

Duluth Recreational Trails Assessment Project

Final Report and Recommendations

September 2013

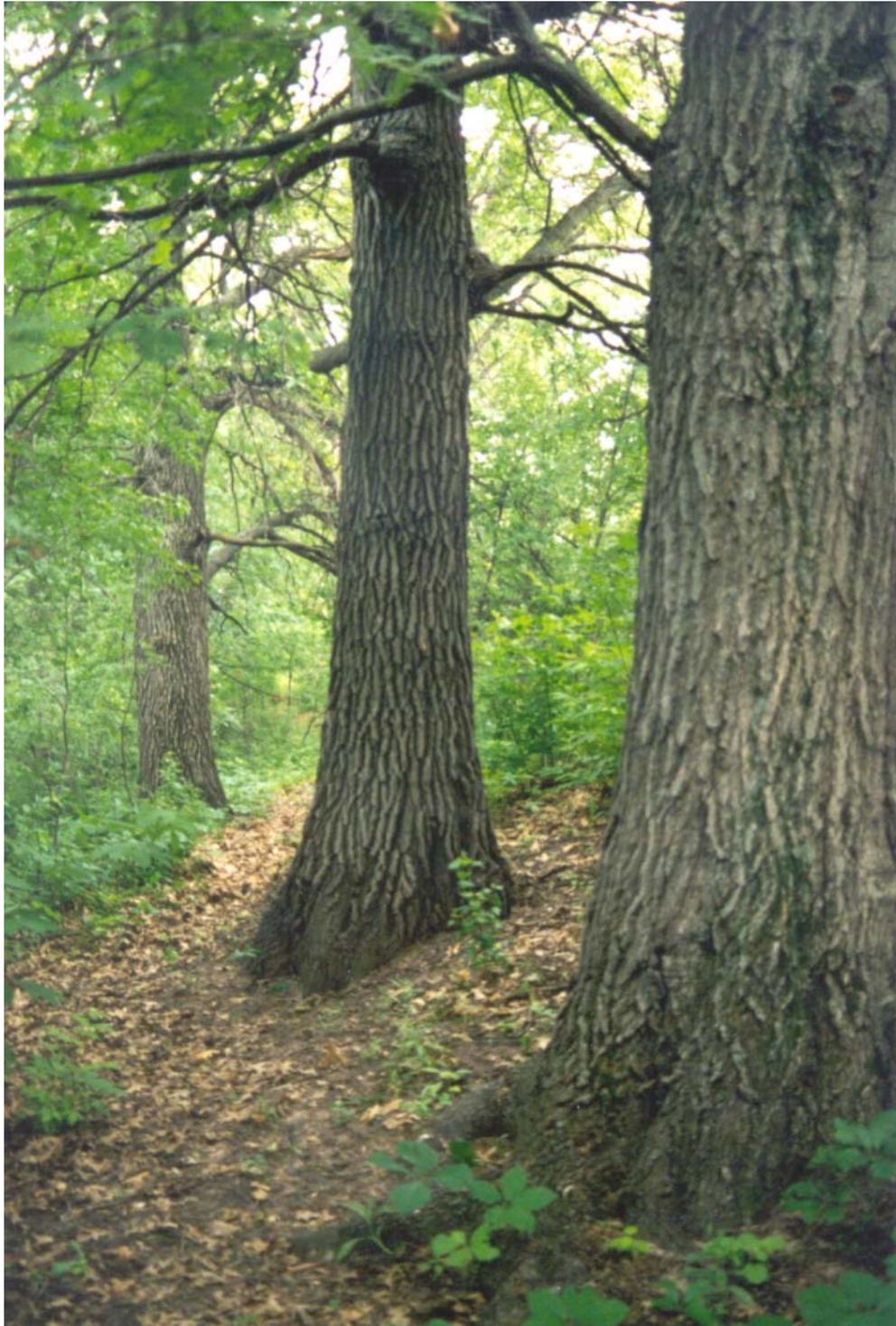


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Introduction

Since the early days of carriage paths and “Tally-ho” parties in the late 1800s, recreational trails have long been an important part of Duluth’s physical infrastructure and cultural heritage. Today, this heritage is alive and well with ambitious plans to add nearly a hundred miles of trails to the existing network of hiking, biking, ski and snowmobile trails that have contributed to Duluth being cited as one of the America’s premier “outdoor towns”. Until recently, however, the trail network in Duluth has primarily been an informal system, built and maintained by different recreational user-groups with varying degrees of formal public involvement by the City of Duluth or St. Louis County. It is also a system for which there existed little collective data.

This recreational trails assessment is an outcome of the *City of Duluth Mayor’s Task Force on Reuse and Protection of Public Lands* and its associated report, dated April 2012. The Task Force was established to assist the City in determining what public lands were essential as “core” greenspace and which lands would be appropriate for reuse and reinvestment in the private market. Additionally, it was noted that since St. Louis County manages a large quantity of public land (tax-forfeit property) within the city of Duluth, their active participation would be vital in charting a coordinated, overreaching strategic plan for public lands. Finally, the report outlined different aspects of public property benefits, including recreation, and recommended additional analysis to refine the overall vision of green infrastructure preservation & reuse in Duluth. This report should be considered one chapter out of four components that comprise the core functions of greenspace in Duluth: 1) recreation, 2) cultural/ scenic, 3) water quality and flood attenuation and 4) natural habitats and important forest areas.

Mayor Ness envisions Duluth as one of the nation’s premier outdoor recreation oriented cities. The Mayor subsequently requested the City administration establish an inter-governmental work team with St. Louis County staff to determine which lands were essential to the current and proposed recreational trail corridors within Duluth’s city limits and to develop recommendations for emergent areas of concern.

The Duluth Trails Team (DTT) met between November 2012 and July 2013 to evaluate the trail system and develop realistic strategies to address identified land use conflicts. The Minnesota Land Trust (MLT) assisted the group by conducting background research, drafting documents and coordinating the GIS-based analysis. Local user-group input was sought throughout the process. The meetings and gathered information were used to explore three outcomes:

- 1) An assessment of the corridors needed to preserve and enhance a trail user’s recreational experience for the existing & proposed trail systems in Duluth (including the Duluth Traverse, the Superior Hiking Trail, cross country ski trails, & snowmobile trails, but not including local “neighborhood” trails because of a lack of reliable map data).
- 2) An analysis of the land ownership and classification to determine permanence and connectivity of the Duluth trail system as a component of Duluth’s “core greenspace”.
- 3) A set of specific actions to improve at-risk trail corridors.

While trail connectivity and real estate were the main foci of the project, the DTT discussed interrelated issues of trail management, access, wayfinding, and promotion that are also key to advancing Duluth as a nationally recognized outdoor destination. This report can be seen as the beginning of a proactive plan to secure and promote the recreational trail network and improve management of the network over the long haul.

Yesterday's Legacy

The Final Report of the Mayor's Task Force on Reuse and Protection of Public Lands noted:

Many publicly owned parcels within the City were deliberately secured to be included in the City's original "Greenbelt" as envisioned by City planners more than 100 years ago. However, a good portion of today's open-space recreation network accumulated as public land through abandonment and failed development decades ago.

This conclusion prompted the DTT to conduct a more detailed analysis of the land ownership and classification underlying the recognized trail systems in Duluth. In this analysis, Duluth's trail system included all recognized trails, a trail network included trails within a given area such as Hartley Park, a trail segment was a length of a particular trail and the trail corridor includes the trail plus a desired buffer zone. The DTT confirmed that Duluth's trail system as it exists today mirrors this relatively informal or ad hoc accumulation of open space (It is only recently that the City has adopted a trails master plan which articulates a preconception for a comprehensive trail system). Significant findings relevant to a recreational trails system include:

- 1) *Public Support:* Duluth is poised to be a premier trail city. Duluth's trail system is an impressive recreational resource that is highly valued by both citizens and visitors to Duluth. Over 180 miles (*All reported statistics in this report are approximate) of existing trails were cataloged in this project supporting hiking, biking, cross-country skiing, and snowmobiling (Map 1). The variety and accessibility of Duluth's trail system equals or exceeds other US cities of similar size and outdoor focus. Five citizen-lead user groups (Superior Hiking Trail Association, Duluth Cross Country Ski Club, Drift-Toppers Snowmobile Club, Reservoir Riders Snowmobile Club and Cyclists of Gitchee Gumees Shores) lead much of the development and maintenance of trail networks. The City and user groups are currently planning or building an additional 90+ miles of trail segments to add to the system. More than \$350,000 has been secured from State and Federal Trails programs in the past 2 years to expand the trail system in Duluth.

The DTT found that public support is strong (and growing) within Duluth for a multi-purpose and interconnected trail system. However, it also recognized that the levels of knowledge and support vary among elected officials at both the city and county levels.

- 2) *Administration:* The trail system, currently and as envisioned, extensively utilizes public land administered by both the City of Duluth and St. Louis County Land and Minerals Department (Map 2a). More than 45% of the trail system is on city owned property (higher if you include trail on City rights of way) and about 45% is on state property (primarily county administered tax-forfeit properties with lesser amounts of school district and MN DOT properties) and something less than 10% of existing trails are built on private property (primarily grant-in-aid snowmobile trails). Trails in the City use land owned by different public and private entities and often a single parcel will have multiple trails (e.g.: separate snowmobile, mountain bike, hiking and ski trails may all cross the same parcel of land).

The St. Louis County Land and Minerals Department administers the majority of State public lands the trail system uses. The County currently has standard operating procedures for authorizing trail projects on tax-forfeited land. Trail authorizations have been granted to independent user groups upon request.

Within the City of Duluth administration there is no unified structure for trail planning, securing land, and operations and management of the trail system. Multiple departments including Parks, Property Management, Planning and Public Works handle acquisition, resale, maintenance and recreation. The City has completed a Trails Master Plan as part of the recommendations of the Parks Master Plan, and the hiring a trails coordinator has improved communication and interaction among user groups and the City.

- 3) *Corridor Connectivity:* There are sections of trail the DTT considered "at risk" for potential loss of connectivity. As the maps illustrate, the trail corridors cross a variety of public and private lands. However, many important trail sections have no formal or legal protection for the trail corridor.

About 50% of trails on City owned land occur within City designated parks, where inadvertent reuse of the property is unlikely. However, the remaining 50% occurs on lands unrestricted for potential reuse and development (Map 2b). The City is developing recreational zoning and trail authorization programs, but neither of these tools are yet commonly used. Additionally, the trail data available to City staff during review of properties for resale is inadequate to ensure existing and proposed trail corridors are taken into account.

Of the trail segments on State owned land, approximately 15% is on (or proposed to be built on) properties classified as “non-conservation” tax-forfeit properties, which are eligible for immediate sale (Map 2c). St. Louis County has authorized about 12 out of 34 miles of trails on tax forfeit land to user groups, primarily Superior Hiking Trail and Cyclists of Gitchee Gumees Shores (Map 3).

Finally, the status of some of the City-owned parcels is currently in flux. The City and County are currently reviewing the status of City held Conditional Use Deeded (CUD) parcels. These are parcels that the City acquired from the State for a specific “conditional use”. The County and City are determining if the City is still in conformance with the original purpose of the deed. Subsequent findings of non-conformance may result in reversion of ownership of certain parcels to the State. This has the potential to affect the integrity of trail networks, as several trails pass through parcels with conditional use deeds.

- 4) *Trail Maintenance and Operations:* The current trail system is truly homegrown and relies heavily on volunteer labor from user groups for both construction and ongoing maintenance. This has created the unique system we have today and the City and County benefit greatly from these user groups participation in the management of the overall trail system. However, without coordinated oversight and consistent funding, trail maintenance and operations can vary greatly in quality and quantity between trail networks and even within particular trail segments. This is because 1) a trail may cross multiple parcels under different ownership with varying management agreements and standards and 2) historically user groups have had to raise their own funds and volunteers for maintenance and operations, which has varied year to year.

The DTT found that existing data on trails were more difficult to secure than expected and inconsistent in nature. Information on the location, type and condition of trails is important for efficient planning, coordination and operations. A wide variety of activities including reviewing land sales, developing management agreements, scheduling maintenance, placing signage and developing promotional materials would benefit by improved geospatial data on trails.

Finally, the DTT’s research indicates all community trail systems as large as Duluth’s that were studied as part of this project had dedicated, publically funded trail maintenance crews, either through user groups or as employees.

- 5) *Access and Promotion:* This is an area in which there could be great improvement so that residents and visitors alike know about the trails and know where to access them. A strategic and coordinated approach involving City, County and user groups to promote the trail system is key to realizing the vision of Duluth as a sought after outdoor recreation mecca. Other communities studied have extensive public maps and other information and the business and tourism community promotes the trail network heavily.

Summary

The DTT concluded the Duluth trail system compares favorably to demographically similar U.S. cities known for outdoor recreation (Ft. Collins, CO, Missoula, MT, and Bellingham, WA) in terms of trail extent and diversity. However, Duluth’s legacy of mixed ownership, administration, and operations that has resulted in an extensive and resource-rich trail network has, at the same time, resulted in a complex and informal system in which important trail connections could be inadvertently lost.

Tomorrow's Opportunity

While the trail system in Duluth does compare favorably to other cities known nationally as destinations for outdoor recreation, a small amount of reorganization of real estate, operations and administration would help propel Duluth towards being a truly world class adventure hub.

Trail sustainability is a result of purposeful planning, construction, maintenance, and management. The three communities we evaluated with extensive trail systems that support a vibrant recreation business sector shared certain characteristics including *extensive cooperation between governmental units (especially where public lands are held by multiple agencies), a dedicated program or department with clear responsibilities and a firm budget, active citizen user groups involved in trail planning and construction, and extensive outreach and promotion programs.*

The DTT identified six core opportunities to improve Duluth's recreational trail operations and management:

- ³ Increased and equal protection of trail corridors on City and private land when possible.
- ³ Clear administrative structure addressing lands, trail management, maintenance and operations.
- ³ Coordinated trail planning and development among user groups and between the City and County.
- ³ Standardized trail design and construction using Best Management Practices for sustainability and enhancing user experiences.
- ³ Consistent and extensive on-trail wayfinding and trail-head signage
- ³ Professional promotional materials and marketing plan

Recommendations

Public open space lands in Duluth are held by both the City and St. Louis County. These two government units will continue to manage the majority of the lands within the recreational trail system for the foreseeable future. Although the City of Duluth and St. Louis County are likely to maintain differing levels of management, adoption of a common vision for the recreational trail system in Duluth is strongly encouraged. In order to achieve this common vision, the task force recommends the following steps:

- 1) Improve trail planning and administration. Establish a standing City/County Trails workgroup with the responsibility for managing ongoing trail development issues.

Re-organize City ownership, administration, planning and maintenance of lands with "Duluth" branding of recreational trails.

- 2) Establish permanent trail corridors on city owned lands. Utilize a range of real estate and administrative actions to protect access and recreational uses.

The City should apply for trail authorizations from the Land Department for all existing and proposed City trails on tax-forfeit property. This ensures the City will be notified of any change in the conservation status, or re-sale of tax-forfeit lands is being considered.

Continue to assess land classifications such as trail authorizations, restrictions, cooperative trail agreements, and specific trail easements within specific geographic study areas in the city to identify gaps in the protected trail corridors. Examples are included for 1) Lester (Map 4), 2) Piedmont (Map 5), and 3) Mission Creek (Map 6). Identified gaps are highlighted in Table 1.

Implement new city zoning and designations (park status) of trail corridors on unrestricted city properties, and consider the utilization of easements in key areas of concern.

The city and county may want to explore establishing formal cooperative management agreements for select recreational areas, which could address *ownership of property, planning, and construction* activities, and/or *the establishment of service agreements* between the city and county for long-term trail and recreation management/maintenance.

Finally, the city and county should explore land ownership consolidation options within the city limits through land exchanges and other transactions.

- 3) Enact Consistent Trail Corridor Management and Operations. Establish formal maintenance agreements with recreational user groups where none exist to clearly establish the roles of the city, county, and recreational user groups in trail development and maintenance. Consider the establishment of a trained city trail maintenance crew to provide consistent management along individual trails. Adopt industry standard best management practices (BMP) for all Duluth trails to improve safety, sustainability and user experiences.
- 4) Update GIS Trail Database. Establish an accurate GIS trail inventory that incorporates known trails along with relevant data, including managers, funding, authorizations, easements, etc. The data must be updated frequently and be readily available to all City and County departments to be an asset for trail management and other land use decisions. It could likewise provide the basis for better recreational promotion and public education.
- 5) Improve Trail Access, Wayfinding, and Promotion. The City and County should consider developing a consistent signage look for its trails and schedule implementation of these signs with user groups. Improvements could be made to improving trail access and trailheads that serve multiple trails. The City might also develop a smartphone/computer application for its trail maps. Professional quality promotional material and physical and online marketing should be developed to improve outreach. Finally, this information should be incorporated and integrated into Duluth's overall outreach to the tourism and business communities.

Table 1 – Summary of Gaps in Trail Corridor Protection

Project Location/Numbered area of concern	Corridor Protection Gap	Extent of trail
<i>Lester River Study Area (Fig. 4)</i>		
1 - Lester ski trails and proposed DT.	Unauthorized trail, Tax forfeit land; Non-Conservation, Tax Forfeit Land.	> 10 miles
2 - Snowmobile trail and SHT on non-cons. status TF area west of Vermillion Rd.	Unauthorized trail, Tax forfeit land; Non-Conservation, Tax Forfeit Land.	> 1 mile
3 - Snowmobile and SHT trail on CUD area located between Jean Duluth Rd. and Livingston Rd ROW.	Pre-1986 Conditional Use Deed.	> 1.25 miles
<i>Piedmont Study Area (Fig. 5)</i>		
1 - Piedmont ski, bike, and snowmobile trails.	Unauthorized trail, Tax forfeit land; Non-Conservation, Tax Forfeit Land.	> 4 miles
2 - Snowmobile trail on non-cons. status TF area east of Getchell Rd.	Unauthorized trail, Tax forfeit land; Pre-1986 Conditional Use Deed; Non-Conservation, Tax Forfeit Land.	> .25 miles
3 - Proposed bike trail west of Arlington Rd.	Unauthorized trail, Tax forfeit land; Non-Conservation, Tax Forfeit Land; Private land, unauthorized trail.	> 1 mile
<i>Mission Creek Study Area (Fig.6)</i>		
1 - Hiking, SHT, and proposed bike trails in Mission Creek CUD area.	Unauthorized trail, Tax forfeit land; Non-Conservation, Tax Forfeit Land; Pre-1986 Conditional Use Deed.	> 5 miles
2 - SHT & proposed bike trail between Munger Trail and DWP.	Unauthorized trail, Tax forfeit land; Pre-1986 Conditional Use Deed; Non-Conservation, Tax Forfeit Land.	> .25 miles
3 - Ski trails and SHT, middle & north Magney-Snivley area.	Pre-1986 Conditional Use Deed.	> 2.75 miles
4 - SHT, ski, DWP, and proposed bike trails.	City-owned, non-park, no deed restrictions.	> 1 mile

Sources

Literature Review

Comprehensive Land Use Plan; City of Duluth
Delinquent Real Property Tax and Tax Forfeiture Manual (Red Book), Stage Six: Tax Forfeiture (section 6700);
Minnesota Department of Revenue
Mayor's Task Force on Reuse and Protection of Public Lands Final Report and Recommendations; City of Duluth
Parks and Recreation Master Plan; City of Duluth
Trail Fundamentals and Trail Management Objectives, USFS
Trail Planning, Design, and Development Guidelines; Minnesota Department of Natural Resources
Trails and Bikeway Master Plan; City of Duluth

GIS and Mapping Data – Contributing Organizations

Cyclists of Gitchee Gumees Shores (COGGS)
City of Duluth
Drift Toppers Snowmobile Club
Duluth Area Trail Alliance (DATA)
Duluth Cross-Country Ski Club (DXC)
Over the Hill Night Riders Snowmobile Club
St. Louis County
Superior Hiking Trail Association (SHTA)

Interviews

Comparison cities and counties

Leslie Bryson, Park Design and Development Manager, City of Bellingham, WA
Jackie Corday, Open Space Program Manager, City of Missoula, MT
Craig Foreman, Park Planning and Development, City of Fort Collins, CO
Nancy Heil, Open Space Coordinator, Missoula County, MT
Karen Mancini, Senior Environmental Planner, City of Fort Collins, CO
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Lisa Moisey, Parks and Trails Manager, Missoula County, MT
Kerri Rollins, Open Lands Program Manager, Larimer County, CO

Area user groups and private citizens

Jim Bianchi, President, Over the Hill Night Riders
Gayle Coyer, Executive Director, Superior Hiking Trail Association
Diane Desotelle, Area of Concern Coordinator, MN Pollution Control Agency
Anne Flueckeiger, Duluth Cross Country Ski Club
Jan Green, Board Member, Hawk Ridge Bird Observatory
Tim Howard, former Supervisor of Real Property, City of Duluth (retired)
Cory Salmela, Duluth Cross Country Ski Club
Hansi Johnson, Midwest Regional Director, International Mountain Bicycling Association
Scott Marshall, Drift Toppers
Aaron Rogers, President, Copper Harbor Trails Club
Larry Sampson, Trail Maintenance Supervisor, Superior Hiking Trail Association
Tony Shoberg, Board of Directors President, Duluth Cross Country Ski Club

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Acknowledgements

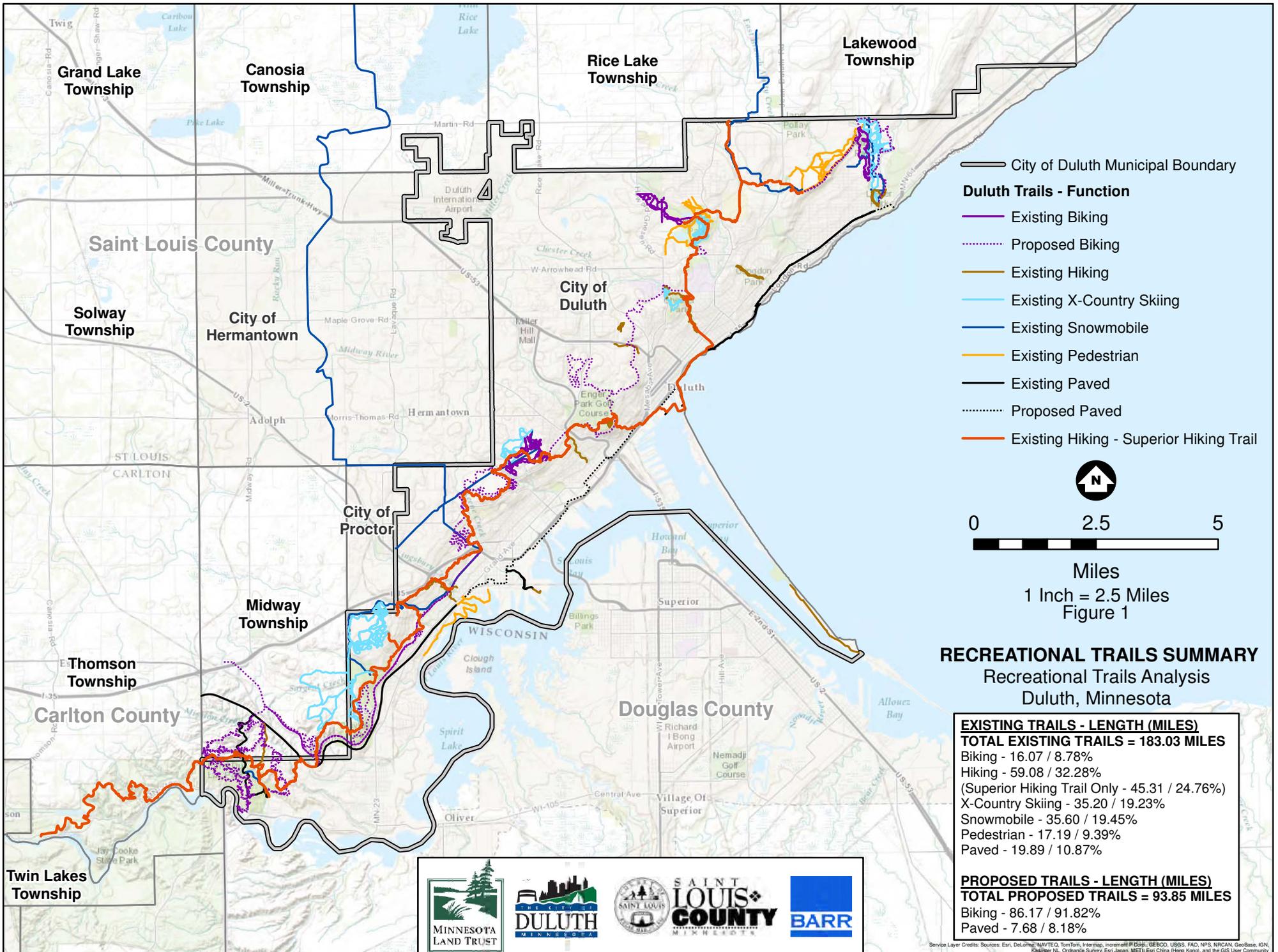
This project was funded in part by the Coastal Zone Management Act, by NOAA's Office of Ocean and Coastal Resource Management, in conjunction with Minnesota's Lake Superior Coastal Program.

This project also received generous support from the Duluth-Superior Area Community Foundation.

The Duluth Trails Team would like to extend their deepest thanks to the interviewed staff from our comparison cities and counties, to the participating staff from the city of Duluth and St. Louis County, to recreational user group representatives, and finally to private citizens, all of whom freely shared their time, expertise, and experiences to assist with this project. It simply could not have been completed without their help, and we wish to recognize their service.



This report was prepared by the Minnesota Land Trust



- City of Duluth Municipal Boundary
- Duluth Trails - Function**
- Existing Biking
- Proposed Biking
- Existing Hiking
- Existing X-Country Skiing
- Existing Snowmobile
- Existing Pedestrian
- Existing Paved
- Proposed Paved
- Existing Hiking - Superior Hiking Trail



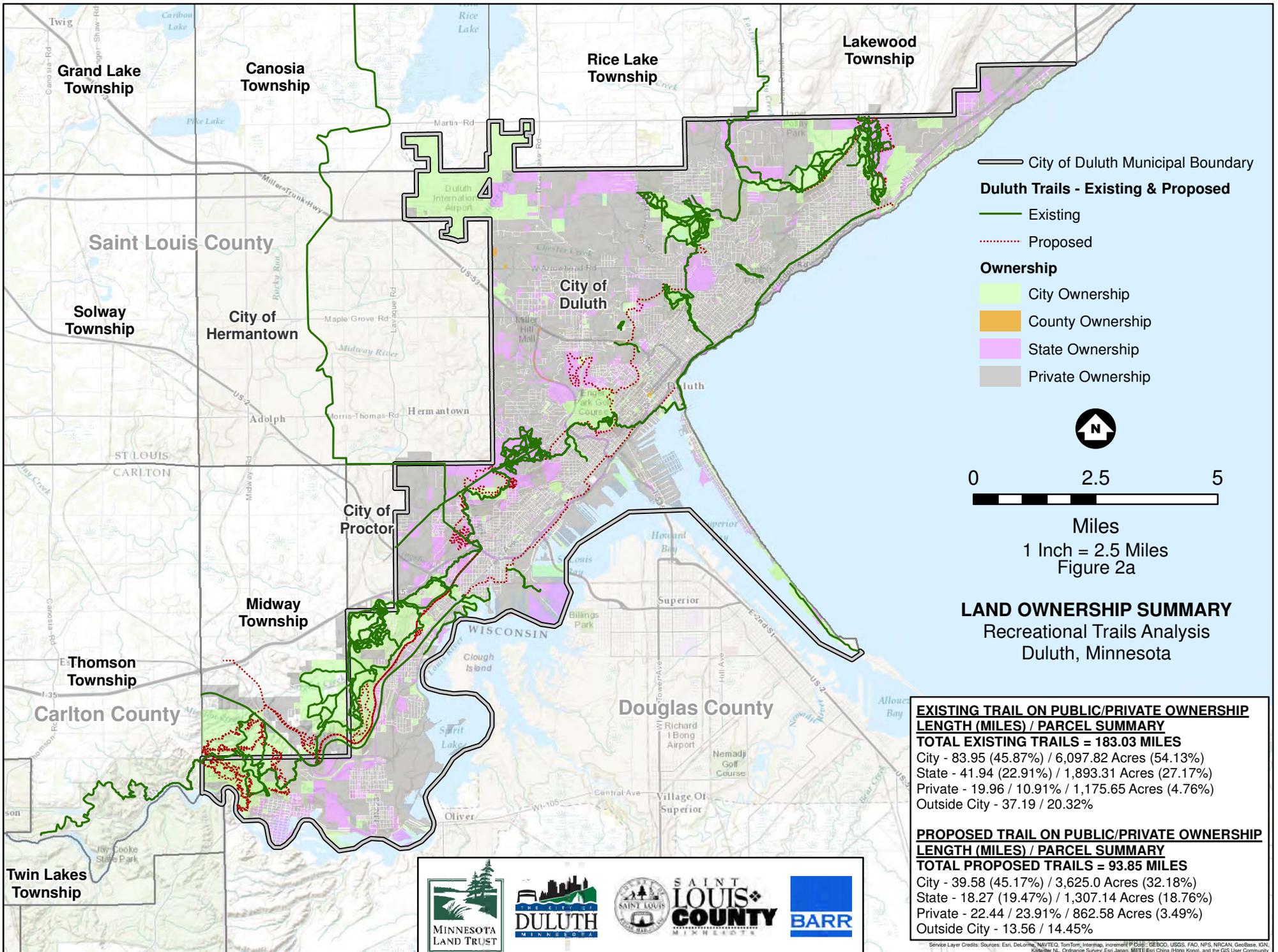
Miles
1 Inch = 2.5 Miles
Figure 1

RECREATIONAL TRAILS SUMMARY
Recreational Trails Analysis
Duluth, Minnesota

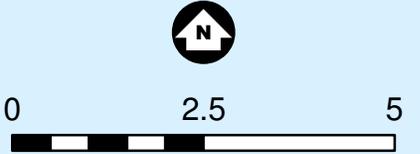
EXISTING TRAILS - LENGTH (MILES)	
TOTAL EXISTING TRAILS = 183.03 MILES	
Biking	- 16.07 / 8.78%
Hiking	- 59.08 / 32.28%
(Superior Hiking Trail Only)	- 45.31 / 24.76%
X-Country Skiing	- 35.20 / 19.23%
Snowmobile	- 35.60 / 19.45%
Pedestrian	- 17.19 / 9.39%
Paved	- 19.89 / 10.87%
PROPOSED TRAILS - LENGTH (MILES)	
TOTAL PROPOSED TRAILS = 93.85 MILES	
Biking	- 86.17 / 91.82%
Paved	- 7.68 / 8.18%



Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, incrementP Corp., GEBCO, USGS, FAO, NPS, NRCAN, Geobase, IGN, Swisstopo, Esri, Swisstopo, Esri, Japan, METI, Esri, China (Hong Kong), and the GIS User Community



- City of Duluth Municipal Boundary
- Duluth Trails - Existing & Proposed**
- Existing
- Proposed
- Ownership**
- City Ownership
- County Ownership
- State Ownership
- Private Ownership



Miles
1 Inch = 2.5 Miles
Figure 2a

LAND OWNERSHIP SUMMARY
Recreational Trails Analysis
Duluth, Minnesota

EXISTING TRAIL ON PUBLIC/PRIVATE OWNERSHIP
LENGTH (MILES) / PARCEL SUMMARY

TOTAL EXISTING TRAILS = 183.03 MILES

City	- 83.95 (45.87%)	/ 6,097.82 Acres (54.13%)
State	- 41.94 (22.91%)	/ 1,893.31 Acres (27.17%)
Private	- 19.96 (10.91%)	/ 1,175.65 Acres (4.76%)
Outside City	- 37.19 / 20.32%	

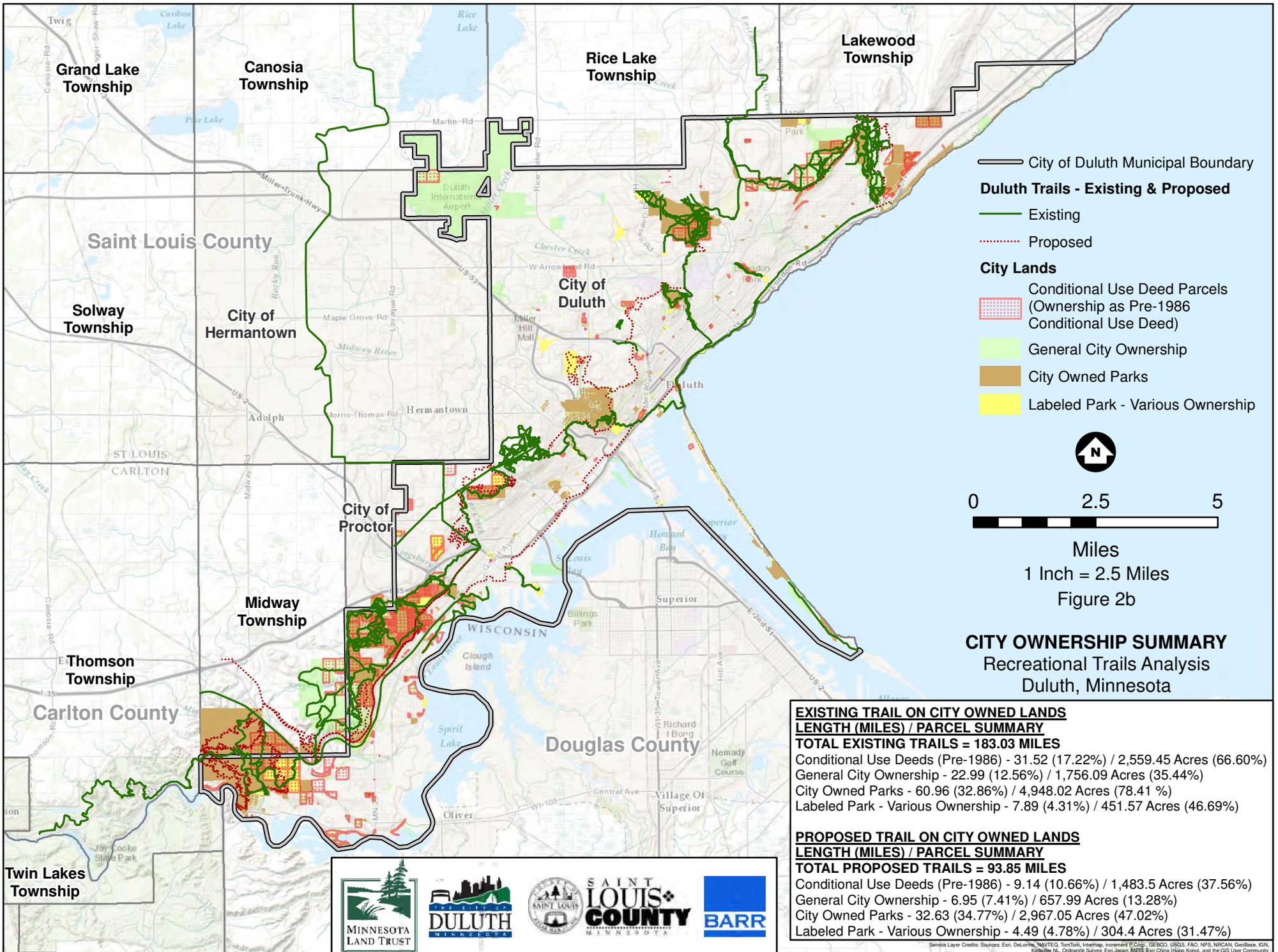
PROPOSED TRAIL ON PUBLIC/PRIVATE OWNERSHIP
LENGTH (MILES) / PARCEL SUMMARY

TOTAL PROPOSED TRAILS = 93.85 MILES

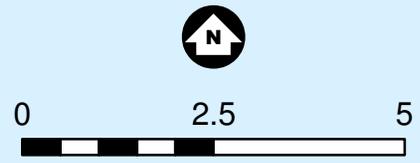
City	- 39.58 (45.17%)	/ 3,625.0 Acres (32.18%)
State	- 18.27 (19.47%)	/ 1,307.14 Acres (18.76%)
Private	- 22.44 / 23.91%	/ 862.58 Acres (3.49%)
Outside City	- 13.56 / 14.45%	



Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FRA, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community



- City of Duluth Municipal Boundary
- Duluth Trails - Existing & Proposed**
- Existing
- ⋯ Proposed
- City Lands**
- Conditional Use Deed Parcels (Ownership as Pre-1986 Conditional Use Deed)
- General City Ownership
- City Owned Parks
- Labeled Park - Various Ownership



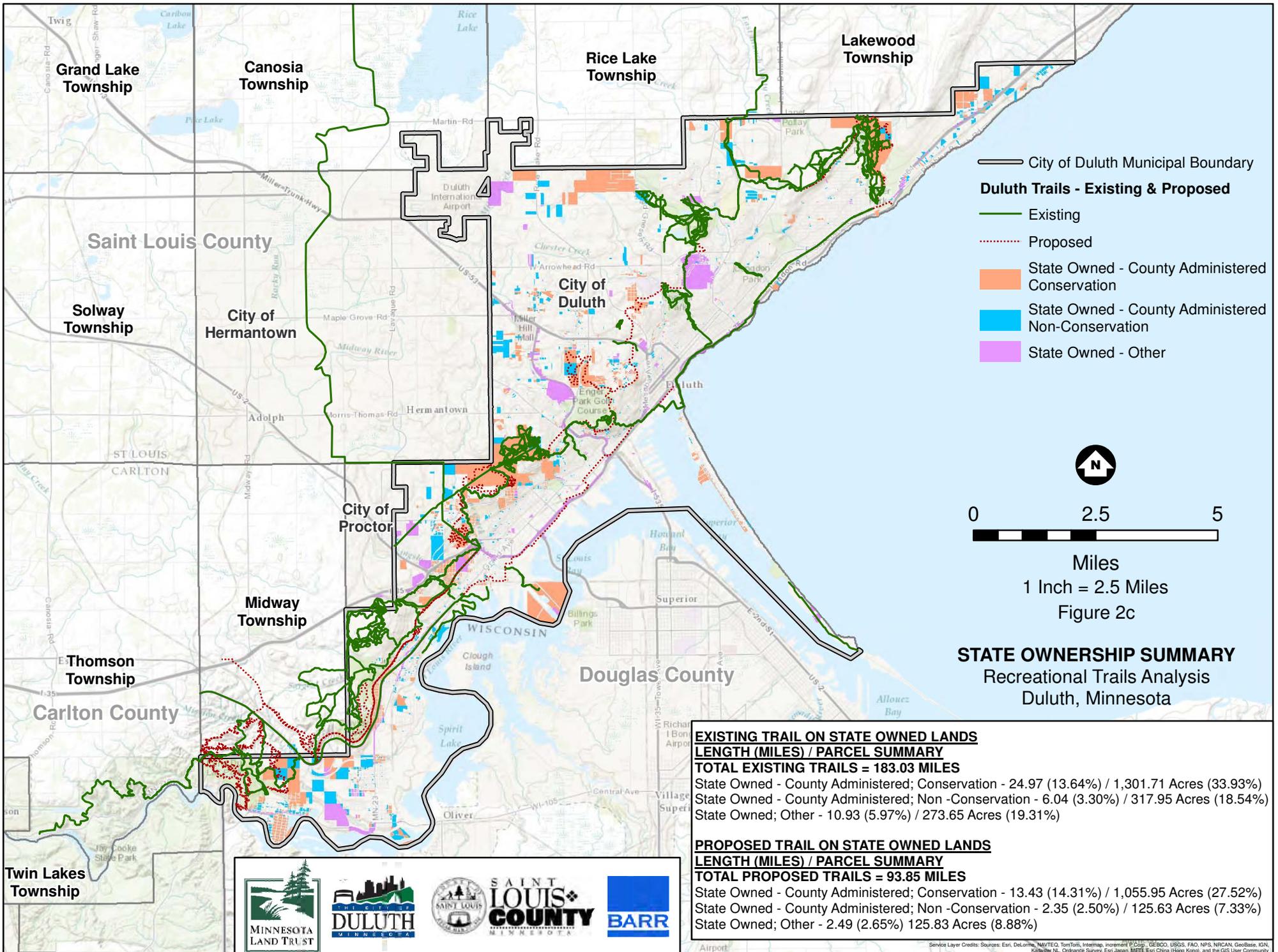
Miles
1 Inch = 2.5 Miles
Figure 2b

CITY OWNERSHIP SUMMARY
Recreational Trails Analysis
Duluth, Minnesota

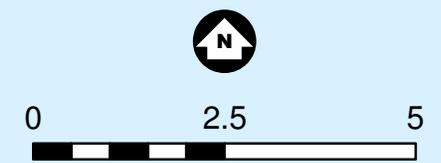
EXISTING TRAIL ON CITY OWNED LANDS	
LENGTH (MILES) / PARCEL SUMMARY	
TOTAL EXISTING TRAILS = 183.03 MILES	
Conditional Use Deeds (Pre-1986) - 31.52 (17.22%) / 2,559.45 Acres (66.60%)	
General City Ownership - 22.99 (12.56%) / 1,756.09 Acres (35.44%)	
City Owned Parks - 60.96 (32.86%) / 4,948.02 Acres (78.41%)	
Labeled Park - Various Ownership - 7.89 (4.31%) / 451.57 Acres (46.69%)	
PROPOSED TRAIL ON CITY OWNED LANDS	
LENGTH (MILES) / PARCEL SUMMARY	
TOTAL PROPOSED TRAILS = 93.85 MILES	
Conditional Use Deeds (Pre-1986) - 9.14 (10.66%) / 1,483.5 Acres (37.56%)	
General City Ownership - 6.95 (7.41%) / 657.99 Acres (13.28%)	
City Owned Parks - 32.63 (34.77%) / 2,967.05 Acres (47.02%)	
Labeled Park - Various Ownership - 4.49 (4.78%) / 304.4 Acres (31.47%)	



Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, Geobase, IGN, Mapbox, Swire, Orange Sky, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community



- City of Duluth Municipal Boundary
- Duluth Trails - Existing & Proposed**
- Existing
- ⋯ Proposed
- State Owned - County Administered Conservation
- State Owned - County Administered Non-Conservation
- State Owned - Other

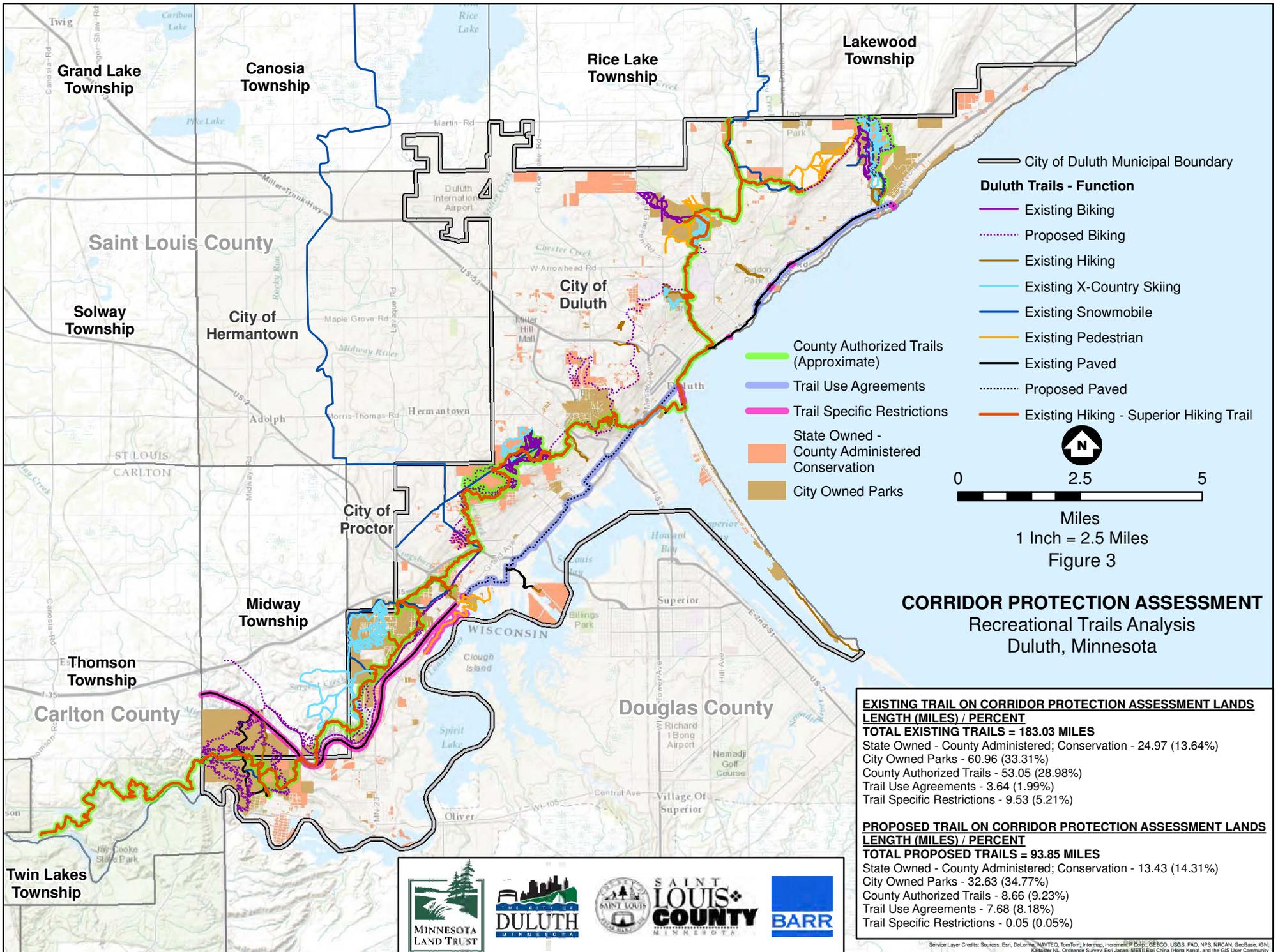


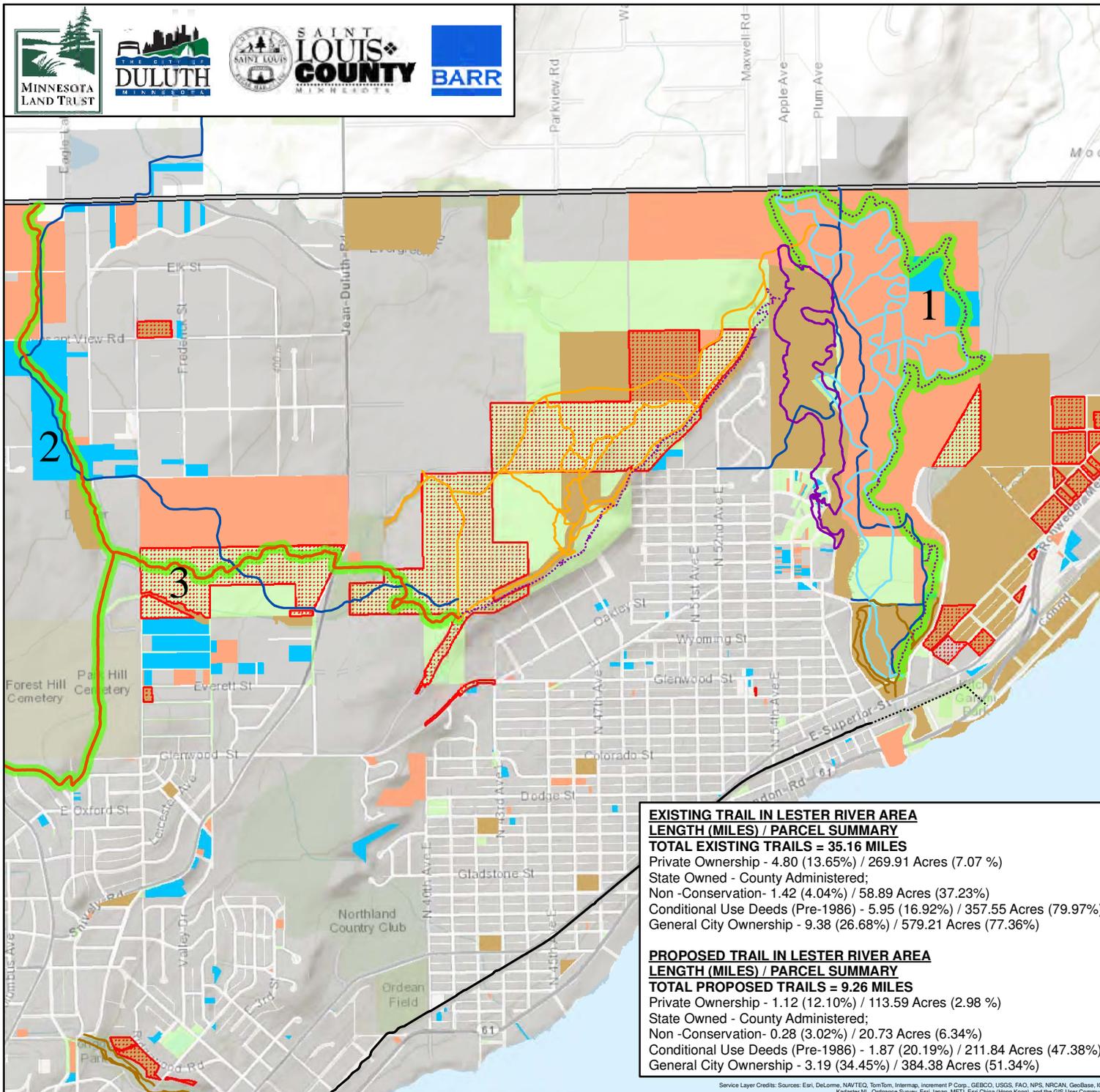
Miles
1 Inch = 2.5 Miles
Figure 2c

STATE OWNERSHIP SUMMARY
Recreational Trails Analysis
Duluth, Minnesota

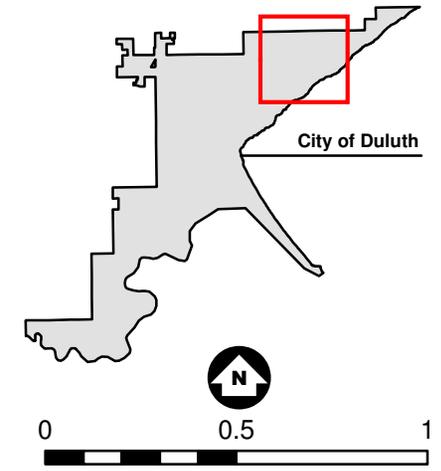
EXISTING TRAIL ON STATE OWNED LANDS	
LENGTH (MILES) / PARCEL SUMMARY	
TOTAL EXISTING TRAILS = 183.03 MILES	
State Owned - County Administered; Conservation	24.97 (13.64%) / 1,301.71 Acres (33.93%)
State Owned - County Administered; Non -Conservation	6.04 (3.30%) / 317.95 Acres (18.54%)
State Owned; Other	10.93 (5.97%) / 273.65 Acres (19.31%)
PROPOSED TRAIL ON STATE OWNED LANDS	
LENGTH (MILES) / PARCEL SUMMARY	
TOTAL PROPOSED TRAILS = 93.85 MILES	
State Owned - County Administered; Conservation	13.43 (14.31%) / 1,055.95 Acres (27.52%)
State Owned - County Administered; Non -Conservation	2.35 (2.50%) / 125.63 Acres (7.33%)
State Owned; Other	2.49 (2.65%) / 125.83 Acres (8.88%)







- City of Duluth Municipal Boundary
- Duluth Trails - Function**
- Existing Biking
- Proposed Biking
- Existing Hiking
- Existing X-Country Skiing
- Existing Snowmobile
- Existing Pedestrian
- Existing Paved
- Proposed Paved
- Existing Hiking - Superior Hiking Trail
- County Authorized Trails (Approximate)
- Conditional Use Deed Parcels (Ownership as Pre-1986 Conditional Use Deed)
- City Owned Parks
- General City Ownership
- State Owned - County Administered Conservation
- State Owned - County Administered Non-Conservation
- Private Ownership



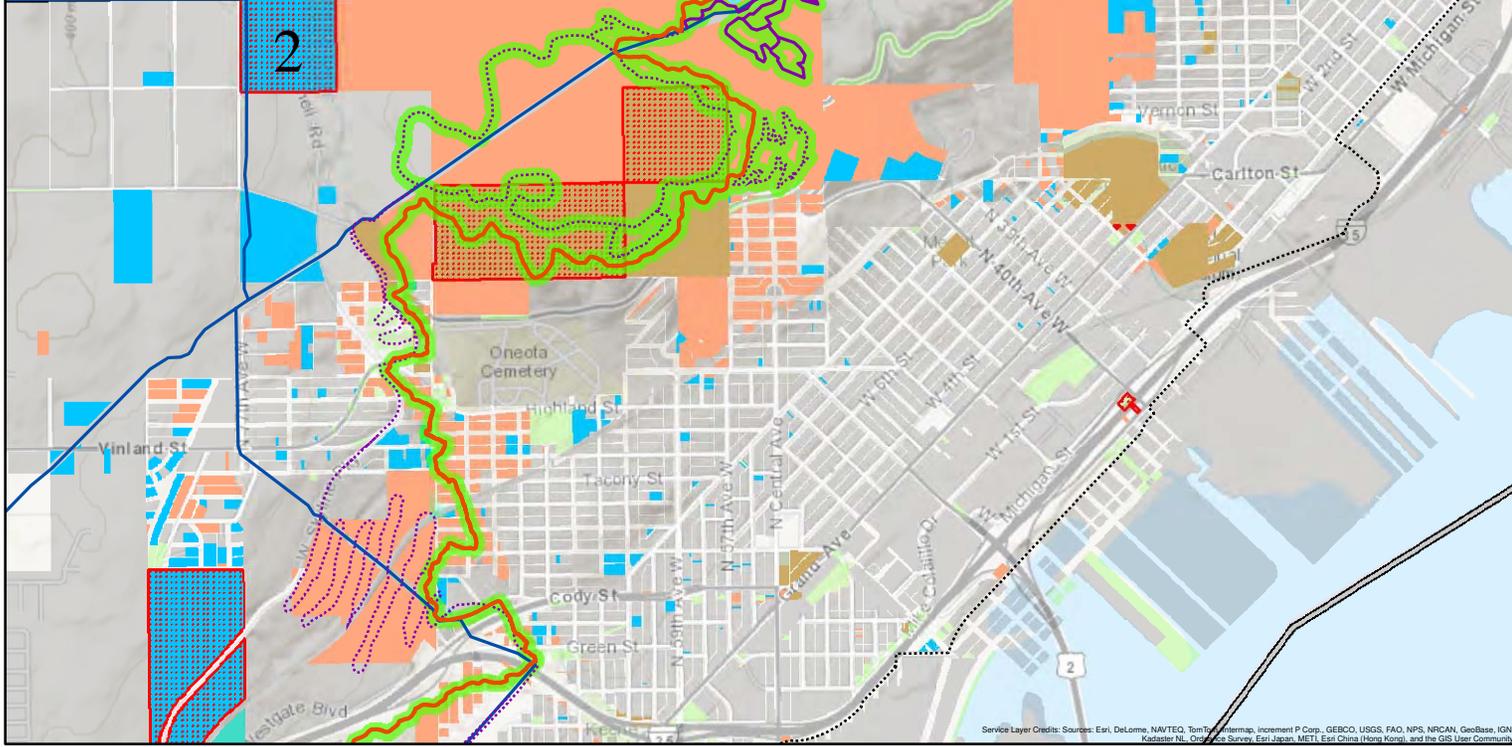
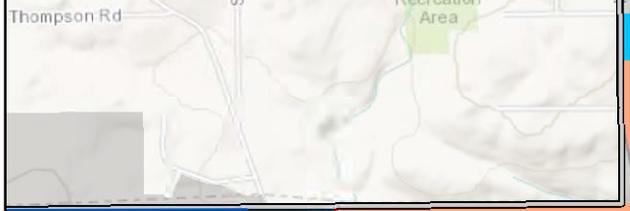
EXISTING TRAIL IN LESTER RIVER AREA	
LENGTH (MILES) / PARCEL SUMMARY	
TOTAL EXISTING TRAILS = 35.16 MILES	
Private Ownership	- 4.80 (13.65%) / 269.91 Acres (7.07%)
State Owned - County Administered;	
Non -Conservation-	1.42 (4.04%) / 58.89 Acres (37.23%)
Conditional Use Deeds (Pre-1986)	- 5.95 (16.92%) / 357.55 Acres (79.97%)
General City Ownership	- 9.38 (26.68%) / 579.21 Acres (77.36%)
PROPOSED TRAIL IN LESTER RIVER AREA	
LENGTH (MILES) / PARCEL SUMMARY	
TOTAL PROPOSED TRAILS = 9.26 MILES	
Private Ownership	- 1.12 (12.10%) / 113.59 Acres (2.98%)
State Owned - County Administered;	
Non -Conservation-	0.28 (3.02%) / 20.73 Acres (6.34%)
Conditional Use Deeds (Pre-1986)	- 1.87 (20.19%) / 211.84 Acres (47.38%)
General City Ownership	- 3.19 (34.45%) / 384.38 Acres (51.34%)

TRAILS - LESTER RIVER AREA
 Recreational Trails Analysis
 Duluth, Minnesota

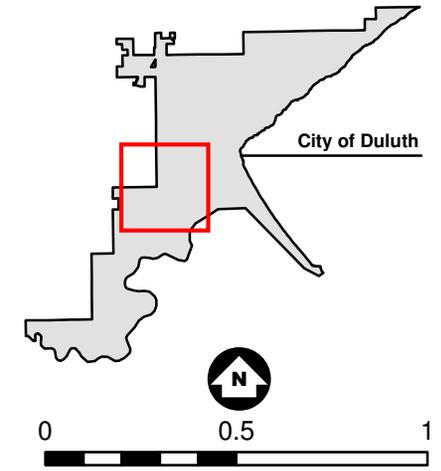


EXISTING TRAIL IN PIEDMONT AREA
LENGTH (MILES) / PARCEL SUMMARY
TOTAL EXISTING TRAILS = 27.39 MILES
 Private Ownership - 5.29 (19.31%) / 182.46 Acres (4.86 %)
 State Owned - County Administered;
 Non -Conservation- 2.86 (10.44%) / 129.00 Acres (31.75%)
 Conditional Use Deeds (Pre-1986) - 1.00 (3.65%) / 206.00 Acres (75.11%)
 General City Ownership - 0.17 (0.62%) / 3.39 Acres (3.37%)

PROPOSED TRAIL IN PIEDMONT AREA
LENGTH (MILES) / PARCEL SUMMARY
TOTAL PROPOSED TRAILS = 19.11 MILES
 Private Ownership - 3.17 (16.59%) / 180.54 Acres (4.81 %)
 State Owned - County Administered;
 Non -Conservation- 0.52 (2.72%) / 24.30 Acres (5.98%)
 Conditional Use Deeds (Pre-1986) - 1.12 (5.86%) / 166.00 Acres (60.53%)
 General City Ownership - 0.40 (2.09%) / 9.61 Acres (9.55%)

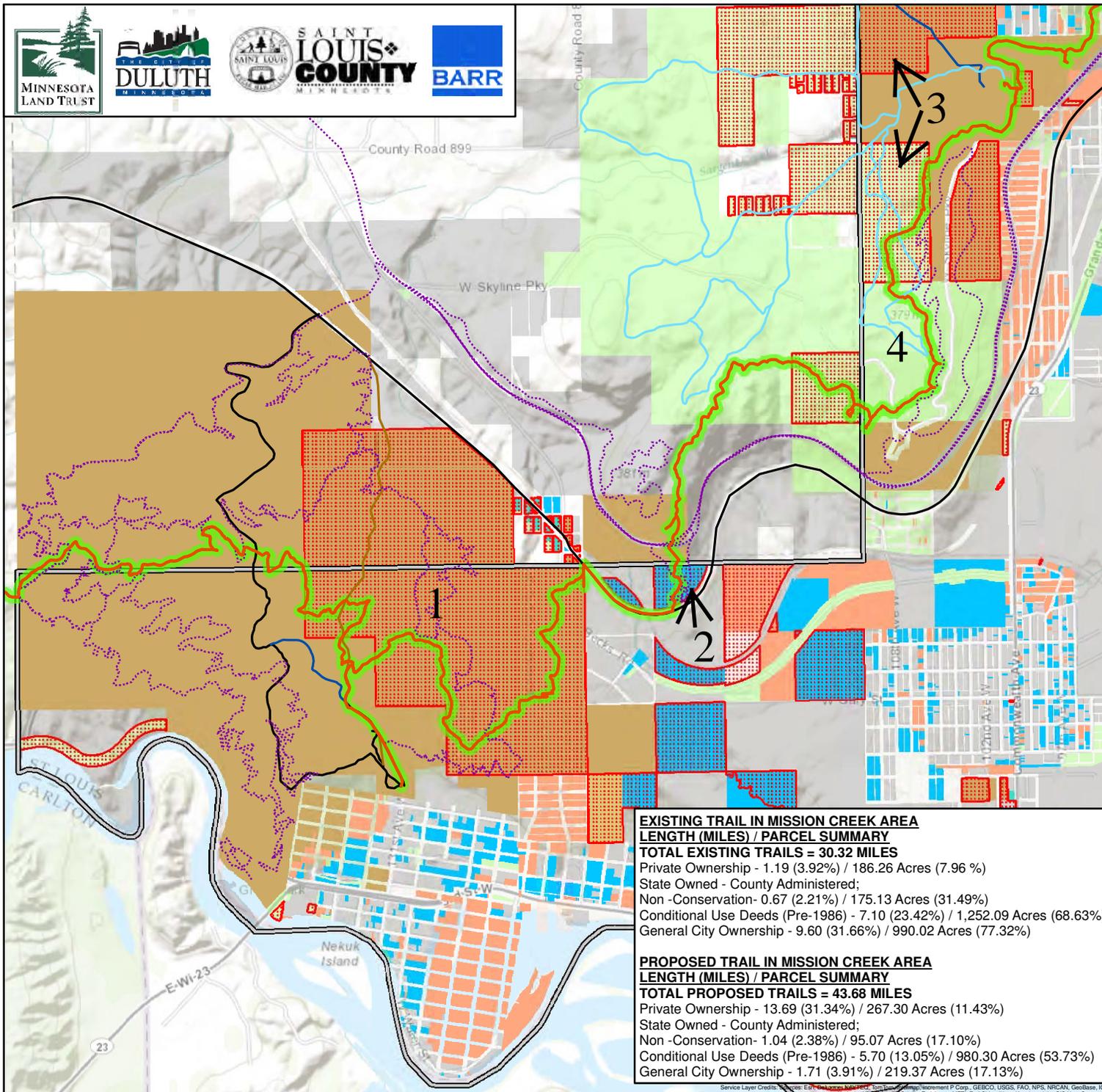


- City of Duluth Municipal Boundary
- Duluth Trails - Function**
- Existing Biking
- Proposed Biking
- Existing Hiking
- Existing X-Country Skiing
- Existing Snowmobile
- Existing Pedestrian
- Existing Paved
- Proposed Paved
- Existing Hiking - Superior Hiking Trail
- County Authorized Trails (Approximate)
- Conditional Use Deed Parcels (Ownership as Pre-1986 Conditional Use Deed)
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- General City Ownership
- State Owned - County Administered Conservation
- State Owned - County Administered Non-Conservation
- Private Ownership

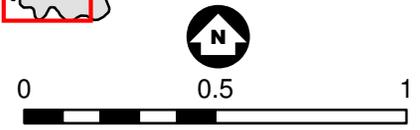
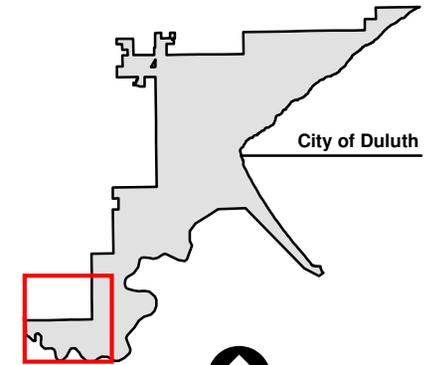


Miles
 1 Inch = 0.5 Miles
 Figure 5

TRAILS - PIEDMONT AREA
 Recreational Trails Analysis
 Duluth, Minnesota



- City of Duluth Municipal Boundary
- Duluth Trails - Function**
- Existing Biking
- Proposed Biking
- Existing Hiking
- Existing X-Country Skiing
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EXISTING TRAIL IN MISSION CREEK AREA	
LENGTH (MILES) / PARCEL SUMMARY	
TOTAL EXISTING TRAILS = 30.32 MILES	
Private Ownership	- 1.19 (3.92%) / 186.26 Acres (7.96 %)
State Owned - County Administered;	
Non -Conservation	- 0.67 (2.21%) / 175.13 Acres (31.49%)
Conditional Use Deeds (Pre-1986)	- 7.10 (23.42%) / 1,252.09 Acres (68.63%)
General City Ownership	- 9.60 (31.66%) / 990.02 Acres (77.32%)
PROPOSED TRAIL IN MISSION CREEK AREA	
LENGTH (MILES) / PARCEL SUMMARY	
TOTAL PROPOSED TRAILS = 43.68 MILES	
Private Ownership	- 13.69 (31.34%) / 267.30 Acres (11.43%)
State Owned - County Administered;	
Non -Conservation	- 1.04 (2.38%) / 95.07 Acres (17.10%)
Conditional Use Deeds (Pre-1986)	- 5.70 (13.05%) / 980.30 Acres (53.73%)
General City Ownership	- 1.71 (3.91%) / 219.37 Acres (17.13%)

TRAILS - MISSION CREEK AREA
 Recreational Trails Analysis
 Duluth, Minnesota

