

# Recreation Opportunity Analysis

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// 2010 Supply of Outdoor Recreation Resources

// Recreation Location Quotient Analysis

**recreation opportunity analysis // 59**

# Recreation Opportunity Analysis

## 2010 Supply of Outdoor Recreation Resources

Minnesota's publicly managed outdoor recreation resources of regional or state-wide significance (ORRs) include 182 regionally significant areas, 1,647 state managed areas, and 18 federally managed areas. In total, Minnesotans have access to more than 11 million acres of regionally significant, state, and federal ORRs across the State, accounting for 22% of the State's total land and water area (Appendix B, Tables 1 & 6). The vast majority of ORRs, more than 9.6 million acres, are managed as state and national forests (Appendix B, Tables 2 & 3). More than 1.5 million acres are protected as state wildlife management areas or national wildlife refuges. Other important resources include state and national parks, state scientific and natural areas, state and national recreation areas, national scenic rivers, national monuments, and state wayside areas. More than 87,000 acres are protected as regionally significant areas in Minnesota (Appendix B, Table 1).

Statewide, Minnesotans have access to more than 11,000 miles of trails managed for summer recreation uses. Almost 5,000 of these trail miles are maintained for non-motorized uses such as walking, hiking, inline skating, and cycling (Appendix B, Table 4). Almost 4,400 miles of trails are state water trails. More than 1,800 miles of these trails are managed for motorized uses such as off-highway and all-terrain vehicles. In the winter, Minnesotans have access to 23,100 miles of trails: both non-motorized trails (1,295 miles) and snowmobile trails (21,805 miles).

### Outdoor Recreation Resource Areas and Trails

The amount of land and water protected as regionally or statewide significant outdoor recreation resource (ORR) areas varies across the State. The Northeast and Northwest Regions have the most land set aside for conservation and recreation. The proportion or percentage of land protected within each region also varies quite significantly. For example, more than 55% (7.8 million acres) of the Northeast Region is publicly managed as outdoor recreation resources (Appendix B, Table 6). In contrast, less than 3% (343,606 acres) of the South Region is set aside for these purposes. The more densely populated regions tend to have less land area devoted to regionally significant, state or federal ORR areas. Like the South Region, the Central and Metro Regions have less than 6% of their land area set aside as outdoor recreation resources. However, it is important to note that these figures do not encompass most locally managed ORRs such as county and municipal parklands.

The distribution of trails also varies region to region. The Northeast Region, the largest region in land area, has the most total summer recreation trail miles, including water trails, at almost 5,000 miles (Appendix B, Table 4). This region has more than half of the State's total supply of non-motorized and motorized summer land-based trails. In contrast, the supply of state water trails is dispersed almost evenly across the Northeast (29%), South (29%), and Northwest (27%) Regions. The South has the most total winter trail miles at more than 7,000 miles. While the bulk of the State's motorized winter trails are found in the Northwest (31%) and South (31%), the majority of non-motorized trails maintained for Nordic skiing are found in the Northeast (54%). Overall, the Metro Region has the fewest summer and winter trail miles. However, the trail supply per land area ratios reveal that the Metro Region has the highest density of summer trails at 35 miles per 100,000 acres (Appendix B, Table 7). The Central Region has the highest density of winter trails at 59 miles per 100,000 acres.

### Amenities

Not all ORR areas or trails provide the same recreation opportunities for visitors. One approach to examining the supply of recreation resources goes beyond acres and miles and explores the types of amenities that are available. For example, 256 areas inventoried across the state have picnic day use areas (Appendix B, Table 5). Camping facilities are available at 201 areas including 145 with developed camping, 121 with primitive camping, and 75 with group camping opportunities. Playgrounds, visitor centers, and equipment rental facilities are present at 127, 126, and 117 areas respectively. Seventy-nine of the areas inventoried have fishing piers.

Overall, the Metro Region has the highest number of ORRs with inventoried amenities per 100,000 acres of any region, which is primarily a function of the higher density of areas with picnic areas and play grounds (Appendix B, Table 8). The Northwest has the lowest number of ORRs with inventoried amenities per 100,000 acres.

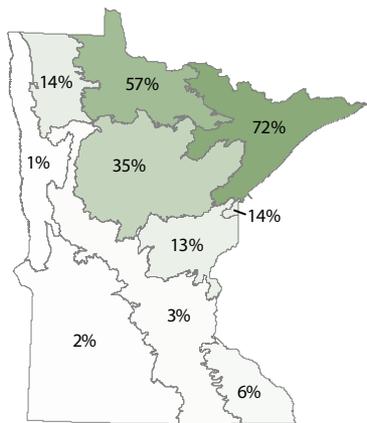
### Ecosystem Representation in Outdoor Recreation Resources

Examining ORR supply based on Ecological Classification System Sections (ECS) (DNR, 1999) provides insight into the extent to which varying ecosystems are represented in the state's network of ORR areas and trails.

For example, more than 72% of the Northern Superior Uplands is publicly protected as ORRs (Figure 1; Appendix B, Table 9), while less than 2% of the Red River Valley and the North Central Glaciated Plains has similar protection. The Minnesota and Northeast Iowa Morainal section has less than 3% of its area protected as ORRs.

Per land and water area, the Southern Superior Uplands has the highest summer (98.2) and winter (76.2) trail mileage per 100,000 acres (Figure 2; Appendix B, Table 10). The North Central Glaciated Plains has the lowest density of summer trail miles (8.8) and the Northern Minnesota and Ontario Peatlands has the lowest density of winter trail miles (24.6) per 100,000 acres.

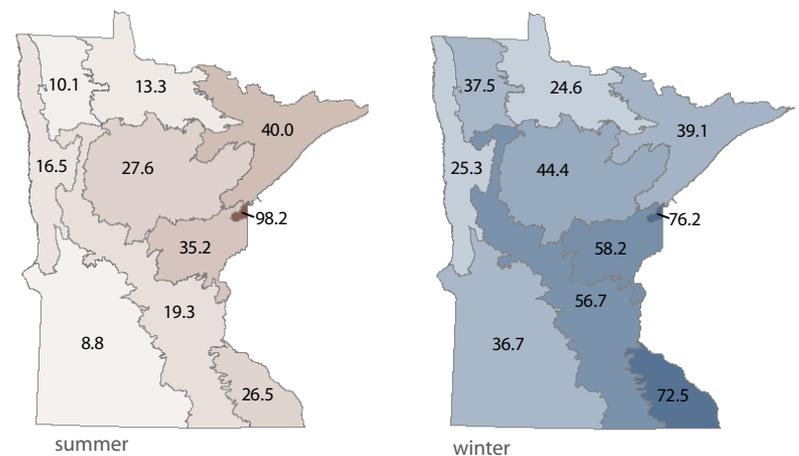
**Figure 1 // Percentage of ecological section protected as outdoor recreation resource areas**



### Potential Demand for Outdoor Recreation Resources

Based on 2009 Minnesota population estimates (U.S. Census), Minnesota's total ORR acreage per capita ratio is 2.24 acres per resident (Figure 3; Appendix B, Table 11). Regional comparisons of acreage per capita estimates show great regional variability: Northeast residents have access to almost 19 acres within their region per resident, and Metro residents have access

**Figure 2 // Miles of outdoor recreation resource trails per 100,000 acres by ecological section**



to 0.04 acres within their region per resident. Trail miles per capita estimates tell us that Minnesotans have access to 211 miles of summer trails and 436 miles of winter trails per 100,000 residents (Figures 4 & 5; Appendix C, Table 14). The Northeast and Northwest Regions have the highest summer and winter trail miles per capita ratios, while the Metro Region has the lowest trail miles per capita ratio. Per capita ratios reveal that the Northeast and Northwest Regions have the highest number of ORRs with inventoried attributes per 100,000 people, especially with respect to general camping facilities, primitive camping facilities, visitor centers, and equipment rental services.

As many Minnesotans may seek recreation opportunities outside of their own region, estimates of potential recreation visitor demand must take into account inter-regional travel. Using 2009 population estimates and state park recreation destination data gathered from a sample of residents in each region (DNR, 2005), potential recreation visitor demand (i.e., regional and interregional demand) ratios were calculated. In this instance, the number of acres per potential recreation visitor declines in the Northeast to 11 acres. The Metro Region's ratio increases slightly at just less than 0.06 acre per potential recreation visitor (Appendix B, Table 12). With respect to

# Recreation Opportunity Analysis

interregional demand for summer trails, the Northeast has 683 miles of trails, while the Metro has 34 miles of trails per 100,000 potential recreation visitors (Appendix B, Table 13).

Given projected population increases and at current supply of recreation resources, both the statewide acreage and trail per capita ratios would decline 11% in 2020 and another 8% in 2035. Region-specific population projections for 2035 reveal the Central Region's ORR per capita ratio will be the most affected by population growth at current supply level, declining more than 40% from 0.39 to 0.23 acres per resident for ORR areas (Figure 3; Appendix B, Table 11). Similarly, trail per capita ratios in the Central Region decline from 148 to 88 miles of summer trails and from 416 to 248 miles of winter trails per 100,000 residents (Figures 4 & 5; Appendix B, Table 14).

Figure 3 // ORR Area Acres per 1,000 Resident by Year

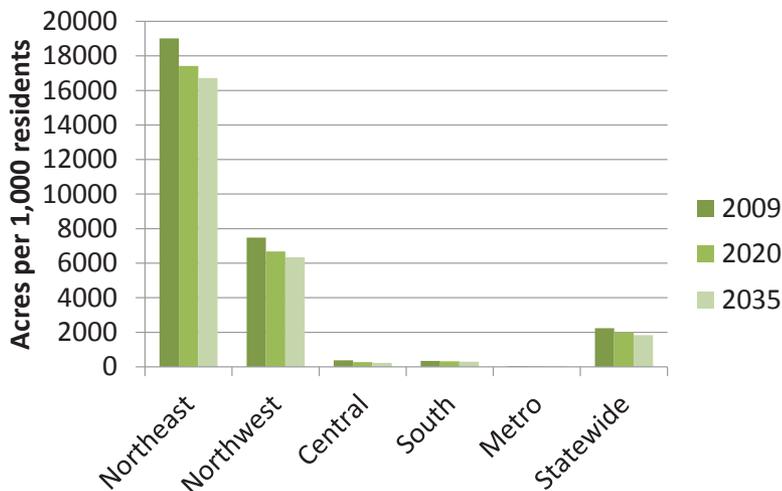


Figure 4 // ORR summer trail miles per 1,000 resident by year

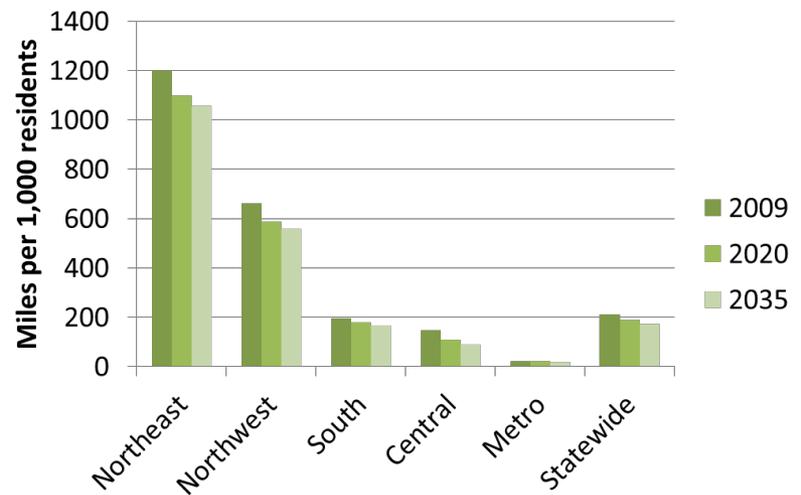
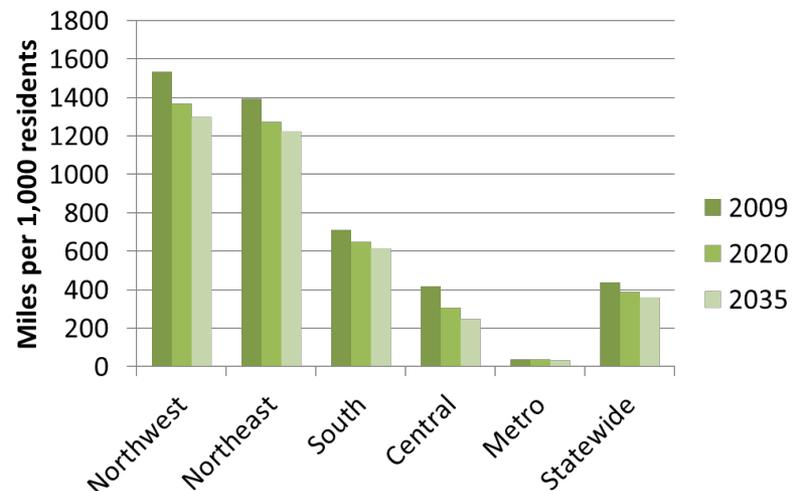


Figure 5 // ORR winter trail miles per 1,000 resident by year

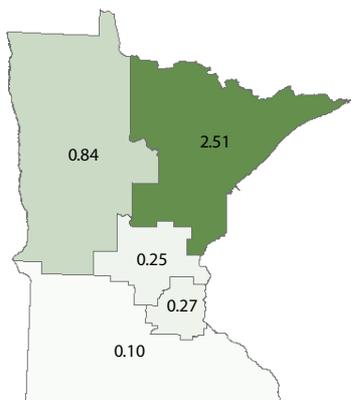


## Recreation Location Quotient (RLQ) Analysis

### ORR Area and Trail RLQs

The ORR area-based RLQ analysis reveals considerable differences across the State. The Northeast Region has the highest score of any region. This region has 2.5 times the acreage protected, per land area, than the state standardized score (Figure 6, Appendix B, Table 15). In contrast the Central, Metro and South have scores less than 0.30, indicating these regions have about 70% less acreage protected, per land area, than the state standardized score. While the Northeast has the highest score for both state and federally managed ORR areas, the Metro Region has the highest score (16.2) for regionally significant areas—at least 13 times more acreage protected, per land area, than the other regions.

**Figure 6 //** Area-based RLQ for outdoor recreation resource areas

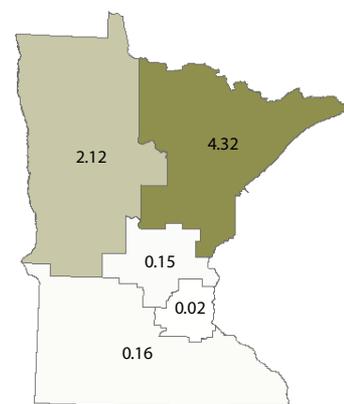


The trail area-based RLQ analysis reveals that the Metro (1.69) and Northeast (1.68) have the highest scores for summer trails and the Central (1.37) and Metro (1.34) have the highest scores for winter trails (Figure 8; Appendix B, Table 17). The South (0.60) and Northwest (0.88) have the lowest scores for summer and winter trails, respectively. The population-based RLQ analysis, adjusted for inter-regional demand, reveals the Northeast has almost 3 times the summer trail mileage and the Metro has about one-tenth of the summer trail mileage of the state

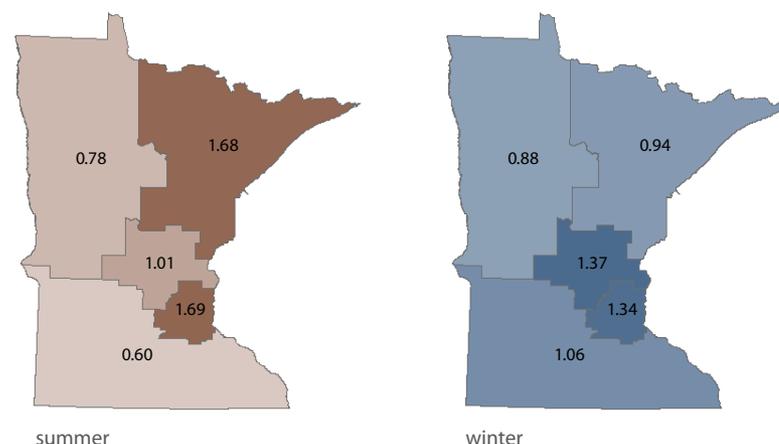
The population-based RLQ analysis, adjusted for inter-regional demand, analysis shows a similar pattern. The Northeast Region has the highest score of any region at over 4 times the acreage protected, per capita, than the state standardized score (Figure 7; Appendix B, Table 16). The Metro Region has the lowest score, at less than 3% of the state standardized score in acreage protected, per capita. The Central and Southern Regions are similar in their scores, 15% and 16% of the state standardized score, respectively.

The trail area-based RLQ analysis reveals that the Metro (1.69) and Northeast (1.68) have the highest scores for summer trails and the Central (1.37) and Metro (1.34) have the highest scores for winter trails (Figure 8; Appendix B, Table 17). The South (0.60) and Northwest (0.88) have the lowest scores for summer and winter trails, respectively. The population-based RLQ analysis, adjusted for inter-regional demand, reveals the Northeast has almost 3 times the summer trail mileage and the Metro has about one-tenth of the summer trail mileage of the state

**Figure 7 //** Population-based RLQ for outdoor recreation resource areas, adjusted for inter-regional demand



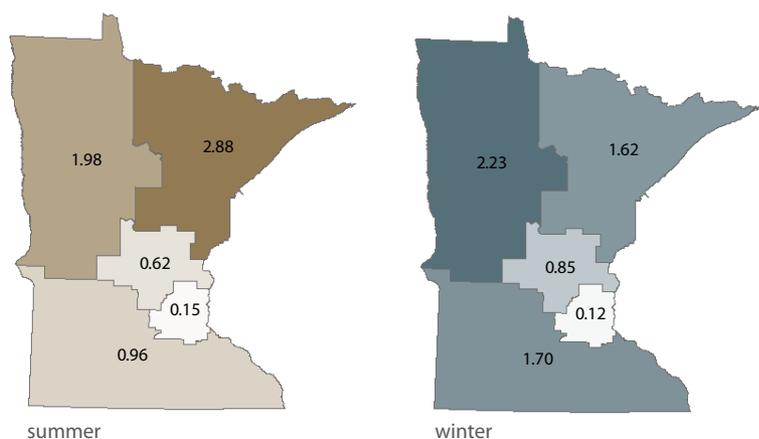
**Figure 8 //** Area-based RLQ for outdoor recreation resource trails, adjusted for inter-regional demand



# Recreation Opportunity Analysis

standardized score (Figure 9; Appendix B, Table 18). For winter trails, the Northwest has 2.2 times the winter trail mileage and the Metro has less than one-tenth of the winter trail mileage of the state standardized score.

**Figure 9 // Population-based RLQ for outdoor recreation resource trails, adjusted for inter-regional demand**



## Amenities RLQ

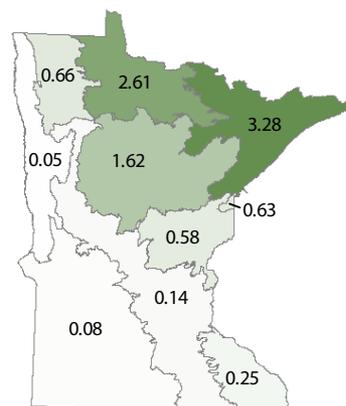
The amenities area-based RLQ analysis produced scores ranging from 0.48 for fishing piers in the South to 9.69 fishing piers in the Metro Region (Appendix B, Table 19). Not surprisingly, the Metro has the highest density for all attributes except areas with primitive camping, which is highest in the Northeast. The population-based RLQ analysis, adjusted for inter-regional demand, suggests high potential demand for areas with ADA accessible camping opportunities within the Central and Metro Regions (Appendix B, Table 20). The Metro Region has scores below the state standardized score for each of the attributes, save picnic areas, fishing piers and playgrounds. The Northeast and Northwest appear to have an abundance of areas with the select inventoried attributes. The South Region has scores below the state standardized score in fishing piers and visitor centers.

## Ecosystem Representation RLQs

The area-based RLQ analysis for ECS Sections suggests some disparities among Sections: the Northern Superior Uplands has the highest score (3.28) and the Red River Valley has the lowest score (0.05) (Figure 10; Appendix B,

Table 21). For summer trail area-based RLQ analysis, the Southern Superior Uplands, the smallest Section in area, has the highest score (4.74) (Figure 11; Appendix B, Table 22). The North Central Glaciated Plains has the lowest summer trail score (0.43). Winter trail scores were the highest in the Southern Superior Uplands (1.78) and the Paleozoic Plateau (1.69) and the lowest in the Northern Minnesota and Ontario Peatlands (0.57) (Figure 11; Appendix B, Table 22).

**Figure 10 // Area-based RLQ for outdoor recreation resource areas by ecological sections**



**Figure 11 // Area-based RLQ for outdoor recreation resource trails by ecological sections**

