirements. These master planning efforts should be supported within the County's Comprehensive Plan, by the inclusion of the following elements:

- Describe, map, and label the Regional Parks System facilities that are located in the County,
- Describe, map, and label the federal and state recreational lands within the County,
- Depict existing regional parkland with a land use of "Park" on your Existing Land Use map, and
- Acknowledge the Council-approved master plan boundaries of regional parks, park reserves, and special recreation features by guiding the properties with a land use of "Park" on your Future Land Use map.

Funding Sources

There are funding sources available for the construction and maintenance of the regional trails system in Washington County. The Metropolitan Council facilitates a portion of these funds. It allocates state and regional funds for ongoing acquisition, development and non-capital projects for the parks and trails system of the Metro area. The Metropolitan Council also allocates state funds to cities and counties to help share the cost of trail operations and maintenance costs each year. Counties apply for funds on an annual basis. Washington County uses these programs to fund capital projects and maintenance for the regional trail system.

Trail Usage

Washington County can be described as an auto-oriented community. In 2015, data collected from the American Community Survey (ACS) found that 84.5 percent of trips within Washington County were made by people who drove alone. Only 1.1 percent of county residents walked to work, and even less, (0.5 percent) used their bicycle to get to work¹. Based on this data and input received throughout the public engagement process, trails in Washington County are primarily used for recreational purposes, rather than commuting.

During the phase one public engagement activities, 5.5 percent of respondents noted they bike to work/daily activities, 5.0 percent walk to work/daily activities, and 82.9 percent drive their car to work /daily activities. Many respondents mentioned they use the trails in Washington County for

¹ Data USA. 2015. https://datausa.io/profile/geo/washington-county-mn/#category_transportation

recreational purposes. Some of these respondents cited the county’s guided fitness hikes as a great way to explore the trails the county has to offer.

In 2016, the Metropolitan Council published detailed annual use estimates for the regional parks system². These estimates were based on four-year average of visit data from 2013 through 2016. In Washington County the report looked at trail usage along only the Hardwood Creek Regional Trail. During the study period, the trail was found to average 208,300 annual visits. This represents 18% of total regional park and trail visits in Washington County. Many of these visits (80%) came in the spring, summer, and fall months. Outside of the core trails of Minneapolis, St. Paul, and the Three Rivers Park District, the Hardwood Creek Regional Trail saw some of the highest number of visits for regional trails.

Walk Scores

A walk score was collected to understand how different Washington County fares when it comes to each communities’ auto-dependency and overall connectivity of the trail network. Walkscore.com was used to gather the scores for each community, and the values were averaged to create a score for each district. To create a walk score, the software from the website analyzes hundreds of walking routes to nearby amenities based on a single address or town center. Points are awarded based on the distance from the location to amenities in each category. Amenities within a 5-minute walk (.25 miles) receive the maximum number of points. The system also measures pedestrian friendliness by analyzing population density and road metrics, such as block length and intersection density. Data sources include Google, Education.com, Open Street Map, the U.S. Census, Localeze, and places added by the Walk Score user community.

The walk score scale ranges from 0 to 100, where 0 represents a “car-dependent” area where all errands require the use of a personal automobile, and 100 represents a “walker’s paradise” where all daily errands do not require a car. Table 3 outlines the different walk score ranges within the point scale.

Score	Description
90 – 100 points	Walker’s Paradise – <i>Daily errands do not require a car</i>
70 – 89 points	Very Walkable – <i>Most errands can be accomplished on foot</i>
50 – 69 points	Somewhat Walkable – <i>Some errands can be accomplished on foot</i>
25 – 49 points	Car-Dependent – <i>Most errands require a car</i>
0 – 24 points	Car-Dependent – <i>Almost all errands require a car</i>

² <https://metrocouncil.org/Parks/Publications-And-Resources/PARK-USE-REPORTS/2016-Annual-Use-Estimate-of-the-Regional-Parks-Sys.aspx>

Walk Score Findings

The scores shown in Table 4 (urban core and city wide) represent walk scores for two different areas within the city. The first considers only the downtown core (e.g., Stillwater has an urban value of 92). The second looks at the municipality as a whole (e.g., Stillwater receives a score of 34 for the entirety of the municipality). Based on this calculation, Washington County received an average score of 25.1 for the urban core and 13.3 for the entire county. This finding represents car-dependent areas where most errands require the use of a personal automobile.

Table 4 provides a breakdown of walk scores for each municipality within Washington County. Cells colored **yellow** represent communities that are partially auto-oriented and partially walkable. Cells colored **orange** are somewhat walkable and cells colored **green** represent communities that are very walkable.

Table 4. Bike/Walk Scores by Community		
Community	Urban Core Walk Score	City Wide Walk Score
District 1	20.1	15.1
Dellwood	0	0
Forest Lake	51	16
Grant	0	0
Hugo	25	25
May Township	0	0
Marine on St. Croix	36	36
Scandia	29	29
District 2	31.7	18.9
Birchwood Village	3	0
Landfall	13	13
Mahtomedi	18	18
Oakdale	56	18
Pine Springs	2	1
Willernie	50	50
District 3	20.7	9.1
Afton	27	0
Bayport	37	0
Baytown Township	0	0
Lake Elmo	25	25
Lakeland Shores	26	26
Lake St. Croix Beach	6	0
Oak Park Heights	8	8
St. Mary's Point	7	7
Stillwater	92	34

Table 4. Bike/Walk Scores by Community		
Community	Urban Core Walk Score	City Wide Walk Score
Stillwater Township	0	0
West Lakeland Township	0	0
District 4	25.1	11.8
Cottage Grove	37	0
Denmark Township	1	0
Grey Cloud Island Township	0	0
Newport	18	18
West Lakeland Township	21	21
District 5	62.0	17.0
Woodbury	62	17
Washington County	25.1	13.3

Trail Gaps

Many of the existing trails in Washington County, based on current mapping data, are located within the southwestern and central areas of the county. This corresponds to more urban and densely populated areas that have developed city centers or downtowns (e.g., Cottage Grove, Woodbury, Oakdale, and Stillwater) (See Figure 3). However, there are fewer miles of trails in the rural portions of the county, such as Hugo, Forest Lake, Scandia, Afton, and Denmark Township. Trail connectivity between these communities and other parts of the county are lacking. As noted, the public outreach efforts determined a stronger need to provide trail connections between communities and key destinations, while expanding recreational opportunities. In that respect, Figure 4 compares the favorite destinations identified during Phase I efforts with the existing and planned trails. This figures highlights the trail gaps in the northern and central portions of the county. These connections may be missing given the lower population densities and agricultural/agrarian landscapes. However, it is important to note that the gaps that exist in this part of the county also coincide with several of the most popular recreational locations as listed by residents during Phase I of public engagement: Big Marine Park Reserve, William O'Brien State Park, and the Marine Library Express as part of the greater library system.

Addressing the gaps and the public's needs will require a careful lens in selecting the appropriate alignments, in addition to prioritizing investments. The undefined RBTN alignments in the 2040 TPP should serve as a foundation for addressing the trail gaps from a county perspective. Links to these systems will likely depended on local efforts. Defining the RBTN alignments will also be challenging for several reasons. For example, new trails must overcome natural and physical barriers (e.g., wetlands, private property and major transportation corridors). Overcoming these barriers will require a screening process to determine their feasibility. Potential screening criteria for evaluating future trails networks, including the RBTN network may include:

- **Environmental:** Includes environmental constraints such as wetlands, slopes, soil types, water bodies, and critical wildlife habitat.
- **Built Environment:** Includes land use considerations, right-of-way, and physical barriers such as roadways, buildings, utilities, and agricultural/farming land.
- **Social:** Includes local partnerships and community support
- **Cost:** Considers the total project cost and effectiveness in delivering a low-cost/high-benefit solution for overcoming the barriers. This includes environmental surveys, planning, and construction.

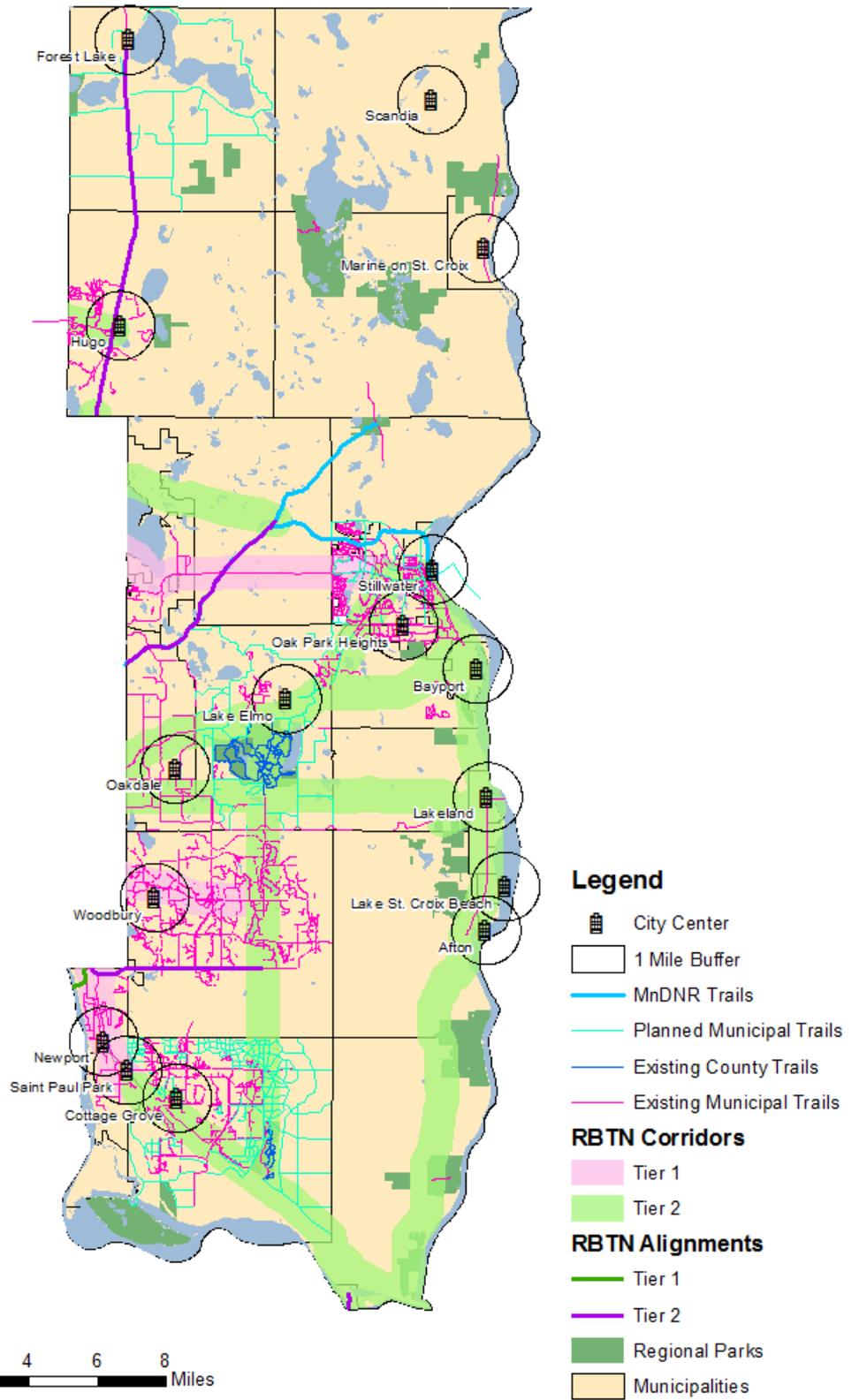


Figure 3. City centers within Washington County with 1-mile access buffer.

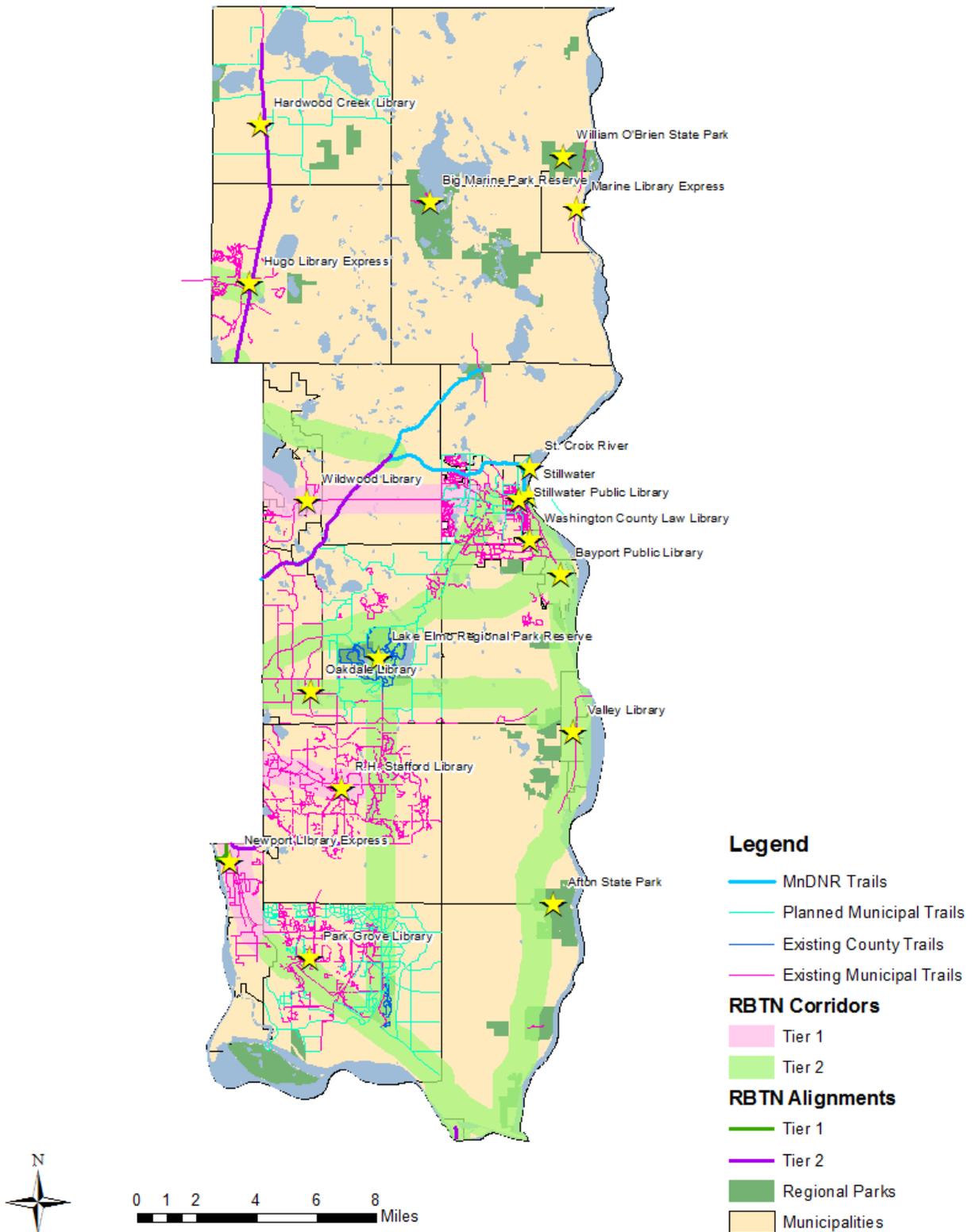


Figure 4. Favorite places in Washington County based on community engagement survey.

Conclusion

In general, the trail network within Washington County is well established in urban areas. These networks provide options for accessing key destinations by foot or bike, and to some extent larger connections to the regional system. However, the trail network is missing in the rural parts of the county. This is not uncommon for counties similar to Washington County. Rural areas across the country have looked to tackle these same issues. For example, the *Safe Routes to School National Partnership*³ produced a report in 2015 documenting strategies for increasing walking and biking in rural communities.

The report acknowledges that rural areas are often isolated and hostile environments for people looking to walk and bike around their communities. One of the recommended strategies is to create walkable and bikeable hubs, such as main streets with commercial development, town centers, schools, libraries, and other similar land uses. Building this foundation will help develop spokes between these hubs that promote and support active living. In this case, these spokes will take the form of dedicated and high-quality bike and walking trails.

The *Promoting Active Living in Rural Communities*⁴ report also outlines how active transportation in rural areas may often times be unrealistic. Active transportation can become more viable in rural areas through creative and local solutions that are tailored to the specific culture, geography, and climate of a given community. This can be achieved by planning active transportation options for all seasons, demographic groups and geographical areas.

These reports show that a county comprised of a variety of different communities, landscapes, land use patterns, and densities can have a high-quality and highly connected trail system that is accessible to all people. This can be achieved by bringing together rural communities and urban city centers with a comprehensive trail network.

Next Steps

A comprehensive county trail master plan should be conducted to better understand the public's needs and trail gaps, while creating the best trail system possible. Through this process, the county may take on a larger role in defining the trail network at a county and regional level. This would include coordination and collaboration with local partners and state agencies (e.g., MnDNR and MnDOT). More importantly, this effort should include a public outreach effort. Plan elements may include an in-depth gaps analysis, route planning, project prioritization, project schedules and funding plans. These plan elements would help provide the county the direction needed in developing a meaningful and fiscally responsible trail plan over the next twenty years.

³ Rural Communities: A Two-Pronged Approach for Improving Walking and Bicycling. Safe Routes to School National Partnership.

http://www.saferoutespartnership.org/sites/default/files/pdf/Lib_of_Res/SR2S_Rural_2pronged%20approach_20150331.pdf

⁴ Promoting Active Living in Rural Communities. Active Living Research.

http://activelivingresearch.org/sites/default/files/ALR_Brief_RuralCommunities_Sept2015.pdf