



NORTH DAKOTA

2023-2027 STATE COMPREHENSIVE
OUTDOOR RECREATION PLAN

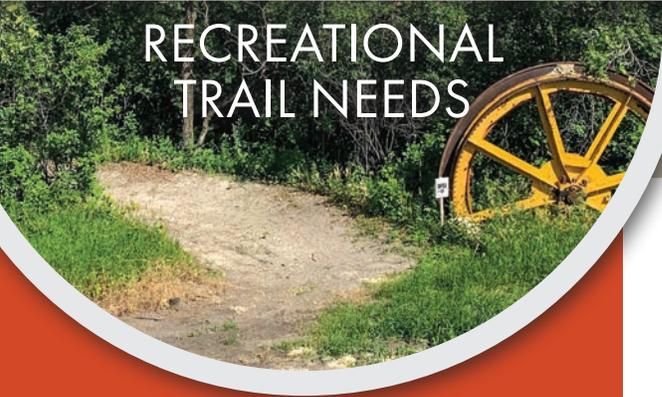
RECREATIONAL TRAIL NEEDS

NORTH DAKOTA

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STATE COMPREHENSIVE OUTDOOR RECREATION PLAN

RECREATIONAL
TRAIL NEEDS



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The mission of the North Dakota Parks and Recreation Department is to offer a diversity of recreation opportunities and sustainably manage resources.

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Acknowledgements: This publication was prepared by the North Dakota Parks and Recreation Department along with Clearwater Communications. Winkelman Consulting surveyed North Dakota households and outdoor recreation providers and analyzed the resulting data included in this publication.

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RECREATIONAL TRAIL NEEDS

OVERVIEW

Recreational Trail Needs is a companion publication to the 2023-2027 North Dakota State Comprehensive Outdoor Recreation Plan (SCORP) prepared by the North Dakota Parks and Recreation Department. It was financed in part by a planning grant from the National Park Service, U.S. Department of the Interior, under the provisions of the Land and Water Conservation Fund (LWCF) Act of 1965 (PL 88-578, as amended), with additional funding provided by the Recreational Trails Program and the state of North Dakota.

Motorized and non-motorized trails are important components of the outdoor recreation infrastructure in North Dakota. Paved multi-use trails for walking, running and bicycling are most often found in communities and provide close-to-home recreation. Unpaved trails for hiking, mountain biking and horseback riding are more common in state and federal parks and recreation areas. Paddling trails for canoes and kayaks on rivers and lakes across the state are much more limited. Winter trails are available in North Dakota for cross-country skiing/snowshoeing and fat-tire biking. Off-highway vehicle (ATV, dirt bike or side by side) and snowmobile trails offer opportunities for those interested in motorized recreation.

North Dakota trail enthusiasts have formed a variety of trail user and advocacy groups at the national, state, regional, and local levels to support the development and maintenance of trail systems. Active trail groups include the Maah Daah Hey Trail Association, North Country Trail Association, NCT - Dakota Prairie Chapter, NCT - Sheyenne River Valley Chapter, NCT - Central Flyway Chapter, Red River Runners, Bismar Runners, Magic City Striders, UND Running Club Team, Jamestown Area Mountain Bikers (JAMB), North Star Cycling Club, Dakota Roughriders Bike Club, Magic City MTB, Save the Maah Daah Hey, Great Rides Fargo, Fargo Moorhead Trailbuilders, Central Dakota Cyclists, Burleigh County Bicycle Cult, UND Cycling Club, NDSU (USA Cycling Club), Turtle Mountain Trails Association, Backcountry Horsemen of ND, American Endurance Riding Conference, North Dakota Equine Association, North Dakota Appaloosa Horse Club, Dusty Trail Riders, Trail Riders of ND and MN, Upper Midwest Endurance and Competitive Rides Association, North American Trail Ride Conference (Region 6), Red River Riders, Roughriders OHV Club, Minot ATV Club, and Turtle Mountain ATV/OHV Club.

DEMAND AND SUPPLY



The most recent North Dakota Tourism Division visitors profile indicated hiking and backpacking motivated 13% of overnight visits and 28% of day trip visits. Another 15% went bicycling or mountain biking and 13% went horseback riding. In 2021, more than 1.3 million state park visitors would have had access to trails. Post-pandemic travel trends included historically high rates of camping, hiking and biking. Tourism reported that new growth opportunities will be limited with existing infrastructure.

Definitions

Support facilities along trails can impact a user's interest level and are categorized as follows:

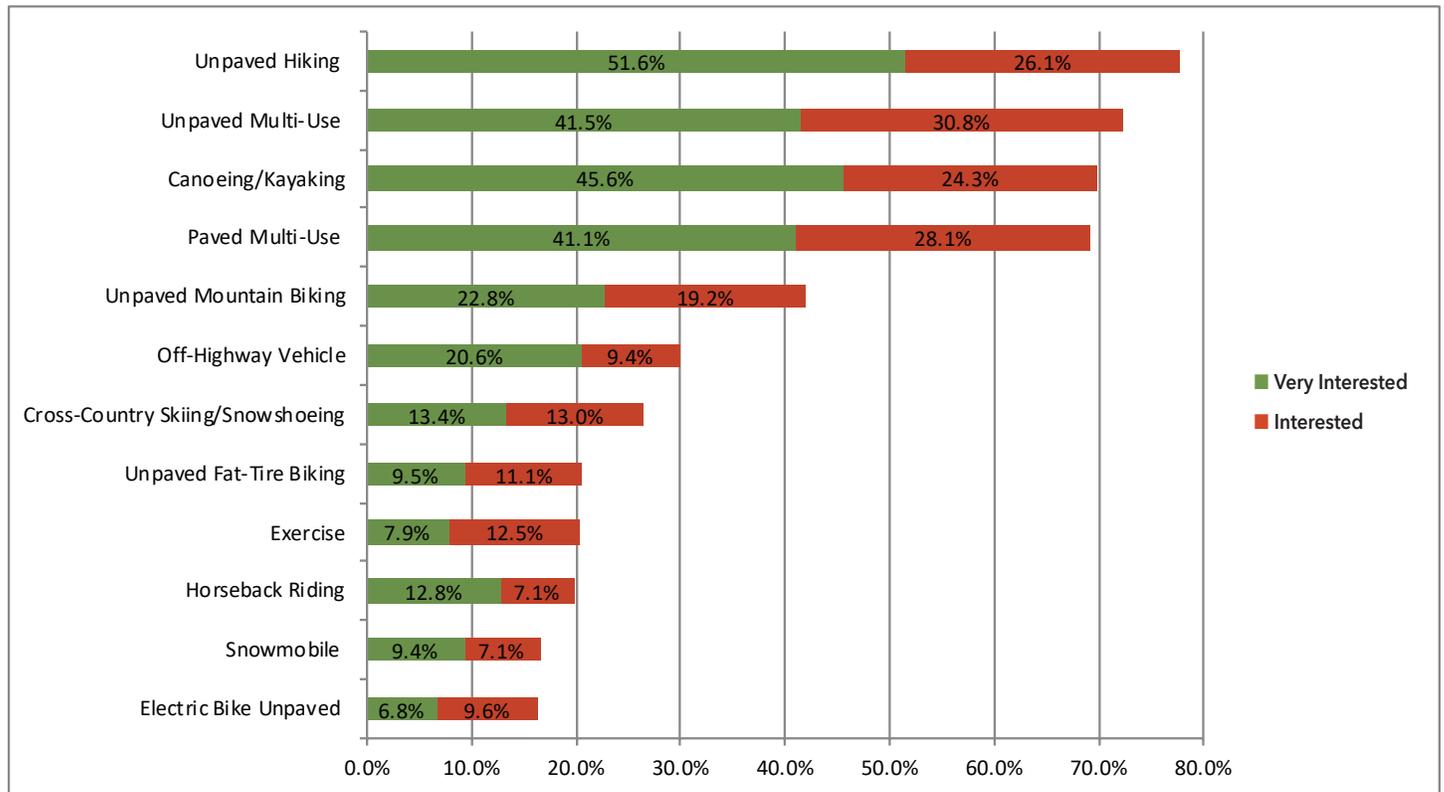
- Primitive trails have neither restrooms nor running water.
- Semi-modern trails have restrooms but no running water.
- Modern trails have permanent restrooms and running water.

PERSPECTIVES FROM NORTH DAKOTANS

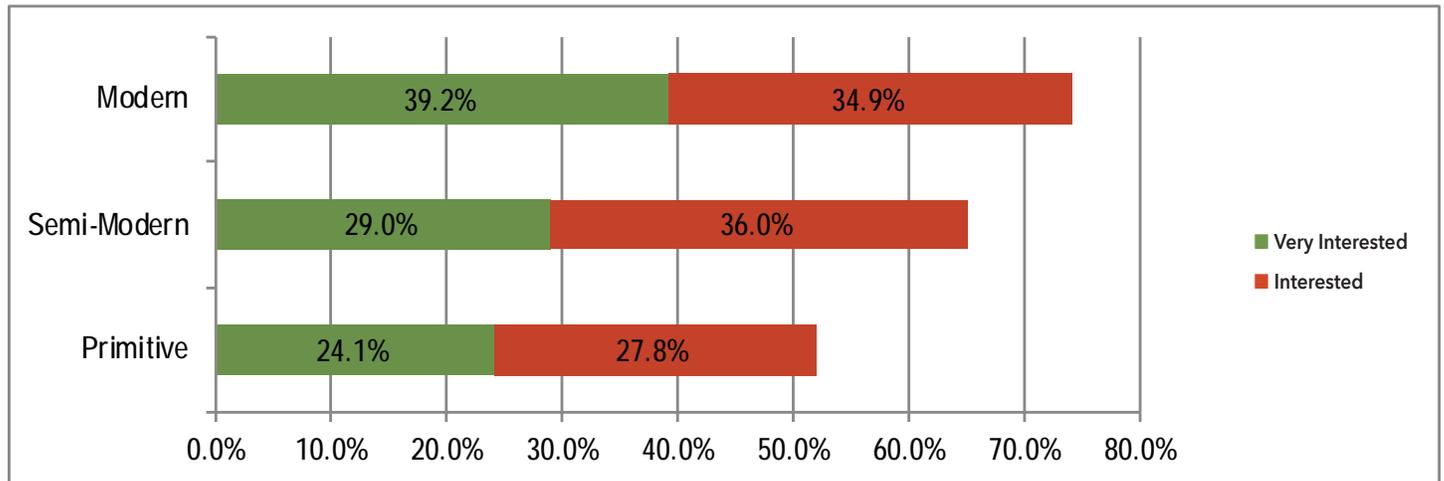
A 2021-2022 survey of North Dakota households was conducted to assess interest in outdoor recreation activities and to identify the perceived quantity and quality of facilities for these activities. Non-motorized trail usage is one of the most popular outdoor recreation activities for North Dakota households, with 90% interested in using designated trails for walking, running, bicycling, or horseback riding. When asked an open-ended question about what outdoor activities or facilities they would like to see offered or expanded in North Dakota, the largest number of North Dakota households expressed interest in trails for non-motorized use. The specific trail activities that interest the most North Dakota households include:

- Using a designated unpaved hiking trail (78%).
- Using modern trails with restrooms and running water (74%).
- Using a designated unpaved multi-use (walking, jogging or bicycling) trail (72%).
- Using a designated canoe or kayaking trail (70%).
- Using a designated paved multi-use (walking, jogging or bicycling) trail (69%).

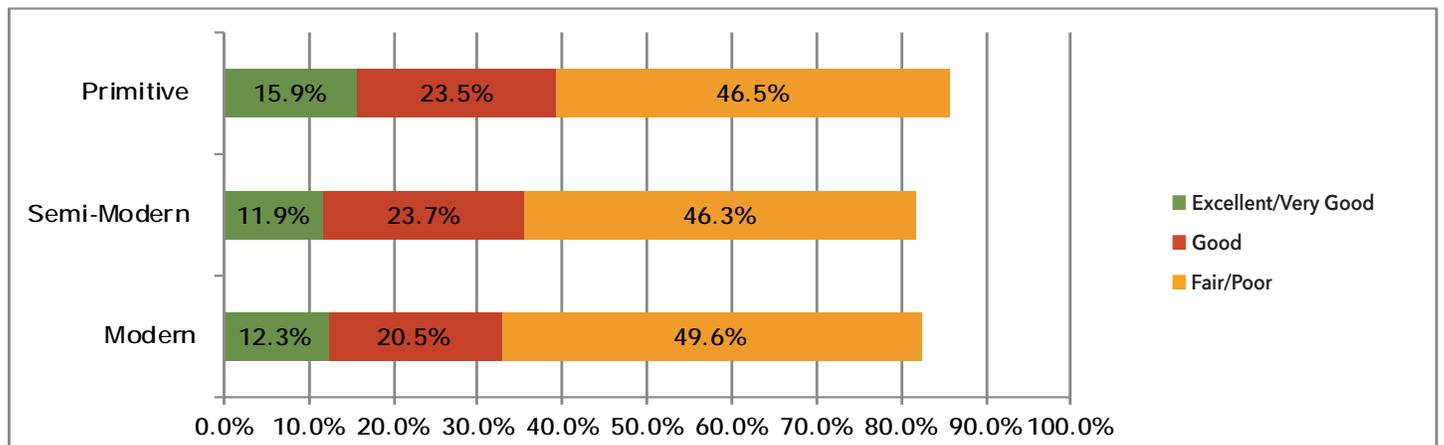
Trail Usage Interest by North Dakotans



Non-Motorized Trail Usage Interest by North Dakotans Based on Amenities



Quality and Quantity of Non-Motorized Trails Based on Amenities in North Dakota



The quality and quantity of trails are critical to the recreation user's experience. North Dakota households that expressed interest in using trails were asked to rate the number of trails and the overall condition of those trails in their area on a five-point scale: excellent, very good, good, fair, or poor. Thirty-one percent of North Dakota households rate the number and condition of paved multi-use trails as excellent or very good. In contrast, fair or poor ratings are given to:

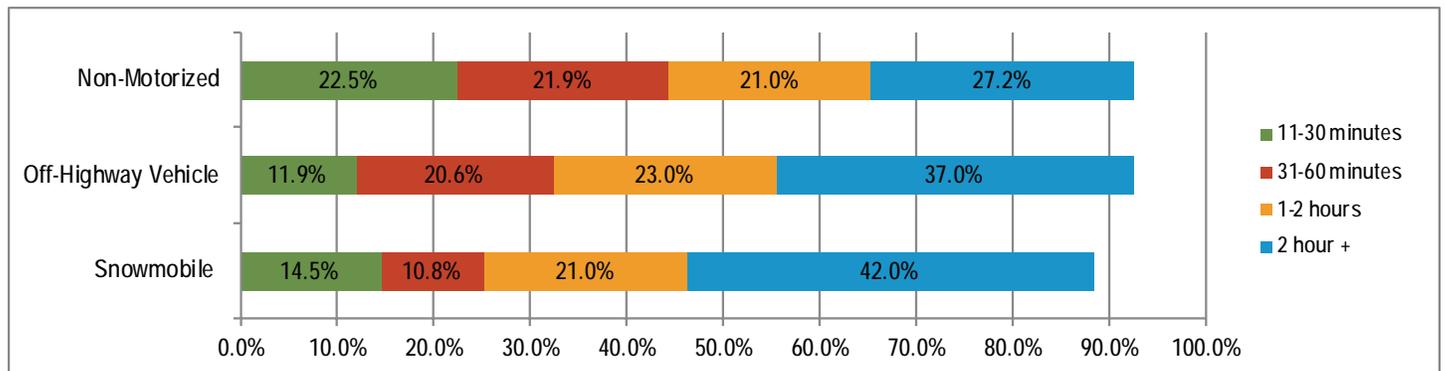
- Exercise trails with exercise machines or equipment at stations (73%).
- Off-highway vehicle (ATV, dirt bike or side-by-side) trails (68%).
- Designated paddling trails for canoeing or kayaking (61%).
- Unpaved fat-tire biking trails (45%).

Trail Quality and Quantity in North Dakota



North Dakota households are willing to travel farther to use motorized trails than non-motorized trails, with 42% of North Dakota households interested in snowmobiling willing to drive more than two hours to use trails. Thirty-seven percent would travel more than two hours to use an ATV, dirt bike or side-by-side trail.

Farthest Distance North Dakota Trail Users Are Willing to Travel

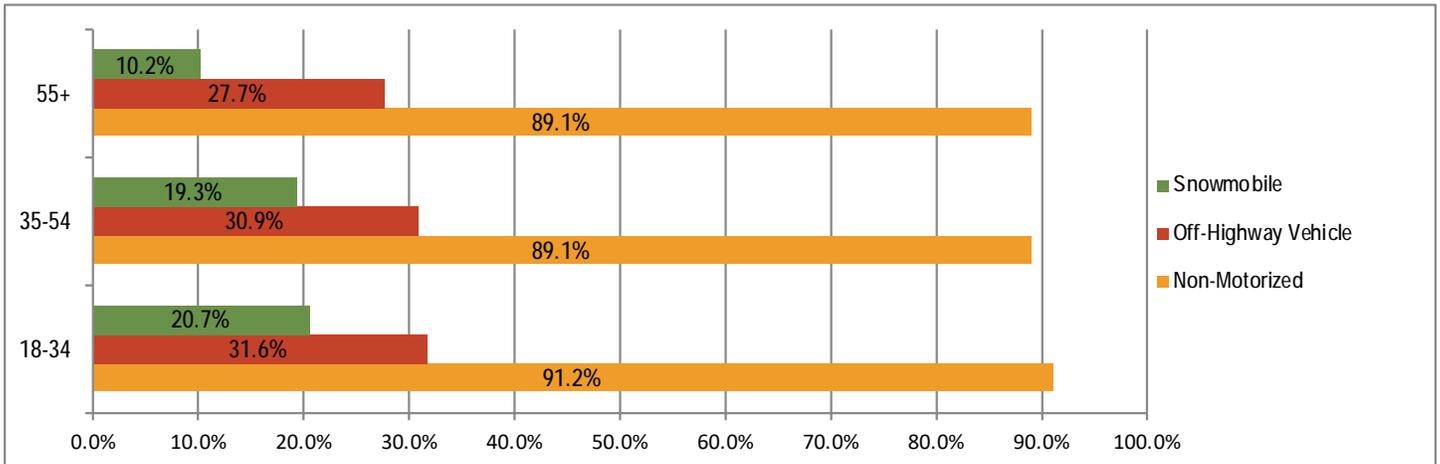


Interest in trails varies somewhat when considering the demographics of North Dakotans or North Dakota households. Men are more interested in using off-highway vehicle (ATV, dirt bike or side-by-side) and snowmobile trails than women, and women are slightly more interested in non-motorized trails than men. Motorized trail interest mostly increases as community population decreases. North Dakotans with the lowest income have the highest interest in non-motorized trails.

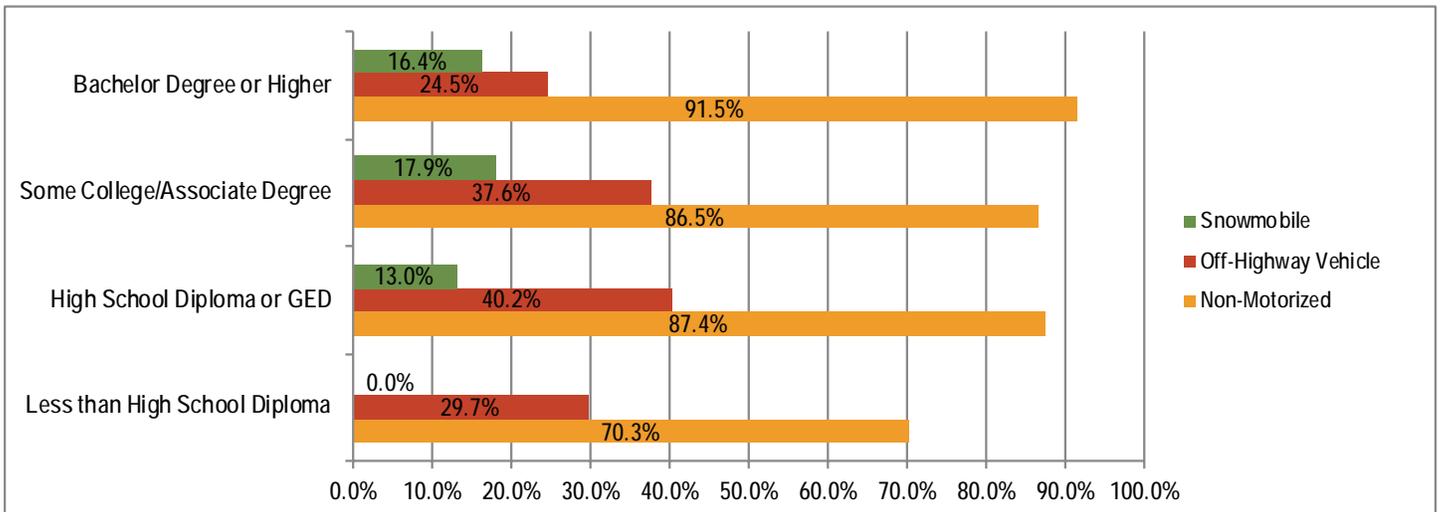
Trail Usage Interest by Gender



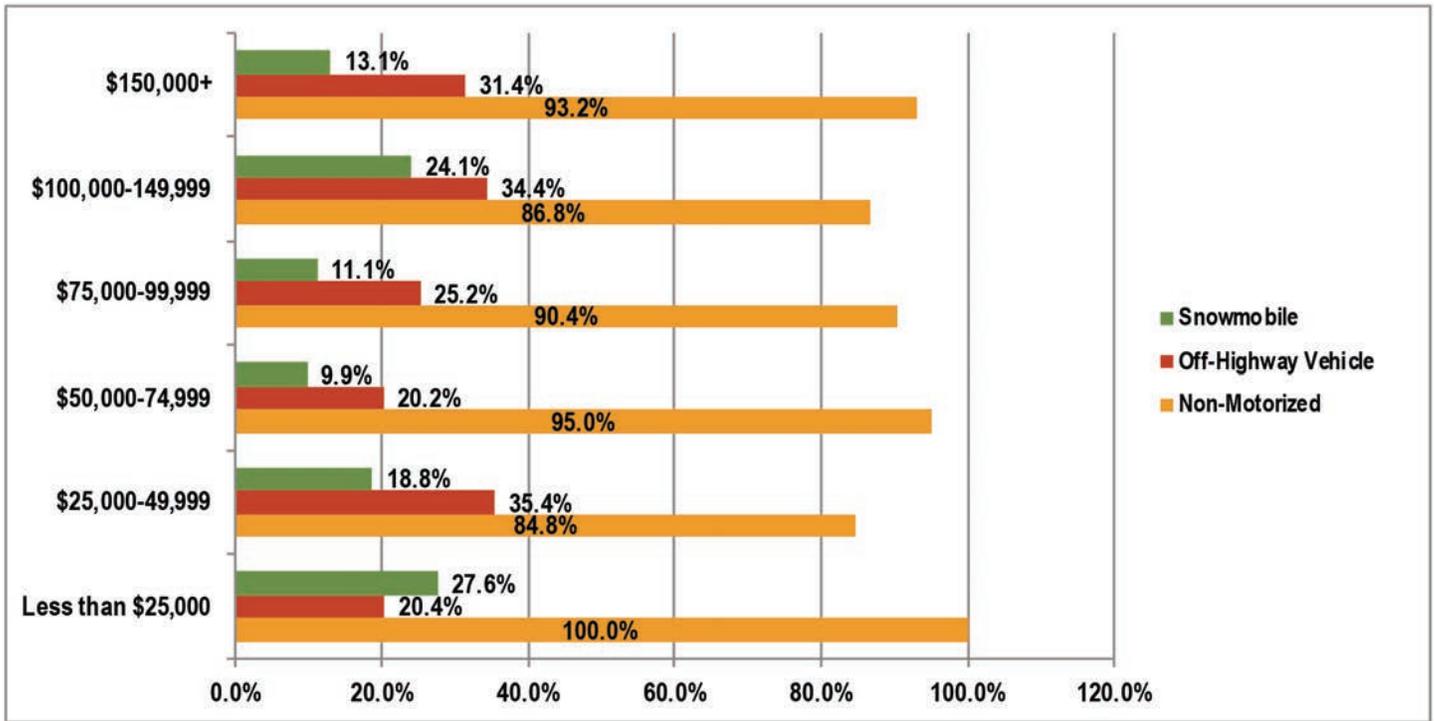
Trail Usage Interest by Age



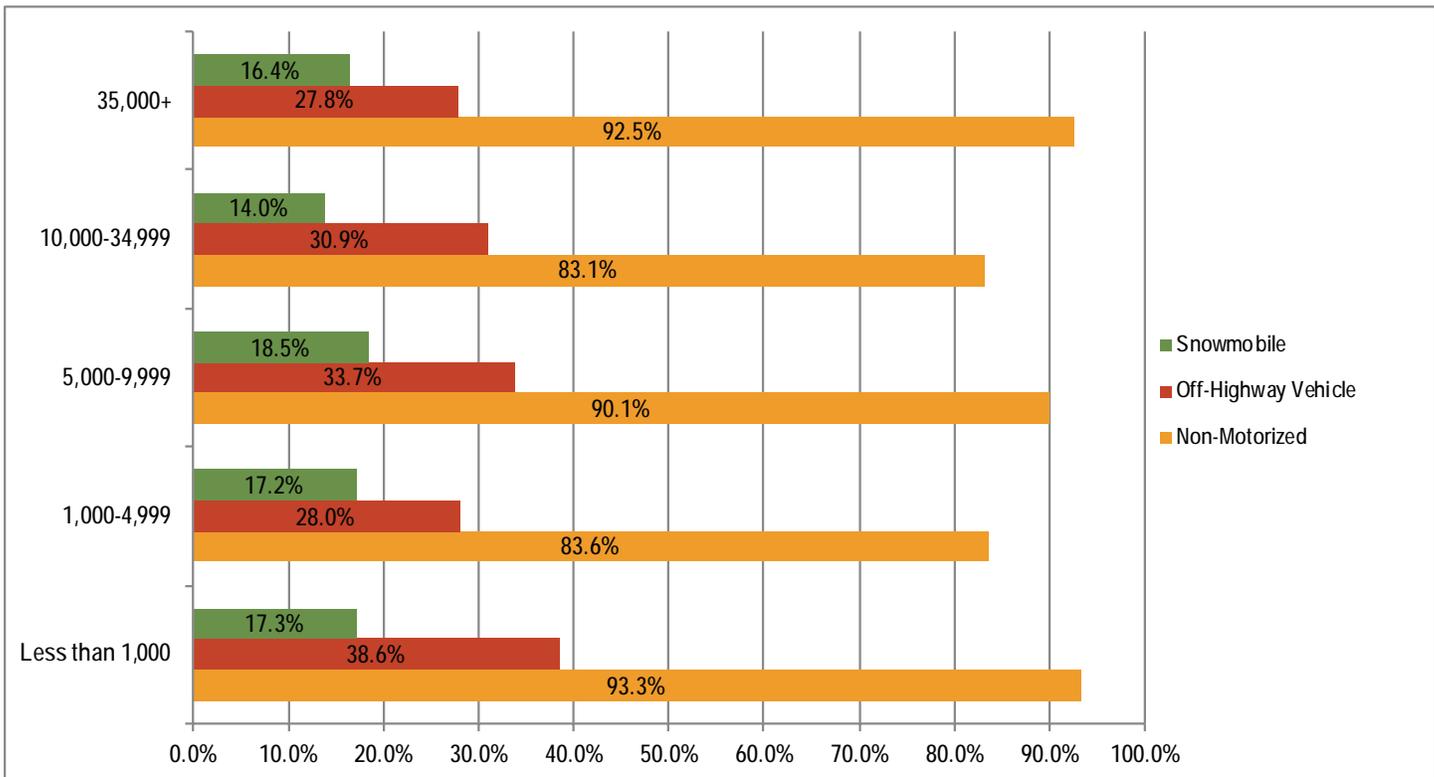
Trail Usage Interest by Education Level



Trail Usage Interest by Household Income Level



Trail Usage Interest by Community Population



Comparing North Dakota households' interest in using different types of trails with their rating of the number and condition of such trails (excellent/very good versus fair/poor) provides a strength-weakness grid. The quality/quantity percentage in the chart shows the difference between the percentage of households that rated a type of trail excellent or very good versus fair or poor. Modern and semi-modern trails, as well as unpaved multi-use trails, hiking trails and paddling trails for canoeing/kayaking, are primary weaknesses throughout the state. This means there is a high level of interest in these types of trails, but the overall number and condition is rated fair or poor. In contrast, paved multi-use trails are primary strengths, according to North Dakota households.

Strength-Weakness Trail Grid

| TRAIL TYPE | INTEREST LEVEL | QUALITY/QUANTITY RATING | STRENGTH/WEAKNESS CATEGORY |
|----------------------------------|----------------|-------------------------|----------------------------|
| NON-MOTORIZED | | | |
| Unpaved Hiking | 77.8% | -23.0% | Primary Weakness |
| Unpaved Multi-Use | 72.3% | -18.1% | Primary Weakness |
| Paddling for Canoeing/Kayaking | 69.9% | -42.5% | Primary Weakness |
| Paved Multi-Use | 69.2% | -7.3% | Primary Weakness |
| Unpaved Mountain Biking | 42.0% | -37.8% | Primary Weakness |
| Cross-Country Skiing/Snowshoeing | 40.2% | -37.2% | Primary Weakness |
| Fat-Tire Biking | 20.6% | -29.3% | Secondary Weakness |
| Exercise with Stations | 20.5% | -71.6% | Secondary Weakness |
| Horseback Riding | 19.9% | -44.2% | Secondary Weakness |
| NON-MOTORIZED AMENITIES | | | |
| Modern | 74.1% | -44.2% | Primary Weakness |
| Semi-Modern | 65.0% | -34.4% | Primary Weakness |
| Primitive | 51.9% | -30.1% | Primary Weakness |
| MOTORIZED | | | |
| Off-Highway Vehicle | 30.0% | -64.5% | Secondary Weakness |
| Snowmobile | 16.5% | -44.6% | Secondary Weakness |



PERSPECTIVES FROM PROVIDERS

A 2022 survey of North Dakota outdoor recreation providers indicates demand generally exceeds supply for most trails and activities across the state. The survey assessed perceived demand for various outdoor recreation facilities, inventoried the quantity and condition of such facilities and solicited input on future demand and needs. The types of trails for which the highest proportion of providers say demand exceeds supply include:

- Unpaved multi-use trails (52.6%)
- Paved multi-use trails (52.0%)
- Unpaved hiking trails (45.1%)
- Off-highway vehicle (ATV, dirt bike or side-by-side) trails (43.4%)
- Mountain biking or electric bike only trails (41.7%)
- Modern support facilities (40.6%)
- Primitive support facilities (39.4%)

Trail Demand Assessed by North Dakota Providers

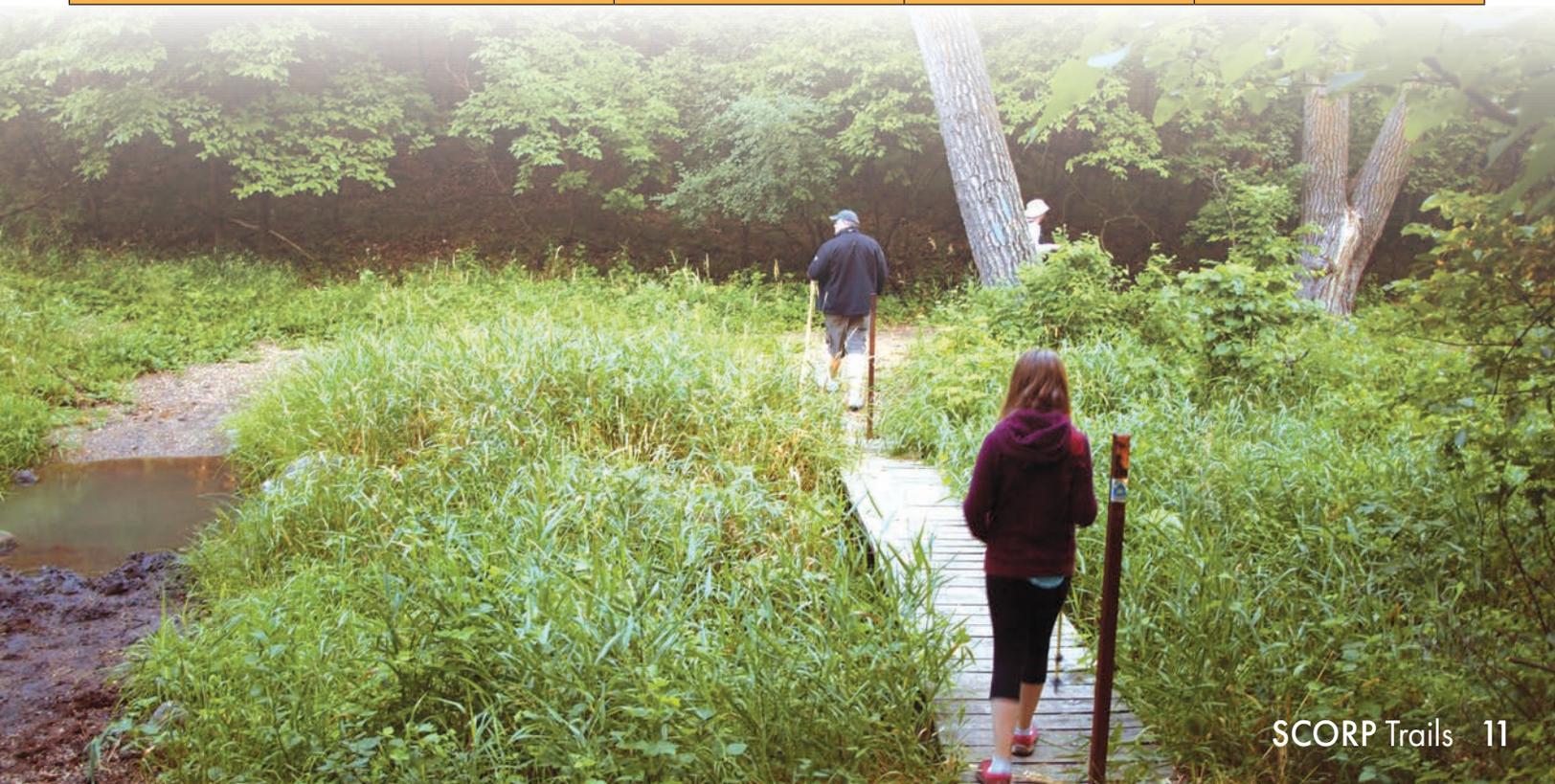
| TRAILS | DEMAND GREATLY EXCEEDS SUPPLY | DEMAND SLIGHTLY EXCEEDS SUPPLY | OVERALL DEMAND EXCEEDS SUPPLY |
|----------------------------------|-------------------------------|--------------------------------|-------------------------------|
| NON-MOTORIZED | | | |
| Unpaved Multi-Use | 25.1% | 27.4% | 52.5% |
| Paved Multi-Use | 22.9% | 29.1% | 52.0% |
| Unpaved Hiking | 18.3% | 26.9% | 45.2% |
| Unpaved Mountain/Electric Biking | 17.1% | 24.6% | 41.7% |
| Paddling for Canoes/Kayaks | 17.1% | 17.1% | 34.1% |
| Cross-Country Skiing/Snowshoeing | 13.7% | 27.4% | 41.1% |
| Fat-Tire Biking | 12.0% | 24.0% | 36.0% |
| Exercise with Stations | 11.4% | 17.7% | 29.1% |
| Horseback Riding | 11.4% | 14.9% | 26.3% |
| NON-MOTORIZED AMENITIES | | | |
| Modern | 16.6% | 25.1% | 41.7% |
| Primitive | 15.4% | 24.0% | 39.4% |
| Semi-Modern | 13.7% | 26.9% | 40.6% |
| MOTORIZED | | | |
| Off-Highway Vehicle | 22.3% | 21.1% | 43.4% |
| Snowmobile | 13.1% | 17.7% | 30.8% |



Providers reported the conditions for specific types of trails varied from 100% of those responding to the survey question feeling that snowmobile and OHV trails are in good condition, while just 27% believe paved multi-use trails for walking, biking and running are in good condition.

Trail Condition Assessed by North Dakota Providers

| TRAILS | GOOD CONDITION | ADEQUATE CONDITION | POOR CONDITION |
|---------------------------------------|----------------|--------------------|----------------|
| NON-MOTORIZED | | | |
| Fat-Tire Biking | 64.3% | 14.3% | 21.4% |
| Paddling for Canoes/Kayaks | 60.0% | 40.0% | 0.0% |
| Horseback Riding | 57.1% | 7.1% | 35.7% |
| Unpaved Mountain/Electric Biking Only | 57.1% | 0.0% | 42.9% |
| Unpaved Multi-Use | 48.8% | 12.2% | 39.0% |
| Exercise with Stations | 44.4% | 11.1% | 11.1% |
| Unpaved Hiking Only | 37.5% | 18.8% | 37.5% |
| Cross-Country Skiing/Snowshoeing | 34.6% | 23.1% | 42.3% |
| Paved Multi-Use | 27.3% | 21.2% | 45.5% |
| NON-MOTORIZED AMENITIES | | | |
| Primitive | 44.4% | 5.6% | 47.2% |
| Semi-Modern | 40.0% | 30.0% | 20.0% |
| Modern | 35.3% | 17.6% | 35.3% |
| MOTORIZED | | | |
| Off-Highway Vehicle | 100% | 0.0% | 0.0% |
| Snowmobile | 100% | 0.0% | 0.0% |



PRIORITIES



TRAILS IN NORTH DAKOTA

Based on analysis of the demand for and supply of outdoor recreation facilities in North Dakota, facility needs are prioritized into three levels: primary, secondary and tertiary. Non-motorized trails are a primary need statewide and in each of the eight planning regions. Motorized trails are a secondary or tertiary need statewide and in Regions 3, 4 and 8.

STATEWIDE TRAIL PRIORITIES

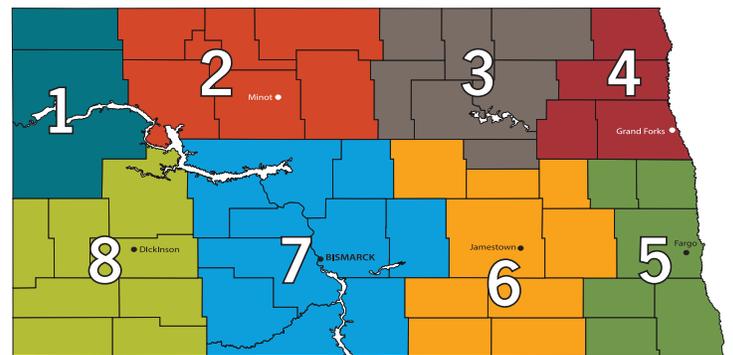
By looking at the findings in household and provider surveys, we can get a picture of trail needs and the differences that exist between various regions of North Dakota. For instance, users are more interested in paved non-motorized trails in larger urban areas than they are in regions with smaller population centers. For instance, Bismarck, Grand Forks and Fargo users rate their paved walking, jogging and biking trails as primary strengths, while Dickinson users consider primitive and unpaved hiking trails as strengths. The general consensus among users “at least interested” in specific activities is that many trails could use improvement or that additional infrastructure is needed.

Statewide, the use of designated non-motorized trails for walking, running, biking, and horseback riding is of interest to 90% of North Dakota households. Seventy-eight percent are interested in unpaved hiking trails; 74% in modern trails; 72% in unpaved multi-use trails; 69% in paved multi-use trails; and 65% in semi-modern trails. That level of interest varies some, but not greatly by region. What does vary is interest in other types of trails, like OHV, snowmobiling, horseback riding, and kayak and canoe trails. Based on strength and weakness data, interested users classify all types of trails in the state as primary weaknesses with slight variations by regions.

Providers throughout the state report demand for both paved (52%) and unpaved (53%) multi-use trails exceeds supply, and more than half rate the quality and quantity of exercise trails (73%), ATV trails (68%), canoe and kayaking trails (61%), horseback trails (59%), snowmobile trails (57%),

modern trails (54%) and unpaved mountain bike trails (54%) fair to poor.

North Dakota’s trail systems have the potential to attract users from long distances and be developed as destinations, as in the case of the Maah Daah Hey Trail. Survey respondents report a willingness to travel more than two hours to use snowmobile trails (42%), OHV trails (37%) and non-motorized trails (27%). Identifying weaknesses and strengths within each region will help NDPRD prioritize areas where improvement is needed. Addressing key areas has the potential to increase tourism and workforce retention within the region.



REGION 1 TRAIL PRIORITIES

Using designated trails for walking, running, bicycling, or horseback riding is of interest to 91% of North Dakota households in Region 1, with 52% interested in modern trails. Unpaved fat-tire bike trails are a secondary strength, while modern trails, semi-modern trails, unpaved multi-use, hiking and biking trails are primary weaknesses for the region. All other trails fall under secondary weaknesses.

Providers in Region 1 indicate their organizations most need to improve, expand or add non-motorized trails (55%) and walking and running paths and trails in general (27%) to meet the demands of the population their organization serves.

Primary weaknesses: Semi-modern and modern trails; paved and unpaved multi-use and hiking trails; canoe and kayak paddling trails; unpaved mountain biking trails.

Secondary weaknesses: Motorized trails; primitive trails, cross-country and snowshoe trails; electric bike, exercise and horseback trails; snowmobile trails.

Secondary strength: Unpaved fat-tire bike.

REGION 2 TRAIL PRIORITIES

Using designated trails for walking, running, bicycling, or horseback riding is of interest to 88% of North Dakota households in Region 2, with 79% interested in modern trails. In user surveys, all trails in the region were ranked as primary or secondary weaknesses.

Providers in Region 2 indicate their organizations most need to improve, expand or add non-motorized trails (41%) and walking and running paths and trails in general (17%) to meet the demands of the population their organization serves.

Primary weaknesses: Primitive, semi-modern and modern trail; paved and unpaved multi-use and hiking trails; canoe and kayak paddling trails.

Secondary weaknesses: Cross-country and snowshoe trails; unpaved fat-tire bike trail and mountain bike trails; motorized trails; unpaved fat-tire bike and electric bike, exercise and horseback trails.

REGION 3 TRAIL PRIORITIES

Using designated trails for walking, running, bicycling, or horseback riding is of interest to 88% of North Dakota households in Region 3, with 79% interested in modern trails. In user surveys, all trails in the region were ranked as primary or secondary weaknesses. The one exception was unpaved mountain bike trails, which are seen as a primary strength.

Providers in Region 3 indicate their organizations most need to improve, expand or add non-motorized trails (23%) and warming huts and shelters along backcountry trails (15%) to meet the demands of the population their organization serves.

Primary weaknesses: Primitive, semi-modern and modern trail; paved and unpaved multi-use and hiking trails; canoe and kayak paddling trails, motorized trails; cross-country and snowshoe trails.

Secondary weaknesses: Unpaved fat-tire bike and electric bike trails; snowmobile trails; exercise and horseback trails.

Primary strengths: Unpaved mountain bike trails.

REGION 4 TRAIL PRIORITIES

While 91% of Region 4 households (which includes Grand Forks, one of the three largest urban areas in the state) are interested in using designated trails for walking, running, bicycling or horseback, fewer than 50% of providers believe demand for trails in the region exceeds supply, a belief shared by providers in the region. Users rank paved walking, jogging or bicycling trails as their top primary strength, while other trails rank as primary or secondary weaknesses.

Just 7% of region providers indicate their organizations need to improve, expand or add non-motorized trails to meet demand and just 8% feel the same about mountain biking trails and bike paths in general.

Primary weaknesses: Primitive, semi-modern and modern trail; unpaved multi-use and hiking trails; canoe and kayak paddling trails, unpaved mountain biking trails; cross-country and snowshoe trails.

Secondary weaknesses: Exercise, motorized, unpaved fat-tire and electric bike trails; snowmobile trails; horseback trails.

Primary strengths: Paved multi-use trails.

REGION 5 TRAIL PRIORITIES

In Region 5 (which includes Fargo, one of the three largest urban areas in the state), 86% of households are interested in using a designated trail to walk, bike or jog or ride a horse. Seventy percent are interested in modern trails and another 81% would enjoy hiking on designated unpaved trails. However, only 24% believe the region's modern trails are of sufficient quality and number. Users of paved walking, jogging or biking trails rate them high enough to make them a primary strength, while snowmobile trails are considered a secondary strength.

Only 12% of providers believe non-motorized trails need to be improved, expanded or trails added to meet the demands of the population their organization serves.

Primary weaknesses: Primitive, semi-modern and modern trails; unpaved multi-use and hiking trails; canoe and kayak paddling trails; cross-country and snowshoe trails.

Secondary weaknesses: Unpaved mountain bike, electric bike, fat-tire bike trails; motorized trails; exercise and horseback trails.

Primary strengths: Paved multi-use trails.

Secondary strengths: Snowmobile trails.



REGION 6 TRAIL PRIORITIES

Ninety-four percent of the households in Region 6 are interested in using designated trails for walking, running, biking, and horseback riding. Seventy-six percent are interested in paved walking, jogging and biking trails, while 68% are interested in unpaved trails. Seventy-two percent of those interested in hiking are most interested in unpaved hiking trails. But users categorize all types of trails as primary or secondary weaknesses.

Forty-four percent of providers indicate non-motorized trails need to be improved, expanded or trails added to meet the demands of the population their organization serves. Another 28% feel the same about walking and running paths and trails in general.

Primary weaknesses: Semi-modern and modern trails; paved and unpaved multi-use and hiking trails; unpaved mountain biking trails; canoe and kayak paddling trails; motorized trails.

Secondary weaknesses: Primitive trails; exercise and horseback trails; unpaved fat-tire bike and electric bike trails; snowmobile trails.

REGION 7 TRAIL PRIORITIES

Ninety-two percent of Region 7 households (which includes Bismarck, one of the three largest urban areas in the state) surveyed are interested in using designated trails for walking, running, biking, or horseback riding. Seventy-eight percent are interested in unpaved hiking trails, and 76% in designated walking, jogging or biking trails, while 68% prefer designated unpaved walking, jogging or biking trails. Respondents rate the quantity and quality of trails in the region among the best in the state, with unpaved hiking trails rating 56%, unpaved walking trails 60% and paved trails 69%. Seventy-eight percent of households are most interested in trails with modern facilities. Providers are split in assessing demand and supply of paved multi-use trails (50%) and mostly believe other trails are adequate. Paved walking, jogging and biking trails are the region's top primary strength. All other trails are seen as primary or secondary weaknesses.

Just 25% of providers indicate non-motorized trails need to be improved, expanded or trails added to meet the demands of the population their organization serves, while 11% believe the same about trails in general.

Primary weaknesses: Primitive, modern and semi-modern trails; unpaved mountain bike trails; unpaved hiking trails; canoe and kayak paddling trails; cross-country and snowshoe trails.

Secondary weaknesses: exercise and horseback trails; snowmobile trails; unpaved fat-tire and electric bike trails; motorized trails.

Primary strengths: paved multi-use trails.

REGION 8 TRAIL PRIORITIES

Ninety-four percent of households in Region 8 are interested in trails for walking, running, biking, or horseback riding, while 34% are interested in using designated ATV, dirt bike or side-by-side trails. Of those, just 7% believe the region has adequate quality or quantity of such trails. Fifty percent of providers believe demand for paved multi-use trails exceeds supply, while 60% feel the same about exercise trails with equipment along the trail. Users consider primitive trails and unpaved hiking trails as primary strengths.

Forty percent of providers believe non-motorized trails need to be improved, expanded or trails added to meet demand, as do 10% of hiking trail providers.

Primary weaknesses: Semi-modern and modern trails; unpaved mountain bike and electric bike trails; snowmobile trails; cross-country and snowshoe trails.

Secondary weaknesses: Unpaved electric bike trails; snowmobile trails; motorized trails; exercise and horseback trails; unpaved fat-tire bike trails.

Primary strengths: Primitive trails; unpaved hiking trails.



SURVEY DATA

In September 2021, the North Dakota Parks and Recreation Department (NDPRD) contracted with Clearwater Communications, Bismarck, to perform survey and planning services to develop the *2023-2027 North Dakota State Comprehensive Outdoor Recreation Plan (SCORP)*, along with two companion publications, *Recreational Trail Needs* and *Wetlands Priorities*.

Clearwater Communications subcontracted with Winkelman Consulting to complete the research portion of the project, which included surveys of North Dakota households and outdoor recreation providers to determine demand for and supply of outdoor recreation facilities in the state. A survey

of North Dakota households was conducted to assess interest in outdoor recreation activities and to identify the perceived quantity and quality of facilities for these activities. From February to April 2022, 713 eligible providers and stakeholders were surveyed online, with 175 completing questionnaires to provide a 95% confidence level with an overall minimum and maximum margin of error of $\pm 3.9\%$ and $\pm 6.4\%$, respectively, in estimating the proportion of the population who possess a certain characteristic or opinion.

Recreational Trail Needs summarizes the research on the demand for and supply of non-motorized and motorized trails in North Dakota.





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