



North Dakota Parks & Recreation Department
North Dakota Department of Transportation



State Bicycle Plan

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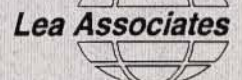
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and

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August, 1994



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1.0 INTRODUCTION TO THE NORTH DAKOTA STATE BICYCLE PLAN

The North Dakota State Bicycle Plan provides the opportunity for a long term vision for bicycling in the state, balanced with practical short and medium term implementation strategies. As the first statewide plan for bicycling, it provides a foundation for planning by describing the current status of bicycling and identifying relevant agencies, legislation and funding mechanisms. The Plan is a strategic document that offers guidelines for policy development, resource allocation and decision-making. It is a framework under which coordinated activities can be implemented to the benefit of the state and its residents.

1.1 MISSION STATEMENT AND GOALS

This plan has been developed to ensure the promotion and encouragement of safe bicycling throughout North Dakota for both transportation and recreational purposes. The following mission statement and goals were adopted to provide direction to the state's bicycle planning process and to the development and implementation of a state-wide bicycling program.

Mission Statement

To enhance the opportunities for, and quality of, all types of bicycling within North Dakota.

GOALS

- G1:* To promote the implementation of the State Bicycle Plan and the development of local/regional plans which are integrated with the State Bicycle Plan.
- G2:* To develop and maintain bicycle facilities that allow and encourage safe, convenient and pleasant bicycle travel.
- G3:* To educate key target groups in lawful and responsible bicycling and driving.
- G4:* To promote the consideration of bicycling at all levels of government through policies and legislation.
- G5:* To increase the number of people using bicycles for transportation and recreation.
- G6:* To provide up-to-date information about existing bicycling facilities and opportunities within North Dakota.

Further details on these goals and associated objectives are provided in later chapters of this Plan.

1.2 PLANNING PROCESS

Two state departments have initiated and implemented the planning process for the North Dakota State Bicycle Plan. The North Dakota Department of Transportation (NDDOT) is responsible for the state's surface transportation network and any provisions made for the use of bicycles along this network fall under its jurisdiction. NDDOT is responsible for ensuring the intermodal and energy efficiency requirements of the Intermodal Surface Transportation Efficiency Act (ISTEA) are met, including developing a statewide long range transportation plan which must include a bicycling component. This State Bicycle Plan meets the planning requirements under the Act. It has also been designed to help the state and local jurisdictions to obtain funding available for bicycle facilities and programs under ISTEA.

The North Dakota Parks & Recreation Department (NDPRD) is responsible for recreational activities across the state, of which bicycling is one of the most popular. The NDPRD has developed the *1991 - 1995 Statewide Comprehensive Outdoor Recreation Plan (SCORP)*, to aid in the development and administration of the state's outdoor recreation resources.

Although NDDOT was designated as the responsible agency for preparation of the state's Bicycle Plan as part of its mandate under the statewide transportation planning process, they were able to form a working relationship with the state's Parks and Recreation Department to mutually undertake the plan preparation process. This was beneficial to both parties as Parks and Recreation Department also needed to address recreational issues associated with bicycling, as it had recently been noted as one of the top three recreational activities in the state under the SCORP planning exercise. ISTEA made it possible to bring together transportation and recreational issues and ideas under one umbrella, and develop a plan that could meet everyone's needs. These departments formed the State Bicycle Plan Steering Committee to cooperatively direct the development of this plan. A team of consultants was retained to work with the Steering Committee and carry out the planning process.

This plan has been developed through a comprehensive planning process involving a variety of activities including:

- detailed analysis of bicycle plans and programs from other jurisdictions;
- review of federal, state and local agencies, legislation and funding mechanisms which contribute to bicycle programming and facility development;
- evaluation of existing planning processes within North Dakota at the state and local levels;
- a public consultation program with workshops held throughout the state;
- key person interviews with state agency representatives;
- and
- consultation with representatives of the Bicycle Federation of America and other national bicycling organizations.

1.3 ENVIRONMENTAL, SOCIAL AND HEALTH BENEFITS

The Intermodal Surface Transportation Efficiency Act (ISTEA) was put into place to create an environmentally sound and energy efficient transportation system across the country. Through its link to The Clean Air Act Amendments of 1990 (CAAA), it encourages projects which contribute to clean air, including those which reduce pollution from motor vehicles.

Funding under ISTEA has created increased opportunities for bicycling in part due to the environmental benefits associated with bicycle use. These benefits result because of the non-motorized nature of bicycles and their ability to replace motorized vehicles. The environmental, social and health benefits of bicycle use across the United States are summarized below.

- Reduction in Pollution

Bicycles do not emit pollutants associated with the combustion of fossil fuels such as CO₂, CO, NO_x and VOC's: These pollutants contribute to ozone depletion, global warming and acid rain. Bicycle use reduces these emissions, helping to decrease the severity of these major environmental problems.

According to recent studies (U.S. Dept. of Transportation, 1993), the percentage of U.S. passenger vehicle emissions displaced through use of bicycles between 1990 and 1991 was:

- from .12% to .68% for CO₂
- from .39% to 2.13% for CO
- from .09% to .51% for NO_x
- from .17% to .92% for VOC.

Additional forms of environmental degradation associated with motor vehicles include the use of CFC's in air-conditioning units, runoff of de-icing salts and the solid waste generated when vehicle chassis and tires are dumped in the environment with limited recycling.

- Reduction in Noise

Bicycle use does not contribute to traffic-generated noise pollution and the subsequent impacts to human health and property values for those living adjacent to major traffic arteries. In a recent study (Ketcham and Komanoff, 1993; quoted by U.S. Dept. of Transportation, 1993), the annual U.S. health and loss of productivity costs from motor vehicle noise were estimated at approximately \$22 billion (1990 dollars) based on a 1981 Federal Highway Transportation Study which compared the differences in property values between homes located near and far from urban interstate highways. In comparison, bicycling generates little noise.

- Reduction in the Use of Fossil Fuels

Bicycling reduces the use of fossil fuels and the need to develop these resources, with all the inherent costs and risks (e.g. oil spills) associated with these activities. Within the U.S., bicycling currently displaces between 120 and 680 million gallons of gasoline per year, or the equivalent of 0.1% to 0.6% of the fuel used by passenger vehicles (U.S. Dept. of Transportation, 1993). Refining and storing petroleum products also contributes to pollution. In comparison, only extremely small amounts of lubricants are used in the manufacture of bicycles and their maintenance.

The energy required to manufacture motor vehicles is considered proportional to relative vehicle weight. Therefore that required for bicycles is roughly two orders of magnitude less than that required for motor vehicles (U.S. Dept. of Transportation, 1993). In 1984, Toyota calculated the portion of total energy use by automobiles that was consumed in materials and vehicle manufacture as 20% (Greenpeace International, 1991). Using bicycles frees resources used in the manufacture of vehicles and fuels for other needs.

- **Reduced Traffic Congestion and Roadway Space Requirements**

Bicycles do not contribute to traffic congestion or to the costs required to alleviate it when vehicle use exceeds roadway capacity. Bicycles require less physical roadway space per traveller than cars or trucks, thus avoiding the need for large roadways and the associated environmental costs. These costs can include impacts to run-off and land drainage, loss of open space and conversion of farm land. Bicycle use can also reduce the need for parking facilities and the space and costs required to provide these. Increased bicycle use also raises broader urban land use questions related to urban sprawl, neighborhood or subdivision planning and the location of regional service nodes (shopping centres, recreational complexes, etc.)

- **Improved Health Benefits**

A more active population on bicycles means a healthier population, with associated reductions in health care costs, lost time from work, increased productivity due to alertness, etc. Low to moderate aerobic exercise, such as bicycling, can yield substantial benefits (U.S. Dept. of Transportation, 1992). "Healthy People 2000," a report on national fitness released by the U.S. Public Health Service, concludes there is a need to shift people from high-intensity exercise to getting more people involved in moderate exercise such as bicycling and walking. Besides the exercise value, commuting bicyclists may gain some measure of relaxation relative to that provided by driving a motorized vehicle. Recreational bicycling is relaxing and provides a sense of well-being and connectedness with the physical environment. While bicycling improves individual health, it also improves the health of others through reductions in air pollution, noise and other impacts to the environment.

- **Improved Access for a Wider Range of the Population**

Bicycles are appropriate for a wide range of users, including children, the elderly, the disabled and the financially disadvantaged. Enhancing the ability of these people to move throughout the state, for transportation or recreational reasons, generally increases the accessibility of services and public areas for all citizens.

- **Improved Tourism Opportunities**

Bicycle touring is an environmentally friendly way to promote tourism into and throughout North Dakota and thus increase local revenues.

1.4 AGENCIES WITH BICYCLING RESPONSIBILITIES

One of the best means of implementing a strategic plan is to target those agencies which have either a direct or an indirect responsibility for the various aspects of bicycling, and involve them in the action of overseeing particular components of the plan. In order to provide a picture of the realm of agencies which have an impact, the following section gives a description of each of the relevant agencies at the federal, state and local levels, and their roles and responsibilities with respect to bicycling. A summary of agency responsibilities is provided in Figure 1.

1.4.1 Federal Agencies

Federal Highway Administration (FHWA) / US Department of Transportation (USDOT)

The Federal Highway Administration's main interests are in the promotion of bicycle planning and usage, and in the general monitoring of state transportation activities. Their promotional role includes involvement in safety programs and providing information to interested organizations. On the monitoring side, the FHWA ensures that each state Department of Transportation (DOT) conforms to federal design and funding requirements, particularly where federal monies have been allocated. The FHWA has a direct responsibility for the National Highway System under ISTEA. Funding for planning, design, and construction of bicycle facilities and transportation planning (including bicycle planning) is available to the state through FHWA.

National Highway Traffic Safety Administration (NHTSA)

The National Highway Traffic Safety Administration has nationwide responsibility in the areas of traffic safety, safe biking promotion, and helmet safety programs. At the state level, the North Dakota Department of Transportation's Drivers License and Traffic Safety Division administers funds directed to the state from the national organization.

US Army Corps of Engineers

The US Army Corps of Engineers falls under the jurisdiction of the Department of Defense and is the second largest provider of recreation as the owners and managers of several recreational areas in North Dakota including Lake Oahe and Lake Sakakawea. Their mandate under federal law is to provide for flood control, navigation, and water conservation. With major impoundments such as Lake Sakakawea, Lake Oahe, Lake Ashtabula, and the Pipestem Reservoir under their jurisdiction, the Corps of Engineers is also the primary supplier of water recreation resources in North Dakota, a role which often conflicts with their priority mandate to provide navigation. State, county, and local entities all manage recreation areas in proximity to Corps lands. Along with providing access to water-based recreation, adjacent site developments contribute immensely to the Corps' overall impact on recreation in the state. Popular activities, other than water-intensive activities, include camping and picnicking. If participation at these areas continues to escalate, the Corps will face increased pressure for development of additional recreation sites. (North Dakota Parks and Recreation, 1990)

Bureau of Land Management

The Bureau of Land Management (BLM) administers nearly 67,000 surface acres of land in North Dakota and 6.1 million acres of federal mineral rights. Eight-five percent of BLM holdings in the state are found in Planning Regions 7 and 8, where the core of North Dakota's energy industry is located. The largest contiguous tract, which encompasses 23,000 acres, is located in southwestern Bowman County. The remaining 44,000 acres are broken into approximately 850 tracts averaging 50 acres per tract. To improve recreational potential on BLM lands, the agency has consolidated tracts in the western half of the state through land exchanges. Although the BLM has a multi-use concept of land management, their tracts are often remote and are not managed strictly for recreation. Consequently, holdings with recreation potential remain largely untapped. A large portion of their land holdings contain trail networks and mountain biking is actively promoted. The Bureau is currently in the process of building and identifying trail networks throughout the country. (North Dakota Parks and Recreation, 1990)

National Park Service

Three recreation areas are administered by the National Park Service in North Dakota. The most renowned of these is Theodore Roosevelt National Park, located amidst the austere buttes and ravines which typify the western one-third of North Dakota. The park is divided into two units: the South Unit, located near Medora, and the North Unit near Watford City. The South Unit comprises 46,346 acres, nearly twice the acreage within the North Unit. Consequently, the South Unit experiences heavier visitation. The area has developed into a major attraction in the state. The park, open year round, is extensively used during summer months for camping, picnicking, and sightseeing. The North Unit of the park is situated in a more remote setting, and attracts a sector of the population whose inclinations are toward a primitive recreation experience. Within 24,466 park acres lie approximately 35 miles of hiking trails from which one can truly absorb the flavor and character of North Dakota's Badlands.

In addition, the National Park Service manages two National Historic Sites. Fort Union Trading Post National Historic Site is located in Williams County, 24 miles west of Williston. Knife River Indian Villages National Historic Site, located at the confluence of the Knife and Missouri Rivers near Stanton, provides interpretation of historical and cultural customs of the Hidatsa Indians. The National Park Service is undergoing construction of a \$2.1 million Native American Interpretive Center at the site. Knife River also offers recreation opportunities for hiking, canoeing, and cross-county skiing. (North Dakota Parks and Recreation, 1990)

The Recreation Resources Assistance Division of the National Park Service has a technical assistance program called the Rivers, Trails, and Conservation Assistance Program. The program receives an annual appropriation which it uses to operate and extend its services to selected projects. Local agencies or community groups may apply through the NPS regional offices to obtain technical assistance to help plan, develop, and manage recreational facilities such as abandoned railroad conversions to trails and open space. Typical assistance per project is around \$50,000 and is not to be applied to construction or maintenance.

US Forest Service

The US Forest Service is the largest land-managing public agency in North Dakota, with administrative authority over the Sheyenne and Little Missouri National Grasslands, as well as a small portion of the Cedar River National Grasslands. Together these areas comprise over 1.1 million acres. The Forest

Figure 1: Key Agency Roles and Responsibilities

	<i>Education/ Traffic Safety</i>	<i>Encouragement</i>	<i>Engineering Facilities</i>	<i>Enforcement</i>
<i>State</i>	State Highway Patrol Dept. of Public Instruction Dept. of Transportation Dept. of Health & Consolidated Laboratories	Parks & Recreation Dept. Dept. of Tourism	Department of Transportation State Highway Patrol	
<i>Federal</i>	Federal Highway Administration National Highway Traffic Safety Association		US Army Corps. of Engineers Bureau of Land Management National Parks Service US Forest Service	Federal Highway Administration
<i>Local/ Regional</i>	Cities Counties		Cities Counties MPO's Park Districts	County Sheriffs Local Police Dept.
<i>Non- Government Organizations</i>	ND Safety Council	Service Clubs American Lung Association		



Service recently committed itself to enhancing recreation opportunities on these lands by establishing the National Forest Recreation Initiative, a partnership and cost-share program designed to increase recreational access and enhance recreational opportunities.

Major recreation-related developments on U.S. Forest Service lands in North Dakota include the North Country National Scenic Trail, a 25-mile stretch which was constructed across the tall grass prairie remnants of the Sheyenne National Grasslands; and a hiking and horse trail (Maah Daah Hey) which would span the Little Missouri National Grasslands while connecting the North and South Units of Theodore Roosevelt National Park. (North Dakota Parks and Recreation, 1990)

Bureau of Reclamation

The Bureau of Reclamation (BOR) is responsible for programs related to public lands management, construction and operation of multi-purpose dams and water distribution facilities, hydro-electric power projects, conversion of saline water and water research, and emergency water resource functions. Principal recreation projects associated with the BOR in North Dakota are those authorized through Garrison Diversion. The original Garrison Diversion Unit Recreation Plan developed in the early 1960's was updated in 1984. The plan encompasses 11 local recreation areas, including Lake Patterson, Lake Brekken-Holmes, Jamestown Reservoir, and Lake Tschida. NDPRD is currently assisting the BOR in developing a master plan for Lake Tschida. (North Dakota Parks and Recreation, 1990)

Rails-to-Trails Conservancy

The mission of the Rails-to-Trails Conservancy (RTC) is to enhance America's communities and countryside by converting thousands of miles of abandoned rail corridors, and connecting open space, into a nationwide network of public trails. The Conservancy was established in 1985 as a national non-profit charitable organization and maintains a membership list of over 50,000. From the head office located in Washington, D.C., the Conservancy notifies trail advocates and local governments of upcoming railroad abandonments; assists public and private agencies in the legalities of trail corridor acquisition; provides technical assistance to private citizens as well as trail planners, designers and managers on trail design, development, and protection; and publicizes rails-to-trails issues throughout the country.

The RTC primarily functions as a technical resource agency to assist local groups in developing and implementing multi-use trails throughout the country. They are not a direct source of funding, however in unique circumstances, for example, where a group would not otherwise be able to acquire an abandoned corridor, the RTC may step in and purchase the land on a holding basis until the group is able to raise the necessary funds.

1.4.2 State Agencies

North Dakota Parks & Recreation Department (NDPRD)

The North Dakota Parks & Recreation Department is responsible for administration of 17 park areas in North Dakota, which encompass over 17,000 acres. The areas under department jurisdiction include eleven full service parks, four primitive parks, and two state recreation areas. Since completion of the 1985 SCORP, the Department has opened two state parks and two state recreation areas.

Legislative mandate also enables the Department to establish a nature preserves system within the state to protect significant natural diversity features remaining on North Dakota's landscape. The Department is one of the two principal agencies involved in developing the North Dakota State Bicycle Plan.

North Dakota Department of Transportation (NDDOT), Project Development

State and federal aid transportation construction projects are administered through four areas of the NDDOT:

- Program & Project Development Division develops all rural state highway projects;
- Secondary Roads Division oversees all projects developed by the counties for county highway systems;
- The Transportation Enhancement Coordinator in the Planning Division oversees Transportation Enhancement project development;
- The Urban Planning Section of the Planning Division oversees all projects developed by the state or by the cities within the Urban Areas.

Each of these areas is responsible for determining appropriate design features for accommodating bicycles with individual transportation projects. Projects that include bicycle consideration are then coordinated with the NDDOT Bicycle/Pedestrian Coordinator to insure consistency in the application of appropriate design considerations.

North Dakota Department of Transportation, Drivers License and Traffic Safety Division

The main responsibility of the Drivers License and Traffic Safety Division of NDDOT is to manage traffic safety programs. Much of the work related to bicycle safety on the road is carried out in conjunction with the state Department of Health and Consolidated Laboratories, through their bike helmet distribution programs. The division is divided into eight regions throughout the state, each with a resident Director of Community Traffic Safety. Directors are also on three of the four Indian Reservations. Some of the regions are more active in bicycle safety than others, but generally all of them supply helmets to local community organizations like the Kiwanis and the Optimists for distribution. The NDDOT Drivers License and Traffic Safety Division also works closely with the State Highway Patrol for implementation of bike safety programs but does not provide direct funding for these initiatives. Rather, they allot assistance to the Highway Patrol through staff time commitment. In the future, they intend to focus additional efforts toward the prevention side of bicycle traffic safety.

The Drivers License and Traffic Safety Division maintains a safety coordinator position which is currently functioning on a limited basis. Currently, the prime responsibility of this position is for developing programs to keep people from drinking and driving. However, in the near future, the responsibilities applied to this staff position will be increased to include pedestrian safety.

North Dakota Department of Health and Consolidated Laboratories (NDDHCL)

The N.D. Department of Health and Consolidated Laboratories' primary influence on bicycling in the state is in the area of bicycle safety. NDDHCL is involved in bike safety through promotion and education. On the education side, NDDHCL receives supplementary funding through the Center for Disease Control under a special injuries grant. NDDHCL focuses on injury prevention and bicycle helmets are one tool to assist in this process. In order to perform this function, they issue bicycle helmets through programs that are jointly sponsored with other government, non-profit and non-governmental organizations. In 1992, the department was active in 12 communities where a total of 50-100 helmets were issued. These helmets were distributed in one of three ways: to individual communities through a mini grant for local education and distribution programs; to communities through a block party concept; or through existing resources from the state level.

The block party concept involves inviting people from within a 5-6 block radius in a neighborhood to a central location for a get-together. This gathering usually attracts 10 to 12 children. It is mandatory for parents to attend. Helmets are distributed to all the children in attendance and both parents and children must sign a pledge form indicating the children will wear the helmet.

As part of their bike promotion responsibilities, NDDHCL acts as a resource for organizations wanting to promote bike education or bike safety on their own. NDDHCL maintains a resource library containing videos and other reference material available for use by schools and other organizations.

North Dakota State Highway Patrol (NDSHP)

The State Highway Patrol is another government department that has an interest in bicycle safety. The Patrol has no overall plan or program in place to deal with the issue, however they respond to requests to attend bike rodeos or schools throughout the state. The public, communities, or agencies, must approach NDSHP to initiate their involvement. The State Highway Patrol deals mainly with building bicycle safety skills through discussion about the proper use and maintenance of equipment and the rules of the road (signs, signals and other safety measures).

NDSHP shares safety and education materials with the state's NDDHCL. The State Highway Patrol also works closely with local, county, city police departments, and local sheriff's departments in the pursuit of bicycle safety enforcement, program implementation and related activities.

North Dakota Department of Public Instruction (NDDPI)

Contacts at the North Dakota Department of Public Instruction indicated the department has no responsibility for formal bicycle safety education through the public school system. However, they do work closely with, and support the efforts of, the North Dakota Safety Council in this area. Representatives from the safety council are invited to come into the schools to educate school children about proper bicycle handling techniques and bicycle safety in general. The Department also advises that the safety council conducts summer bicycle education and training programs.

North Dakota Department of Tourism (NDDT)

The mandate of the Department of Tourism is to promote and attract non-resident travel to North Dakota. They support the continued development of bicycle and/or multi-use trails to assist them in meeting this objective. The department funds the production of tourism information and promotional material.

To assist in creating a universal vision for outdoor recreation and tourism proponents, a statewide tourism study was completed. This study identifies outdoor recreation areas in the state that demonstrate a high degree of tourism potential and recommends marketing techniques to attract resident and non-resident use.

North Dakota Game and Fish

The ND Game and Fish Department administers over 140,000 acres of public land, the bulk of which is dispersed between approximately 130 state wildlife management areas. Recreational developments on Game and Fish lands center on public access areas, picnic areas, and trails. Department coordination with special interest groups has helped to enhance habitat areas in private ownership, while concurrently promoting the conservation of state resources and public access to private lands. (North Dakota Parks and Recreation, 1990)

North Dakota Forest Service

North Dakota contains fewer acres of native forest than any other state in the country, with less than one percent of the state's total land area remaining as original woodlands. Of the acreage left in native cover, the N.D. Forest Service manages 12,068 acres at four state forests, one recreation area and two nurseries.

Parallel to the philosophy of the U.S. Forest Service, state forest lands are managed within a multiple-use concept. All state forests are accessible for public hunting and fishing during appropriate seasons. In addition, most possess maintained trails for hiking, horseback riding, cross-country skiing and snowmobiling. (North Dakota Parks and Recreation, 1990)

Indian Affairs Commission

The state Indian Affairs Commission (IAC) has no direct responsibility for bicycling for Indian peoples in the state nor any rules or regulations related to bicycles. Their only indirect role in bicycling is liaison with tribal governments on tourism-related issues. The focus of IAC operating funds expenditures changes from year to year. Last year the focus of spending was on the socio-economic status of Indian women and youth; this year, the focus will be on tourism. This spending priority could have an impact on enhancing the opportunities for bicycling on Indian reservations throughout the state, but it will be dependent on local tribal government initiatives and requests.

State Trails Advisory Task Force

Under the Symms National Recreational Trails Act of 1991, the state formed a State Trails Advisory Task Force to assist NDPRD staff with the preparation of strategies toward the development of statewide multi-use trail systems networks and a State Trails Plan. The Task Force consists of members representing a

broad cross-section of interests including national and state officials, trail user groups, private landowners and legislators. The Act requires that this task force become a permanent operating Board by 1994. Due to lack of funding, the future of this organization and its plans are now in jeopardy.

Governor's Council of Physical Fitness

The Governor's Council of Physical Fitness was formed "to encourage North Dakotans to participate in more active health and fitness activities to help them live healthier, happier and more productive lives". The fifteen member Council has no direct tax support, and is in the process of developing a membership program and seeking non-profit status to solicit funds to implement its goals, objectives and programs. The Council has selected one promotional activity involving active lifestyles, fitness and wellness, for each month of the year and will support these activities as feasible with promotions, organizational activities and, to a limited degree, through funding.

Bicycling as a fitness activity falls well within the goals and objectives of the Governor's Council on Physical Fitness. The Council encourages individuals to partake in bicycling not only as a form of transportation and recreation, but also as a means of improving aerobic capacity and overall fitness. To date, no group has requested the support of the Council to promote bicycling in the state. However, the adoption of a resolution by the Council supporting bicycling as a fitness activity, or to promote a bicycling event, would be appropriate.

It would also be reasonable to highlight bicycling as one of the monthly promotions of the Council. The Council does not have any funds to assist in the specific promotion of bicycling and would have to rely on a variety of other funding opportunities to accomplish this task. For a bicycle promotion month, they would work together with bicycle proponents, bicycling businesses, state and federal governments for coordination.

1.4.3 Local Government Agencies

Metropolitan areas (population over 50,000) are required by FHWA to combine multi-jurisdictional transportation into Metropolitan Planning Organizations or M.P.O.'s. The M.P.O. is required in order to receive federal transportation funding. There are three MPO's in North Dakota: Fargo-Moorhead, Bismarck-Mandan and Grand Forks-East Grand Forks. Each is responsible for ensuring efficient and coordinated planning in their own jurisdiction. This authority stretches from land use and community planning to transportation, transit and environmental planning and intergovernmental coordination.

At the local level, there are three types of government organizations: cities, counties and townships. They are responsible for bicycle planning and the design, construction and maintenance of all bicycle facilities within their jurisdiction. Where cities and counties are members of an MPO, they may independently contract with the MPO to oversee some of those responsibilities.

Enforcement services are provided at the local level through city and county police and sheriff departments. Education services are provided at the local level through school safety programs.

Tribal governments are a separate local government entity. They maintain their own responsibility for tourism, bicycle planning, the provision of bicycling facilities, highway safety and enforcement. Some tribes have developed bicycle paths on their reservations and prepared Tourism Master Plans. Funding

for facilities projects are available from five possible sources:

- At the Federal level ISTEA funds are available. Certain monies are set aside specifically for tribal use, for example, 2% from the Bureau of Indian Affairs is for transportation and planning purpose.
- Staff funds that may be available through ISTEA
- Other state funds (from other sources, for example, grants or matching funds)
- Tribal funds gained through individual tribal pursuits (gaming, tribal operated business revenue)
- Any other economic development financing on the open market

Each tribe would have to be approached individually to determine its commitment and intentions to provide bicycle facilities on the reservation and adopt relevant policies in their plans to enhance bicycling education, enforcement and encouragement.

1.4.4 Local Non-Government Agencies

North Dakota Safety Council

The N.D. Safety Council is the local implementation agency for the National Safe Kids Coalition. As part of its responsibilities, the Council promotes the use of bicycle helmets. Funding for the N.D. Safety Council comes from the Safe Kids Club Fund and from local donations. The National Safe Kids Coalition makes recommendations on public policy and suggested legislation.

Bicycle Clubs

Several active bicycle clubs exist in different areas of the state. Most offer a range of opportunities with emphasis on different types of bicycling (e.g. Badlands Bike Club focuses on mountain biking). The following clubs are active in the state:

- Dakota Rough Rider Bicycle Club (Bismarck)
- Great Plains Bicycling Club (Fargo)
- Northern Lights Wheelmen (Bismarck)
- North Star Cycling Club (Grand Forks)
- Badlands Bike Club (Dickinson)

Some clubs also produce newsletters for members (e.g. Great Plains Bicycling Club Newsletter). A separate publication, "The Cyclist's Connection," created in Fargo, provides a list of bicycling events and schedules and area bicycle clubs for North Dakota, South Dakota, Minnesota and Canada.

Others

Local Service Clubs like the Kiwanis, Optimist, Elks and Rotary, gear some of their safety activities toward youth and conduct clinics to educate young people about proper bicycle equipment, safe handling techniques, and general riding skills. The American Lung Association concentrates their activities related to bicycling in the area of encouragement. For example, they sponsor an annual state bike tour/race as a fundraiser.

1.5 APPLICABLE LEGISLATION AND FUNDING MECHANISMS

In order to understand fully the context that bicycling fits into as a recreational activity and as a mode of transportation, it is necessary to provide some background on legal and legislative mandates. Various statutes, codes, by-laws and regulations intertwine to function as the basis for decision-making at all levels of government.

Associated with each piece of legislation are designated funding mechanisms which serve as tools to implement the intent of the law. The following section describes the relationship between legislation and funding, and how these mechanisms can be applied in North Dakota.

1.5.1 Federal Level

Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991

The ISTEA recognizes the transportation value of bicycling and walking. ISTEA not only offers mechanisms to increase consideration of bicyclists' and pedestrians' needs, it mandates that transportation projects "consider" intermodal and multimodal issues in project planning. Within ISTEA, bicycle transportation facilities are defined as "new or improved lanes, paths, or shoulders for use by bicyclists, traffic control devices, shelters and parking facilities for bicyclists".

There are several avenues for bicycle-related transportation funding under the Intermodal Surface Transportation Efficiency Act passed in 1991. In addition, ISTEA also provides funding mechanisms for transportation planning activities at the metropolitan and statewide levels. Figure 2 provides a graphical illustration of the state federal-aid funds allocated to each ISTEA program. The position of State Bicycle/Pedestrian Coordinator is funded through ISTEA.

(1) Surface Transportation Program (STP) Funds (Section 1007)

STP funds can be applied to the construction of bicycle transportation facilities and pedestrian walkways or non-construction projects (such as brochures, public service announcements and route maps) related to safe bicycle use on the National Highway System (NHS), or roads that are functionally classified as a collector or higher.

Projects must be principally for transportation rather than recreation and must be referenced in an overall long range plan developed by each MPO and/or the state.

(2) Congestion Mitigation and Air Quality (CMAQ) Improvement Program Funds (Section 1008)

The purpose of these funds is to cut pollution in communities with serious air quality problems, that is, those that have failed to meet the National Ambient Air Quality Standards. However, because North Dakota does not have any air quality problems, it can use funds received from the congestion mitigation category for any project eligible under the Surface Transportation Program (STP).

Both construction and non-construction projects are eligible. Projects must be principally for transportation and not recreational purposes and must be referenced in a Long Range Plan of the MPO and/or state for eligibility.

Section 1008 funds have been used elsewhere in the U.S. to fund bike parking racks, bike actuated signal detectors, bike lockers at a train station, bike parking, bike lanes, pedestrian/bicycle bridges and commuter bike plans (county level).

(3) Transportation Enhancement (TE) Funds

ISTEA has set aside 10% of the STP funds to be used for transportation enhancement (TE) activities. NDDOT, through its Planning Division, is responsible for administering the Transportation Enhancement funds. By definition, projects which increase the value, beauty and/or reputation of the local, regional and/or state transportation network are considered transportation enhancements. The goal of enhancements is to integrate transportation systems into communities to enhance their livability. Bicycle and/or pedestrian facilities, including the preservation and/or conversion of abandoned railway corridors for use as bicycle or pedestrian trails, fall into this category and may be eligible for funding. The state can initiate TE projects for bicycle/pedestrian facilities.

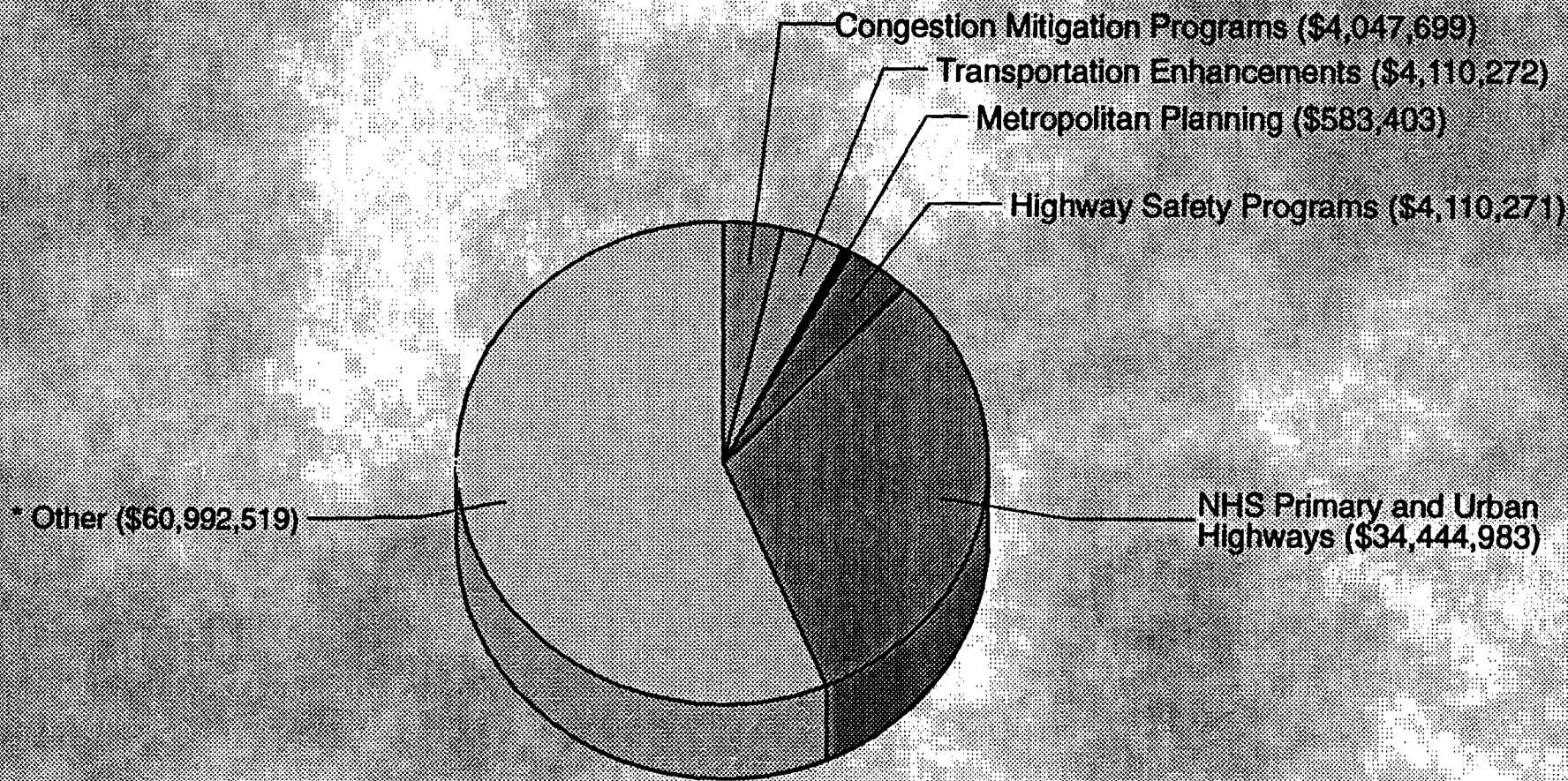
Allocation of state TE funds is divided into five project categories:

- **NDDOT initiated** - projects that the DOT initiates on the State Highway System, which may include bicycle/pedestrian facility enhancements.
- **Tourism plan** - projects that have been identified in the *North Dakota Historic Sites, State Parks and Tourism Development Plan*.
- **Urban** - projects that are located in cities with a population of 5,000 and over, are identified by the city, are part of a regularly scheduled street construction project, and which are related to and reduce transportation conflicts.
- **Secondary roads** - projects occurring on the state's County Highway System. These have eligibility requirements comparable to those of the urban projects.
- **Director's Task Force** - projects where funds will be made available to any public or non-profit entity provided they are sponsored by either a city government or a county commission.

To be eligible for TE funds, privately-initiated proposals for enhancement activity, or the area proposed to be served by the activity, must:

- have a direct relationship to the transportation system, but not necessarily to a currently planned highway project;
- be undertaken on roads functionally classified as collector and higher;
- comply with the Americans with Disabilities Act of 1990;
- have a maintenance commitment by the project sponsor;
- be in public or non-profit ownership; and,
- pass a test for one of function (the proposed activity would provide a transportation related function), proximity (the proposed activity must be physically associated with a transportation

Figure 2: Federal-Aid Highway Program Apportionments (1992 FY)



Total = \$108,289,147

**** OTHER Includes Regular and Rehabilitation, Non-NHS Secondary Highways, Planning and Research, Bridge Replacement, Demonstration Projects, Defense Access Roads and Beautification. ***



system), or impact (the proposed activity will result in a positive effect to a transportation system).

Only construction costs will be funded with federal aid to a maximum of 80%. The project sponsor must provide the 20% match plus the funding for engineering, right-of-way and items not eligible for federal funds. The project sponsor may require the project requester to provide the match.

Project selection is based on the following criteria: benefit to the community, region and/or state; environmental impact; demonstrated support from other local government agencies and/or non-profit organizations, and/or the general public; inclusion in an identified long range plan; benefits to the existing transportation system; anticipated number of users; representative mix of projects.

Examples of bicycle/pedestrian projects currently (1993-1997) awarded under this program include bikeways in Grand Forks, Park River, Medora, Bismarck, New Town, Mandan, Fargo, Minot, Jamestown, West Fargo, Wahpeton, Valley City, Barnes County and Bottineau County.

(4) Highway Safety Grant Program (Section 402) Funds

These funds are designated for state and community highway safety projects. The priority status of safety programs for bicyclists and pedestrians expedites the approval process for these related safety efforts. In North Dakota these funds are used for educational programs in areas of alcohol counter measures, occupant protection, and motorcycle, bicycle and pedestrian and roadway safety. Other activities funded include police traffic services, traffic records and emergency medical services training. The bicycle/pedestrian safety programs include awareness, research and training materials. These funds are available through NHTSA and FHWA and administered by the NDDOT Driver's License and Traffic Safety Division.

(5) National Highway System (NHS) Funds (Section 1006)

Construction of bicycle transportation facilities and pedestrian walkways may be funded if these are proposed on lands adjacent to any highway on the NHS other than the Interstate System. Bicycle facilities must be principally for transportation rather than recreation. Bicycle and pedestrian facilities must be located and designed pursuant to an overall plan developed by each MPO and/or the state.

Funding formula is 80% federal, 20% local or state. An example of the use of this program in North Dakota is a project that was proposed on a highway outside Minot where a sidewalk was to be constructed of concrete and its width extended to accommodate bicycles. This project has not been completed to date.

(6) Highway Trust Fund for Scenic Byways (Section 1047)

This program provides funding for up to 80% of a project's costs. Eligible bicycle/pedestrian related projects include the construction of pedestrian and bicycle facilities and improved access for recreational purposes along highways designated as scenic byways and all-American roads. North Dakota proposes to take advantage of this program and plans to develop a Scenic Byways Program, system plan and associated corridor management plans in 1994 (see section 1.6.1).

(7) Federal Lands Highway Funds (Section 1032)

These funds may be used to construct pedestrian walkways and bicycle transportation facilities in conjunction with roads, highways and parkways at the discretion of the department charged with the administration of such funds. These bicycle facilities can be any new development, or rehabilitation of existing pathways, and must be principally for transportation rather than recreation and must be located and designed pursuant to an overall plan developed by each MPO or the state.

In North Dakota, federal lands projects consist of Indian Reservation roads, National Park highways and U.S. Forest Service highways. The Bureau of Indian Affairs (BIA) administers the federal aid Indian Reservation roads program, in consultation with the tribal councils. The National Park Highway program is administered by the FHWA. The state DOT develops the program for the U.S. Forest Service Highways with the projects generally being on local or county roads.

(8) Federal Transit Administration Funds

Transit funds available under Title III, Section 25 of ISTEA, may be used for bicycle and pedestrian access to transit facilities, to provide shelters and parking facilities for bicycles in or around transit facilities, or to install racks or other equipment for transporting bicycles on transit vehicles. The funding formula for these projects is 90% federal, 10% local match. Only Fargo, Minot and Grand Forks maintain transit fleets and are therefore the only cities in the state eligible for this category of funding.

(9) Safety Belt and Motorcycle Helmet Use Laws (Section 153)

ISTEA mandates and provides funds for states to implement seat belt and motorcycle helmet laws, as a means of reducing traffic fatalities and serious injuries. This section of the Act is administered by the FHWA and NHTSA. According to the legislation, states which do not have laws for both items in effect at any time in fiscal year (FY) 1994, will have 1½ percent of their fiscal year 1995 NHS, CMAQ, and STP apportionments transferred to the Section 402 (Safety) program. Thereafter, the transfer penalty is 3 percent. As of 1 October 1993, 28 states were in non-compliance with the legislation and are subject to penalty. North Dakota is listed as one of these states as a result of a suspension of the proposed safety (seat) belt law. As these penalty dollars are transferred to the safety program account, it is conceivable that these monies could be used to finance bicycle safety programs.

(10) Planning Requirements

Planning funds can be used for the planning of bicycle facilities. This document is an example. The ISTEA legislation now places a strong emphasis on transportation planning at both the local and state levels. One section of the Act, Metropolitan Planning, concerns the planning and programming of transportation improvements in urban areas with a population of 50,000 or more. In North Dakota, this covers three urban areas: Bismarck/Mandan, Fargo and Grand Forks. The other section, Statewide Planning, covers planning and programming of other transportation improvements throughout the state. The latter must be coordinated with MPO planning activities.

(a) Statewide Long Range Transportation Plan

In addition to the statewide transportation planning required under Section 135 of Title 23, ISTEA requires each state to develop a transportation plan that is both long range and multimodal. It must be coordinated with MPO planning, rural economic growth, tourism development and with Indian tribal nations. Statewide transportation planning is funded through an earmark of 2% of a state's apportionment. At least 25% of this amount must be used for research and development programs and for technology transfer activities. Statewide planning is also an eligible activity under STP and NHS. NDDOT is in the process of preparing this plan.

(11) Symms National Recreational Trails Act (NRTA)

Section 141 of ISTEA encompasses the National Recreational Trails Funds Act or the "Symms Bill." The purpose of the National Recreational Trails Act is to undertake trail and trail-related projects identified in, or that further a specific goal of, the *Statewide Comprehensive Outdoor Recreation Plan (SCORP)* required by the federal Land and Water Conservation Fund Act (LWCF). Sharing the trail between motorized and non-motorized uses is a primary goal of the Act. Specific beneficiary projects are to be determined by trails advisory committees to be established in each state. North Dakota has established its committee under the name of the North Dakota Trails Advisory Task Force consisting of members from a broad range of interests including national and state officials, trail users groups, private landowners, and legislators.

Funds which are established with revenues received from federal taxes on non-highway recreational fuel, are allocated under the National Recreational Trails Act (NRTA) to be used for the acquisition, planning and construction of recreational trails or related projects that have previously been identified in, or that further a specific goal of, the SCORP. The North Dakota Parks and Recreation Department has been designated as the state agency responsible for administering the Symms Trails Act. The state may provide monies received under this Act as grants to private individuals and organizations; county and city governments; and other government entities, after considering guidance from the North Dakota Trails Advisory Task Force regarding uses consistent with the intentions of the NRTA.

Permitted uses of funding related to bicycle and pedestrian activities include maintenance of existing trails, development of urban trail linkages, environmental and safety education programs, trail facilities development, restoration of areas damaged by trail use, acquisition of easements and fee simple title for property and construction of new trails.

The Act mandates that not less than 30% of funding received by the state be reserved for non-motorized trail purposes, another 30% for motorized purposes and the remaining 40% is discretionary with preferences given to projects with the greatest number of compatible uses and innovative recreational corridor sharing between motorized and non-motorized uses. Up to 5% of the annual funds may be allocated for the operation of environmental protection and safety education programs related to the use of recreational trails.

Land and Water Conservation Fund (LWCF) Act

The Land and Water Conservation Fund was conceived in 1965 as a federal grants program through which the nation could acquire, develop and maintain a quality outdoor recreation system for its citizens.

Federal, state and local projects that qualify and receive monetary support through the LWCF are designated to remain in outdoor recreation use in perpetuity. The North Dakota Parks and Recreation Department, the public agency charged with planning and coordinating park and outdoor recreation matters in the state, is the Governor's designated agency to administer the LWCF in North Dakota. Adoption and continued update of the SCORP ensures the state's eligibility to participate in the LWCF program. The plan guides the investment of LWCF monies.

The fund provides 50/50 matching grants for resource land acquisition and outdoor recreation facility development. The program is administered at the state level through the N.D. Parks and Recreation Department and federally through the U.S. Department of the Interior National Parks Service. Eligible projects include trails, campgrounds, picnic areas, restrooms and other recreational facilities. Many of these projects are indirectly related to bicycling as ancillary facilities along trails and bike tour routes. Eligible applicant groups include cities, counties, townships, water management districts, park boards/districts, state agencies and school districts. Sponsors must have clear title to project lands. Projects are evaluated based on criteria developed from the SCORP, and through public input, and include the following:

- priority level of project identified in SCORP;
- number of age groups served;
- number of (recreational) activities affected.

Clean Air Act Amendments (CAAA) 1990

The CAAA may have a greater effect on the nation's transportation over the next 20 to 30 years than any of the non-highway laws enacted since the 1960's. The CAAA has recast the planning function to ensure that, in areas experiencing air quality problems, transportation planning is geared to improving air quality as well as mobility. State and local officials have been challenged to find ways of reducing emissions from the vehicle fleet, to develop projects and programs that will alter driving patterns to reduce the number of single-occupant vehicles, and to make alternatives such as transit and bicycles an increasingly important part of the transportation network.

Since it was amended in 1990, the Clean Air Act has expanded the potential role of bicycle projects in cleaning up the air, especially in areas with significant levels of pollution. The U.S. Environmental Protection Agency has released non-attainment area designations, that is, a geographic region that does not meet the National Ambient Air Quality Standards. North Dakota does not fall into the category of requiring air pollution reduction measures and the Act is therefore not relevant to the bicycling issue.

Federal Sports Fishing and Restoration Act

Under this Act, a federal funding program has been developed called the Wallop-Breaux Fund. The main purpose of these funds is for the enhancement of sport fishing opportunities and access. Approximately \$140 million is set aside annually in this fund by the US Fish and Wildlife Service, and are available on a 75% federal/25% state match to each state's game and fish agency. The state portion of the match can consist of in-kind services as well as money. These funds are destined strictly for boating and fishing improvement projects, however, if a proposed project provided access to a sport fishery, these funds could potentially be used to support land acquisition and/or maintenance for bicycle projects.

North Dakota gets an annual allocation of \$2 million under this program of which 12½% must be spent on boating and fishing facilities. The state Game and Fish Department has recently exceeded this minimum and has a backlog of approximately \$900,000 in projects, constituting about 2½ years of Wallop-Breaux funding. However, high priority projects, projects which have available matching funds, and those ready for construction, may have a higher priority than some already on the list. A list of eligible projects includes: boat ramps and lifts, docking and marina facilities, breakwaters, fish cleaning stations, restrooms and parking areas.

1.5.2 State Level

North Dakota Century Code

The North Dakota Century Code is the most important piece of legislation adopted at the state level. Sections of the code which apply to bicycling are listed below. The Code has no direct funding mechanisms attached.

- 39-10.1-01 Effect of chapter - Penalty for violation.

This section states that it is unlawful for any person, or the parent of any child, to violate the sections contained in this chapter and that those who do will be assessed a penalty of up to \$5.00. It further states that the provisions apply whenever a bicycle is operated upon any roadway or bicycle path.

- 39-10.1-02 Traffic laws apply to persons riding bicycles.

This section states that bicyclists are accorded the same rights and are subject to the same rules as drivers of vehicles.

- 39-10.1-03 Riding on bicycle.

This section states that there is only one person allowed per bike, and that bicyclists must ride upon a bicycle seat. Tandem bikes are allowed.

- 39-10.1-04 Clinging to vehicle.

This section states that no person on a bicycle may attach themselves, or the bicycle, to a vehicle on the road.

- 39-10.1-05 Riding on roadway and bicycle path.

This section is divided into three points which state that:

- bicyclists shall ride as near to the right side of the road as possible.
- bicyclists may not ride more than two abreast except on exclusive bike paths.
- bicycles shall use bike paths and not the roadway where a bike path has been provided.

- 39-10.1-06 Carrying article.

This section states that no bicyclist shall carry a package that restricts him/her from having at least one hand on the handlebars.

- 39-10.1-07 Lamps and other equipment on bicycles.

This section states a minimum bicycle equipment requirement:

- lights and reflectors must be affixed when riding a bicycle after dark.
- every bicycle must have brakes.

- 39-10.1-08 Point system not applicable.

This section states that bicyclist violations may not be assessed against the violators driving record but that any other penalty for a criminal or non-criminal traffic offence is applicable to bicyclists.

Another set of rules applies to the abandonment and conversion of surplus railway corridors for other transportation uses:

- 49-09-04.2 Abandoned railroad right-of-way - Sale - First Option - Public use - Wildlife use.

Whenever any state-owned land taken, held, and used pursuant to section 49-09-01 for railroad right of way, or any railroad spur, industrial, switching, or sidetrack right of way located entirely within the state is abandoned or offered for sale, lease, exchange, or other disposal, the landowner or landowners adjoining the abandoned right of way shall be given next option to acquire the right of way upon reasonable terms, second only to the right of the public service commission to receive in trust and transfer the right of way to any person, firm, or corporation for the continued operation of a railroad.

General Revenue

All of the monies generated in the state of North Dakota from fuel taxes, motor vehicle driver's license fees, motor vehicle registration fees and permit fees are to be used strictly for transportation purposes, generally for transportation infrastructure and maintenance. Revenue from Motor Vehicle Registration fees and state motor fuel taxes goes into the State Highway distribution fund and is distributed in the following manner through the state treasurer's office: 63% to the state Department of Transportation, 23% to the counties and 14% to the cities.

Special Assessments

The special assessment process is a means of financing and constructing certain public improvements and services to be paid wholly or in part from "special assessments" (taxes) against benefitting property. It is distinguished from improvements which benefit the entire community as they are paid for out of general revenues or through bond issues. In all but exceptional cases, special assessment projects are capital in nature and enhance the utility, accessibility or aesthetic value of the affected properties. Generally, the projects also provide improvements or additions to a government's infrastructure. Bicycling and pedestrian infrastructure is included within this category under Section 40-22.01 of the

North Dakota Century Code which states:

... the improvement of the municipal street system and any part thereof, including any one or more of the processes of acquisition, opening, widening, grading, gravelling, paving, repaving, surfacing with tar, asphalt, bituminous, or other appropriate material, resurfacing, resealing, and repairing of any street, highway, avenue, alley, or public places within the municipality, and the construction and reconstruction of overhead pedestrian bridges, pedestrian tunnels, ... curbs and gutters, sidewalks, ... (etc.).

N.D. Department of Transportation Special Road Fund

These monies may be used exclusively for the construction and maintenance of access roads to, and roads within, recreational tourist and historical areas as designated by the commissioner upon the advice of the Special Road Advisory Committee. The Committee consists of members from the Senate and House Transportation and Appropriation committees, the directors of the Game and Fish Department, Parks and Recreation Department, and Economic Development and Finance, plus the DOT Commissioner. Projects are funded at 60% of construction costs, except within state-owned tourist and historical areas, and 100% for all engineering and right-of-way acquisition, and for routine maintenance of the improvement.

1.5.3 Local Level

Legislation at the local level comes in the form of ordinances. Ordinances which may affect bicycling include traffic ordinances and license by-laws. For example, many urban areas have a traffic ordinance which permits bicycling on sidewalks except in the downtown area.

There are generally four sources of funding for projects initiated at the local level: general revenues (property tax), local sales tax, developer dedications and private sources. As property taxes form the basis for generating revenue for local government organizations, they can be considered as another source of funding for transportation projects. Local parks districts have their own taxing authority to obtain funds from the property tax. This authority is legislated under the North Dakota Century Code. The majority of their revenues, however, come from fees and charges. They receive no federal funding, although some project costs may be covered under ISTEA or LWCF programs. Bicycle related projects and programs fall under Parks District trails programs. The districts develop and maintain recreational multi-user trails including some ancillary facilities (restrooms, water fountains, benches and "pull off" connections to other recreational facilities). At the local level, the Parks District may also combine with the Water Resources District to undertake a project jointly where access or facilities may be provided in the vicinity of a Water Resources District facility, for example, access to a dam or water retention structure.

Some cities in the state designate a portion of the revenues derived from their local sales tax to be used for public transportation purposes. In Grand Forks, for example, the major local source of money for constructing the bikeway system is city sales tax revenues. A second source of local funding includes monies collected and channelled into a Bikeway Development Fund, generated through fees from the licensing of bicycles in the city.

Bicycle facilities may be included as part of a larger land development project as a result of a requirement for dedication of either land or recreational facilities by local governments in their approval of these projects. Such facilities (or the land for rights-of-way) also may be included as a component of a private development as a mitigation measure to offset or balance a negative aspect of the project. In these cases, bicycle facilities may be taken by the local government as a positive trade-off.

Private sources of funding are unlimited, however, and it is a matter of tapping into the right agency or program. In North Dakota, private non-profit foundations raise funds through charitable gambling to cover expenditures on projects to improve state park and recreation areas. Two foundations that are active in this area include: the Theodore Roosevelt Foundation and the Fort Abraham Lincoln Foundation.

Corporate sponsorship is another private funding opportunity. One example of corporate commitment has been shown by Dupont which sponsors a National Trails Day Awards Program. Applications are accepted by the company from cycling clubs and ten winners are announced annually. Awards include \$500 in cash plus \$1,500 in merchandise for the club. It is anticipated winning clubs will target their monies toward trail development and maintenance or events to promote and encourage bicycling.

1.6 PLANNING AND PROGRAMMING ACTIVITIES

Outside of the State Bicycle Plan, there are several other planning processes being conducted at the state and local levels, many which have an impact on bicycling. The statewide bicycle planning process has not ignored them and, in fact, has made an effort to avoid duplication and overlap. The State Bicycle Plan has considered the linkages to these other plans in order to streamline the development and implementation of bicycle-related programs and activities. The following sections provide a description of the relevant plans and other programs being undertaken at the state, MPO and local levels.

1.6.1 State Level

Statewide Comprehensive Outdoor Recreation Plan (SCORP)

The 1991-1995 *North Dakota Comprehensive Outdoor Recreation Plan* was prepared to guide acquisition, development and administration of outdoor recreation resources in the state. The plan delineates policies and strategies to address the most pressing recreational issues and needs in the state with bicycling being in the top three ranked recreational activities. The work leading to the preparation of the plan constitutes the most comprehensive planning exercise pertaining to the natural and recreational resources in the state to date. As all of the state's natural and recreational resources, facilities, areas and programs interact in a complex relationship, additional research is necessary to complement and supplement the information provided in SCORP. This State Bicycle Plan is an example of such complementary linkage research and policy development. Information from SCORP is provided in section 2.1.

Statewide Transportation Improvement Program (STIP)

Under ISTEA, the state is required to prepare a statewide transportation improvement plan (STIP) and submit it to the Federal Highway Administration (FHWA). The STIP is to outline the transportation programs planned over the next three year period in the state. The plan is to include all transportation projects for which an approval by the FHWA or the Federal Transit Administration (FTA) is required.

The 1993 STIP has been completed and adopted, and NDDOT is in the process of compiling the list of projects for 1995 construction in the 1994 version of the plan. The 1994 plan is expected to be complete by September 1, 1994.

The projects listed in the STIP include those generated from the regional TIP's although it also includes statewide projects such as interstate highways and bridges, as well as projects for areas outside MPO's. The STIP must be reviewed and approved by USDOT.

State Tourism Plan

The development of *North Dakota's Development Plan for State Historic Sites, State Parks and other Tourism Attractions* was commenced in 1989 following legislative assembly approval which resolved that the state should investigate a study of North Dakota's bountiful natural resources and outdoor recreation activities with an emphasis on the state's wildlife resources and enhancement of these resources for the benefit of North Dakota citizens and economic development. The foremost recommendation which

resulted from the study was for the development of the state's historic sites and parks based on a regional touring concept that would entice visitors to travel to North Dakota's tourist attractions that are located "off the beaten path," thereby lengthening the traveller's stay and generating a positive economic impact at both the local and state levels. To meet this goal, the plan's objectives are twofold:

- to further the development of high quality tourist experiences at state parks and historic sites; and
- to develop a network of historical, recreational, cultural attractions and scenic routes well-organized into thematic regions of the state.

The plan went on to divide the state into four tourism regions, each with its own distinct and unique features and characteristics: Wetlands and Wildlife; Legends, Lakes and Leisureland; Farmlands, Folklore and Festivals; and Great Lakes, Grasslands and Badlands. Specific development plans for each region's state historic sites, state parks and other tourism attractions were presented.

A number of the development projects recommended by the plan will assist in enhancing bicycling opportunities in the state, particularly the development of multi-use trails, enhanced facilities in state parks and at historic sites, tourism information centres and a statewide signing system. The plan further recommends that the responsible department work closely with NDDOT to make the best possible use of any ISTEA transportation enhancement funds that may be available for eligible tourism projects. If implemented, the recommendations noted in the state's Tourism Master Plan could go a long way toward assisting with the development of ancillary bicycle facilities based on the regional themes presented, and complement the State Bicycle Plan.

State Bikeways Map

In 1982, a state bikeways map was published jointly by NDPRD and NDDOT. The map received limited distribution and has not been updated. This map is no longer available.

Scenic Byways Plan

ISTEA legislation also encourages each state to develop a Scenic Byways Plan. The State Scenic Byways Plan will encompass a plan designating certain highway and roadway corridors for preservation of their aesthetic quality. Criteria would be developed for these designations including protection of historical and cultural resources, and tourism promotion. NDDOT is the responsible agency for overseeing the plan and they have again agreed to cooperate with the state Parks & Recreation Department to initiate the plan preparation process. State Parks & Recreation and NDDOT are proposing to follow the same structure as was used for the development of the State Bicycle Plan. The plan is expected to be completed by 1994.

1.6.2 Local Level

The two most critical local plans for bicycling in the cities and MPO's in North Dakota are the overall Transportation Plan and the Bicycle Plan.

The Fargo-Moorhead area is currently in the process of updating its 1988 Metropolitan Bikeway Plan. Completion of this update is scheduled for winter 1994.

Transportation Plan

A local Transportation Plan is a comprehensive document that provides a 20-year vision of transportation in the region and includes a financial plan showing anticipated revenues and expenditures. It is generally developed based on current and forecast issues, socio-economic baseline data, traffic forecasts, and analysis. Under ISTEA, requests for funding of various projects must first be included in an MPO or city transportation plan. The transportation plan also documents the multi-modal transportation planning process which is established in the area and recommends system improvements. The system improvements are those projects necessary to allow the system to meet travel demands which will be placed upon it during the next 15 - 20 years. Usually the transportation plan is supplemented with several sub-documents: a highway plan, transit development plan, bikeway plan, regional transportation network plan and possibly a pedestrian plan or skyway system plan. The following communities have adopted Transportation Plans: Dickinson, Devils Lake (1970), Jamestown (1975, being updated in 1993/94), Minot (1986), Williston (1982), and Richland County. All of the MPO's have transportation plans in place; Bismarck-Mandan (1989), Fargo-Moorhead (1993) and Grand Forks/East Grand Forks (1992).

Bicycle Plan

Local community and MPO bicycle plans are generally focused on facilities. For example, the objectives of the Fargo-Moorhead Metropolitan Area Bikeway Plan are to: establish a metropolitan bikeway network that is safe and continuous; provide bikeway linkages to areas and sites that are high bicycle-travel trip generators; be able to be implemented and maintained by the appropriate local government; and be accepted by the bicycling public.

All of the MPO's have bicycle plans in place. Dickinson is the only city outside the MPO's that has adopted a bike plan. The Bismarck-Mandan bicycle plan (1980) is currently in the process of being updated.

1.7 SUMMARY OF THE STATUS OF BICYCLE PLANNING IN THE STATE

With the introduction of ISTEA in 1991, a revolutionary change took place in the distribution of federal highway and transit funding to the states, and the manner in which it was to be allocated to projects and local governments. In addition, the Act legislated a whole new approach toward transportation planning, first by making its focus multi-modal and second by involving the local units of government by providing opportunities for input into the decision-making process. The Act mandates linkages between various government level planning and programming activities forcing government departments and agencies to work more closely together, and to cooperate both inter- and intra-governmentally.

Prior to ISTEA, several local bicycle plans had been completed and were being implemented. Each of the MPO areas had put in place some form of bicycle plan, either a network plan or a pathway map, and at least one city outside the MPO's had adopted a plan. These plans, however, were predominantly facilities oriented, concentrating on the transportation network infrastructure needed to achieve a safe, expanded and coordinated metropolitan bikeway system. With the advent of ISTEA, these communities are now able to tap into the federal funds set aside for planning purposes to update and rework their plans, thereby incorporating a broader context for bicycling and setting some policies to address the other three E's — encouragement, education and enforcement.

In addition, ISTEA allows the state and city level transportation planning processes to be tied together. Previously cities and MPO's had tended to act independently in the development and provision of suitable bicycle facilities and programs. Now local governments must arrive at their proposed project listing in consultation with the residents of the community and ensure that the prioritized projects are included in the STIP in order to be eligible for federal-aid funding.

It should be noted that the first use of ISTEA dollars on statewide planning for bicycles has been the development of this plan. That is the purpose of the exercise leading up to the preparation of this plan. Some funds have been expended on the project side, primarily to assist in upgrading state highway facilities to accommodate bicycle use.

There are four key government agencies that influence and direct bicycling activity at the state level. They are: NDDOT, the Parks & Recreation Department, the Department of Health and Consolidated Laboratories and the State Highway Patrol. NDDOT's primary responsibilities lie with the transportation aspects of bicycling (infrastructure and traffic safety); Parks & Recreation responsibilities are primarily in the area of encouragement; the Department of Health administers bicycle helmet safety programs; and the State Highway Patrol is concerned with enforcement. One of the main objectives of the State Bicycle Plan is to encourage and foster cooperation between these state departments and to bring in other departments as the need arises.

2.0 BICYCLING IN NORTH DAKOTA TODAY

This chapter provides an overview of what is known about current bicycling levels, bicycle accident statistics and existing bicycling facilities in North Dakota. Information about recreational levels of bicycling has been summarized from other studies, but little information is available on the use of bicycles specifically for transportation purposes. The available information will aid the implementation of this plan and collection of further data has been addressed in the plan's recommendations.

Information on available bicycle facilities and routes is also presented. A number of representative locations and facilities are noted but this listing is by no means complete. The development of a complete facility inventory and database needs to be continuously updated.

2.1 RECREATIONAL BICYCLING DEMAND

The *State Comprehensive Outdoor Recreation Plan (SCORP)* provides a comprehensive planning framework to meet the future recreational needs of the state and fulfill a federal requirement for participation in the Land and Water Conservation Fund (LWCF). LWCF participation ensures availability of federal monies to enhance and develop the state's recreational resources.

The SCORP planning process includes a statewide recreation participation survey. (State planning regions are shown in figure 3.) The most recent SCORP planning and consultation exercise, completed in 1990, identified bicycling as the number two ranked outdoor recreational activity in the state, based on annual per capita participation days¹. The state-wide recreation participation survey (Baltezare and Leitch, 1990) prepared for the plan concluded the following:

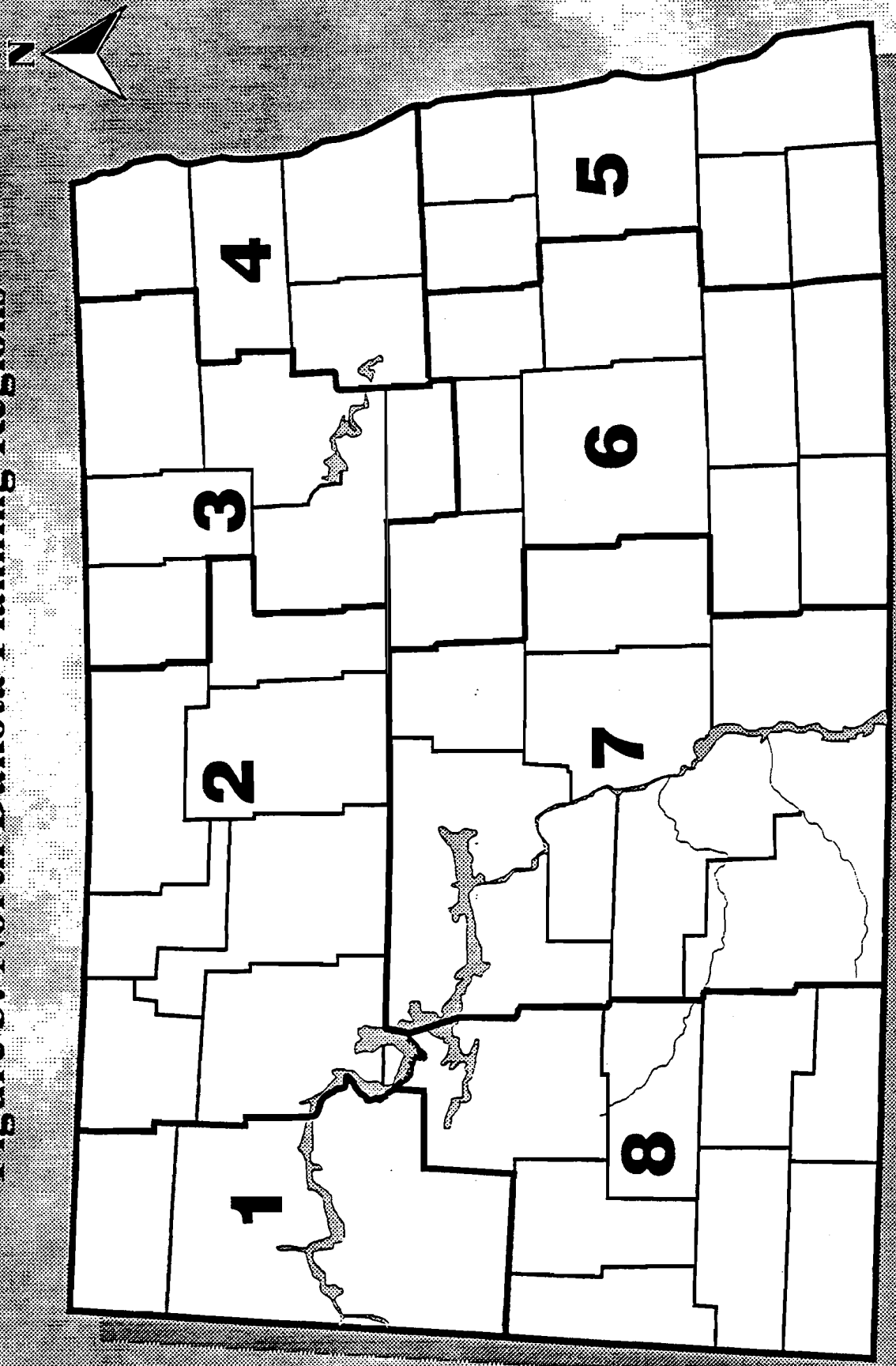
- the average North Dakota resident was estimated to be spending 14 days per year bicycling in the state by 1990;
- total days of participation for bicycling activities in North Dakota are projected to increase from 9.3 million in 1990 to 10.1 million by the year 2000;
- generally, respondent families from eastern counties (state planning regions #4 and 5) participated in recreational activities outside the state more frequently than those from any other planning regions;
- the majority of respondent families indicated they would leave the state to pursue their most important recreational activity if it was not available in North Dakota;
- most North Dakota residents considered the availability of outdoor recreation to be important;
- the percentage of respondent families participating in out-of-state bicycling averaged 1% for the state;
- in the Fall/Winter season, walking and bicycling were the most common recreational activities among the state planning regions;
- respondent families indicated they would like to see trails facilities developed or expanded in the state (for bicycling purposes).

¹ A "day" is defined as any portion of a 24-hour period in which participation in a recreational activity occurred.

Since the survey instruments employed for the 1985 and 1991 SCORPs were similar, there is an opportunity for comparison between the results to discover changes in annual per capita participation over the five year period. Activities that experienced the greatest increases in annual per capita days of participation were walking (increase of 12.84 days from 7.1 to 19.94) and bicycling (increase of 6.01 days from 7.95 to 13.96). Increases in these two activities ranked far above changes in other activities.

Directly comparative data are not available for other states. National bicycling statistics indicate the annual bicycle miles travelled at between 25 and 92 miles bicycled per person per year, or 1/2 to 2 miles per person per week. Of the total miles bicycled, recreational bicycling accounts for 45%, followed by commuting (17%), personal business (15%), children (15%) and commercial (8%) (U.S. Department of Transportation, 1993).

Figure 3: North Dakota Planning Regions





2.2 DEMOGRAPHIC PROFILE OF BICYCLISTS

As illustrated in Figure 4, the majority of bicyclists are less than 45 years of age (SCORP, 1990). The less than 20 years age group and the 20 - 44 age group have relatively similar participation rates averaging 47.2% and 42%, respectively. Together, these two age groupings account for over 85% of North Dakota's cyclists. Participation by age is comparable for both the Spring/Summer and Fall/Winter periods. It is difficult to ascertain a better breakdown of bicycle participation by age grouping, as the base data was divided into large age groups. The data were aggregated in this fashion to be consistent and comparable to previous SCORP exercises. In the future, it is preferable to show the results of the data analysis in a maximum age grouping of five years. The breakdown by gender is typical, with the split over the course of a year being almost 50/50. The only unexpected pattern found in gender analysis is that in the Spring/Summer period more males tend to ride (52.4% vs females at 47.5%) whereas in the Fall/Winter period, more females tend to ride (55.7% vs males at 44%). The reasons for this slight shift have not been determined.

By 1990, 28% of the state's population participated in bicycling (as a recreational activity). As the SCORP surveys have not included questions defining the reason for bicycling, it is difficult to determine the purpose of bicycle trips, whether utilitarian (primarily for transportation purposes) or recreational.

Figure 6 shows the absolute number of participants per region. Regional participation in bicycling is relatively similar to the state average, ranging from 21 - 35% of the regional population. Region 5 shows the highest per capita participation rate at 31% of the total projected regional population during the Spring/Summer period and 35% in Fall/Winter.

Participation can also be represented by the number of days of participation in bicycling as a recreational activity. On average, the North Dakota resident spent 31 days bicycling in 1990. This ranks above gardening and walking. Overall, North Dakotans were expected to spend 9.3 million days bicycling in 1990 increasing to 9.8 million by 1995 and 10.1 million by the year 2000. Figure 5 illustrates that Spring/Summer bicycling activity exceeds Fall/Winter activity in all regions of the state. It shows that bicycling activity is heavy in Regions 6 (Jamestown) and 7 (Bismarck-Mandan), particularly in the Spring/Summer period.

Population trends will be indicative of the trends in bicycling activity in the future. If the base population declines, the aggregate number of bicycling days in the state is likely to show an absolute decrease. As population increases, particularly in the less than 20 and 20 to 24 year groupings, the number of bicycle participants will likely show a proportional increase. Aside from absolute population figures, other factors must be considered when attempting to project the number of bicyclists and their level of participation. These factors may include:

- Provision of good bicycling facilities;
- Encouragement programs and events;
- National and regional leisure trends.

Some of these trends are noted below:

- North Dakota population expected to increase by only .6% by the year 2000;
- National population expected to increase by 7.7% by year 2000;
- In general, the eastern portion of the state has experienced the greatest growth in population between 1980 and 1990;

- State Planning Regions 4 (Grand Forks) and 5 (Fargo Area) were the only two regions exhibiting positive population growth between 1980 - 1990; all others were negative. This was a significant shift from the previous ten-year period when five of the eight planning regions showed positive growth rates;
- Between 1980 and 1990 only six counties in the state gained population; five counties lost 20% or more;
- By 1990, 40% of the state's population resided in the three metropolitan areas, a rise of 4.3% over a ten year period;
- Gallup surveys show that the percentage of Americans who exercised regularly grew from 24% in 1961 to 46% in 1980. This growth is noted to have "represented one of the most dramatic changes in American lifestyles in recent decades" according to George Gallup. The fact that the first dramatic growth in bicycling started to take place during the same time period as this major change in American exercise habits may in part explain the reason for the bicycling renaissance in this country. (Minnesota Department of Transportation, 1992)

Generally, four types of bicycle riders exist in North Dakota:

- **Commuting/utility riders** are those who bike regularly to and from specific destinations, usually as quickly and directly as possible. Examples include trips to purchase or transport goods and services or to travel to and from work or school.
- **Recreational cyclists** include those who take local excursions and are generally riding for pleasure or fitness. Off-road mountain bicycling is a very popular recreational activity.
- **Touring cyclists** bike over longer, extended periods of time. Touring requires more planning since the destination and route are important factors.
- **Racers** participate in a specialized form of biking. Bicycle racing is very intense; race courses may use public roadways with the approval of appropriate government agencies.

Figure 4: Projected Bicycling Participation, (1990)
North Dakota : All Planning Regions

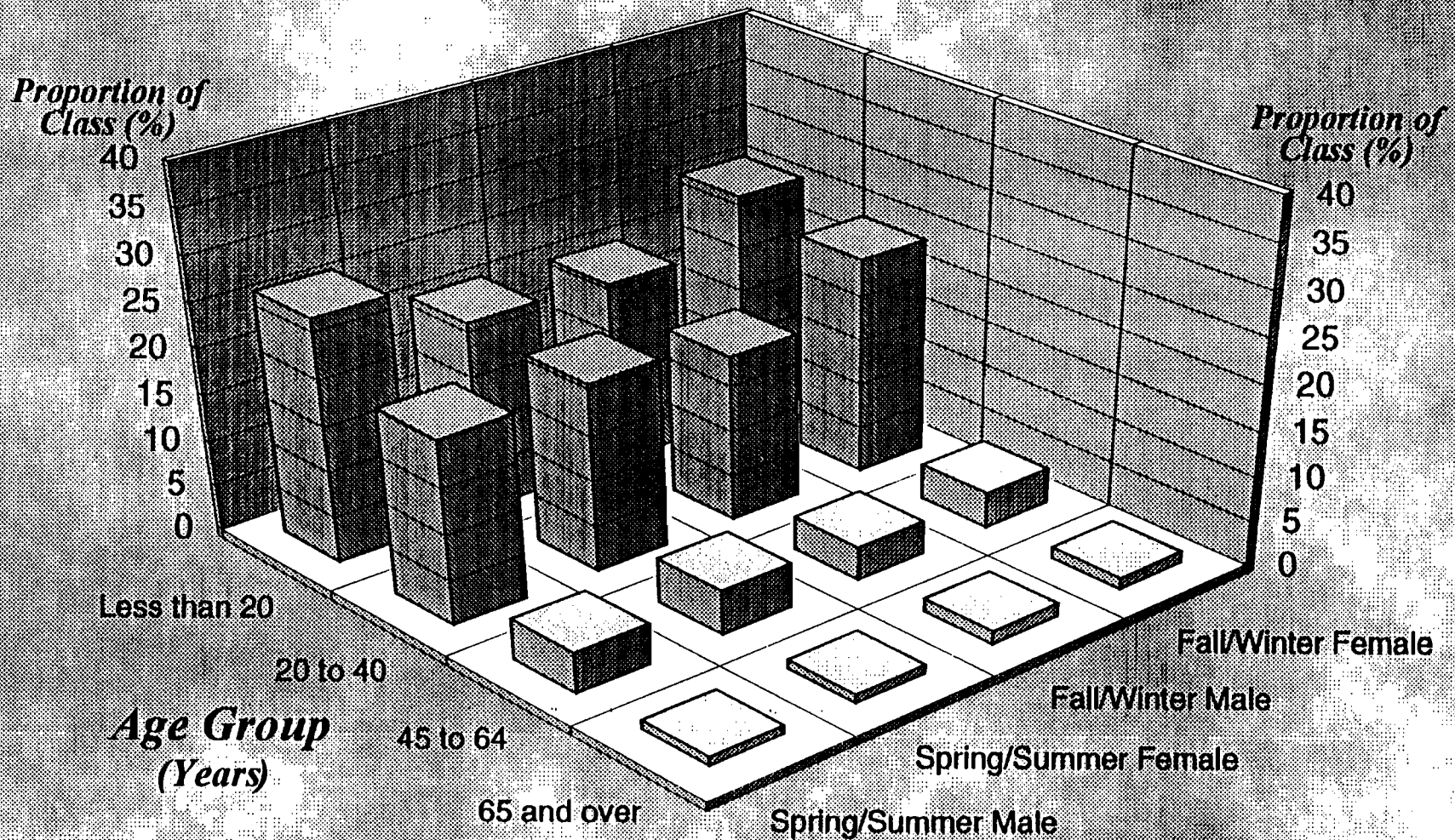
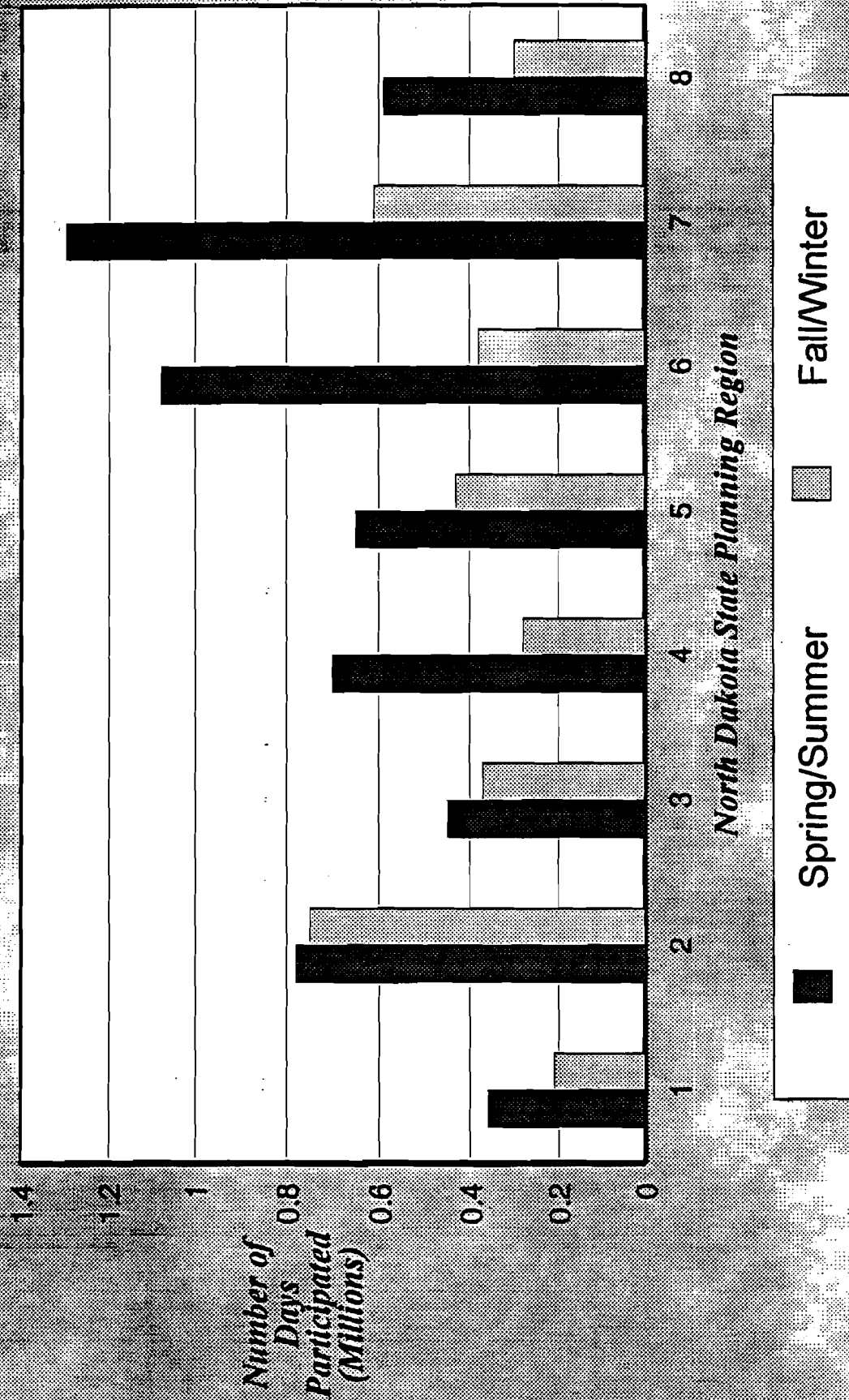


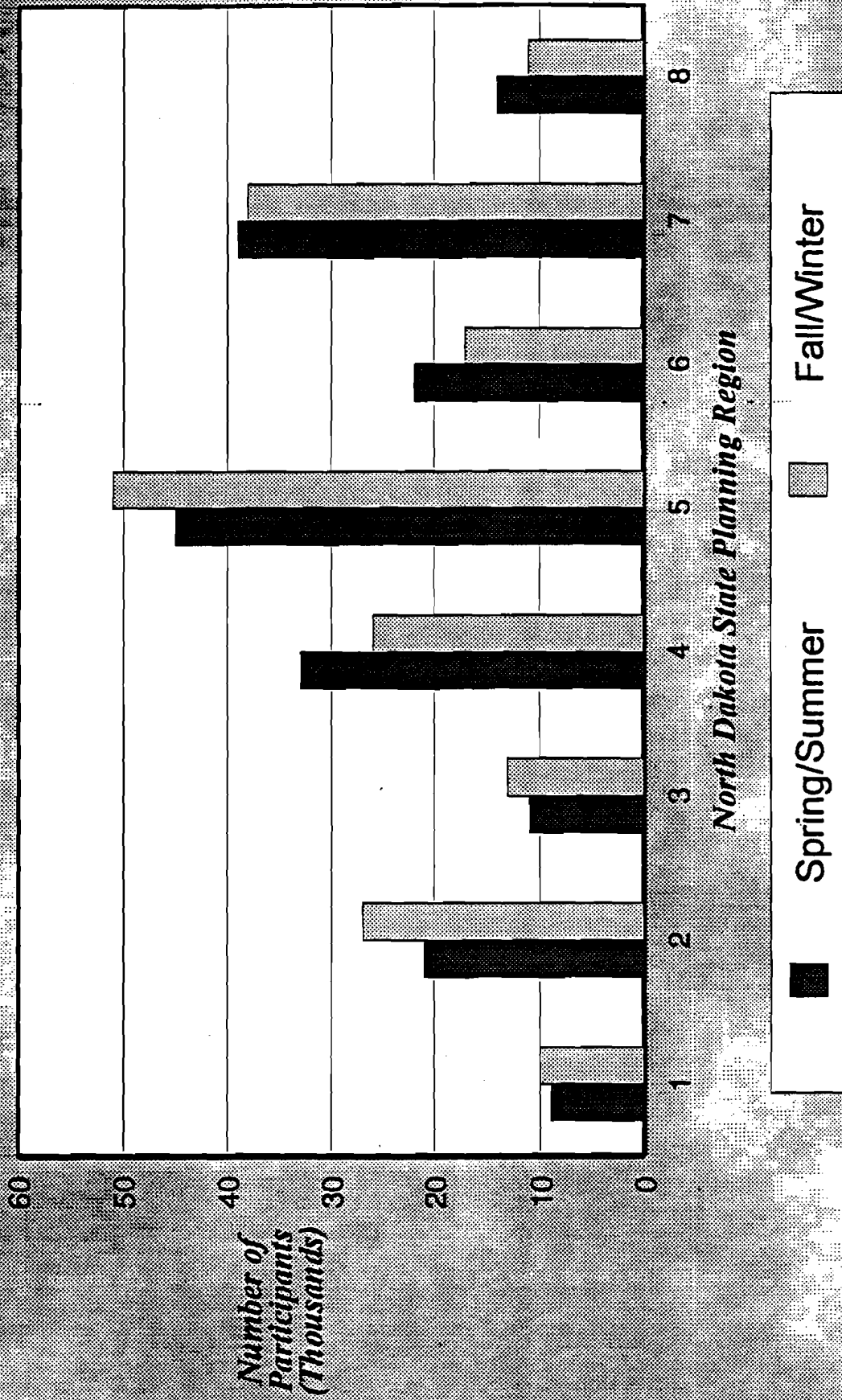


Figure 5: Number of Projected Bicycling Participants (1990)
By Region of Occurrence





**Figure 6: Number of Projected Bicycling Participants (1990)
By Region of Residence**





2.3 BICYCLE SAFETY

The major components of bicycle safety include education, enforcement and engineering. In North Dakota, the number of bicycle-related fatalities has been very low. The occurrence of injuries, however, is fairly common. Education and enforcement can significantly reduce this.

Education

Bicyclists need to know the vehicle laws and need to develop good cycling skills to successfully coexist safely with motorists. Education should provide bicyclists with skills and knowledge, stress the safety value of helmets and feature other protective techniques.

Enforcement

A lack of law enforcement leads to a general disregard for the law by riders, parents and law enforcement officers. A lack of enforcement may be due, in part, to an inadequately trained police force which views citing cyclists as unimportant and/or impractical as bicyclists often lack positive identification, such as a driver's license. Common bicycling violations in North Dakota include running stop signs and traffic signals, riding the wrong way on a street and riding at night without lights.

2.3.1 Bicycle Accident Statistics

Injury Statistics

Nationally, the bicycle injury rate per mile travelled is several times higher than that of miles travelled in a motor vehicle. In Minnesota, for example, the bicycle fatality rate per mile travelled is three times that of the automobile fatality rate.

In North Dakota, 49 bicycle injuries were reported to the North Dakota Health Department (NDHD) in 1991, representing two percent of the 2,405 total injuries reported that year. Bicycling ranked 12th among the state's most common injuries, down four places from 1990 when bicycling was the 8th most common cause of injury (NDHD 1990). Of the 2,597 injuries reported in 1990, 3% (78 injuries) were bicycle-related. Falls (28.5%) and motor vehicle accidents (19.5%) were predominant.

From 1985 to 1990, 445 bicycle-related injuries were reported to NDHD, or approximately 89 per year. During the same period, the state Department of Transportation documented 528 bicycle-motor vehicle traffic accidents. Nine people were killed, or less than two percent. Though not comprehensive, the statistics compiled by NDHD offer a foundation for tracking bicycling injuries. During the 1985-90 report period, NDHD documented all bicycling injuries reported by North Dakota medical facilities - those requiring hospital care as well as those that did not. In the future, NDHD will track only those injuries which require hospital care.

As stated in the national statistics section of this plan, it is likely that the figures reported by the state Departments of Health and Transportation are only the tip of the iceberg. Because reporting accident statistics to NDHD is optional (unless the incident involves a head injury), the volume of reported accidents is probably a small proportion of serious injury accidents involving cyclists. One case in point is an Australian survey which found that for every reported accident involving a cyclist, there were approximately 30 accidents which were not reported. With the implementation of computerized reporting

techniques by the NDHD and updated highway patrol injury report forms, however, it is anticipated the consistency of reporting will improve.

The Age Factor

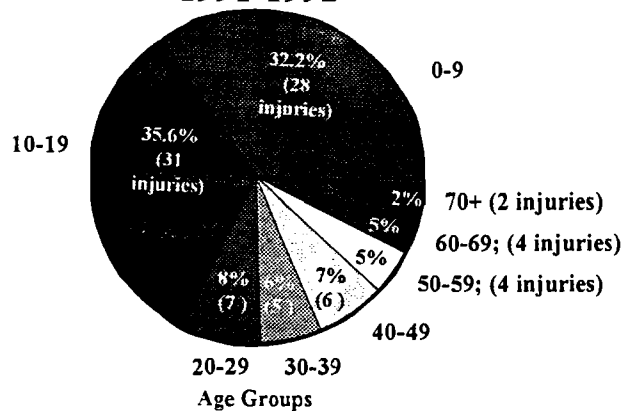
The number of bicycle accidents varies considerably with the age and experience of the cyclist. The 5-14 year age group has the highest number of bicycle accidents in North Dakota and nationally. From 1985 to 1990, bicycle accidents were the fourth most common injury sustained by children aged 5-14 in North Dakota. Of the approximately 5,000 accidents reported during the period, 445 were reported by children in this age group (8.3%).

Within the 5-14 year-old age group, the 5-9 year-old children appear to be at the greatest risk. During the 1985-90 period, 211 children sustained bicycle-related injuries. Of the 1,773 total injuries reported for this age group, bicycle accidents accounted for 12 percent.

Nationally, more than one-third (40 percent) of bicyclists killed in traffic crashes in 1992 were between five and 15 years old. The fatality rate for this age group of bicyclists was 7.2 persons per one million population. More children 14 and younger lose their lives as bicyclists and pedestrians than from any other accident type. Moreover, bicycles rank second in accounting for hospital emergency room admissions nationwide (Consumer Product Safety Commission). The high rate of accidents and injuries in this young age category can be attributed to several factors. The 10-14 year age group generally has the highest bike use, increased trip lengths and greater exposure to more severe traffic conditions. Increased on-road experience and the development of peripheral vision, physical conditioning and reflexes account for the gradual decrease in the accident rate in the ages following 10-14 years.

North Dakota Bicycling Injuries*

1991-1992



* - nonfatal bicycling injuries as reported to the North Dakota State Health Department.

Figure 7: Bicycling Injuries by Age

Motor Vehicle Collisions

The first automobile crash in the United States occurred in New York City in 1896 when a motor vehicle collided with a bicycle rider (Famous First Facts, by Joseph Kane.)

• National Statistics

Nationally, more than 41,000 bicyclists have died in traffic crashes in the United States since 1932 -- the first year in which bicyclist fatality statistics were recorded. The 350 bicyclists killed in 1932 accounted for 1.2% of the 25,800 persons who died in traffic crashes that year (NHTSA 1993).

In 1992, 722 bicyclists were killed in traffic crashes. The bicyclist deaths accounted for two percent of all traffic fatalities during the year. The number of bicyclist fatalities in 1992 was 28 percent lower than the 1,003 fatalities reported in 1975 -- the first year in which the Fatal Accident Reporting System (FARS) was operational. The 1975 FARS total was the highest ever recorded. In 1975, the average age of bicycle fatalities was 17.7 years; in 1992 it was 27.5 years. Bicyclists accounted for 11 percent of all non-motorist traffic fatalities in 1992. Pedestrians accounted for 87 percent and the remaining two percent were skateboarders, skaters, etc. Bicyclist fatalities occur more frequently in urban areas (61 percent), at non-intersection locations (68 percent), between 4-8 p.m. (37 percent) and during the summer months -- June, July and August (38 percent). Most biking fatalities in 1992 were males (88 percent), between 5 and 44 years old (77 percent) (NHTSA 1993).

Since 1940, the number of bicycle-motor vehicle deaths has increased 33 percent nationally. The number of bicycles in use, however, has increased 13-fold, so the death rate is one-tenth the rate in 1940. The proportion of deaths occurring to young adults and adults, however, has steadily increased since 1960 (National Safety Council Accident Facts).

Nationally, more than one-third of bicycle-traffic crashes reported in 1992 that resulted in fatalities involved alcohol. In 21.5% of the crashes the driver was intoxicated while bicyclists were intoxicated in 4.4 percent of the fatal crashes (NHTSA 1993).

• North Dakota Statistics

Of the 634 bicycle-related injuries reported from 1985 to 1990, or 10.9% (69) involved a motor vehicle. In the 0-9 year old age group, 7.8% (22) of the 281 injuries involved a motor vehicle while 25.7% (9) of the 35 injuries in the 20-29 year old age group involved a motor vehicle.

In North Dakota, the number of bicycle-motor vehicle deaths has consistently hovered at an average of two deaths per year. In 1979, a peak of four deaths occurred while in 1980 and 1992 the state achieved fatality-free reporting years.

Injuries

• Head Injuries

Of the injuries reported to the NDHD in 1985-1990, 21% involved head injuries. Data specifically regarding helmet use is not available. An additional 27% involved open wounds, 25% involved fractures and 8% involved a sprain, strain and/or dislocations. While head injuries are largely preventable with the use of a bicycle helmet, injuries to the body are difficult to prevent in terms of safety equipment,

other than proper bicycle parts including reflectors, headlamp and a bell. Proper education of the cyclist and the motorist is an essential element in the prevention of all accidents. Another key component is enforcement of traffic laws. Improved law enforcement will likely result in improved bicycling skills and thus reduce hazardous situations.

- **Helmets**

It has been estimated that as much as 75% of all bicycle rider fatalities are a result of head injuries. The best protection against this type of injury is use of an approved bicycle helmet. Wearing a helmet can reduce the severity of brain injury in a crash by 88% and save a life. Unfortunately, the majority of riders choose not to wear a helmet. Encouraging riders to wear helmets is a challenge to all states and their communities. In Australia, where the use of bicycle helmets is strongly promoted, an impressive 60% of elementary school age children wear helmets. In addition, Australia's emergency room admission statistics show bicycle crash-related head injuries have declined dramatically.

Riders should choose bicycle helmets approved by the two bicycle helmet standard authorities in North America - Snell Memorial Foundation and American National Standards Institute (ANSI).

2.3.2 Types of Bicycle Accidents

As noted in the fatality summary prepared by the NHTSA and quoted above, certain types of behaviors are common to bicycle-vehicle accidents that result in fatalities. In his report "*Bicycle Safety Education: Facts and Issues*" (1978), Cross identified the common factors in bike-car crashes and common crash types based on an extensive analysis of 1975 data from 919 accident cases from four different areas of the U.S. (Cross & Fisher, 1977). BIKECENTENNIAL printed the following summary of this information:

Five crash types result in 80% of all bike-car accidents:

- **Motorist drive-out (19%)** - A motorist at a stop sign, signal, or in a driveway pulls out in front of a passing bicyclist;
- **Bicyclist ride-out at stop sign or signal (17%)** - A bicyclist rides past a stop sign or red light without stopping;
- **Motorist unexpected turn (15%)** - A motorist turns in front of a bicyclist without yielding;
- **Bicyclist off-road ride-out (14%)** - A bicyclist rides onto the roadway without yielding;
- **Bicyclist unexpected turn (14%)** - A bicyclist turns left in front of an overtaking car without looking back or yielding;

The following five factors were involved in most bike-car accidents:

- **Bicyclist riding without lights** - Almost 50% of bike-related fatalities involve bicyclists riding without lights at night;
- **Bicyclist riding against traffic** - Riding against traffic accounts for about 20% of all bike-car crashes;
- **Bicyclist ignoring traffic control devices** - Running stop signs or yield signs is a major crash cause among young riders;
- **Motorist drinking and driving** - the inebriated motorist is a factor in night-time cycling deaths;
- **Motorist failure to yield** - Motorists who don't watch for other road users hit adult bicyclists.

In their report *A Study of Bicycle-Motor Vehicle Accidents*, Cross and Fisher (1977) also came up with seven broad classes of accidents with 36 different specific types, the first classification of its kind. Although the data they analyzed came from four different parts of the country, there were striking similarities between the accident data which allowed the authors to develop an accident classification system which could be used across the U.S. Classifying accident data using this system allows enforcement and safety education officers to identify key problem areas and design their enforcement and safety programs to target these areas or accident types.

Developing a good understanding of the nature of bicycle accidents within any community first requires access to accurate information about accidents. Throughout the U.S., in general fewer than 10% of all serious injury-producing accidents get reported. Many of these may be falls, collisions with stationary objects, collisions with pedestrians and other non-car related crashes. For serious car-related accidents, less than 30% are reported (BIKECENTENNIAL, 1993). Cross and Fisher (1977) concluded that bicycle injuries were generally under-reported by a factor of 12.47. Cooperation with local hospitals and medical clinics is necessary to obtain information on bicycle injuries and accidents that are not reported to the police. Inclusion of this information in the analysis of accident data will provide a more accurate picture of problem areas and safety messages that need to be reinforced through bicycle safety programs. It will also allow for meaningful evaluation of existing safety education and enforcement programs.

2.4 EXISTING BICYCLE FACILITIES AND ROUTES

2.4.1 Bicycling Environment

North Dakota has a favorable bicycling environment in both rural and urban areas due to relatively low traffic volumes. In addition, the state's urban areas are developing bicycle networks. Promoting the bicycle as a vehicle and encouraging motorists and cyclists to "share the road" opens thousands of miles of roadway to bicyclists. Integrating cyclists into roadways may also encourage the acceptance of cyclists by motorists.

Bicycles are legal on all public streets and highways in the state, though bicycling on Interstates is not recommended due to faster, higher volumes of traffic. Opportunity exists for bicycle use if the demand can be met by appropriate facilities. Transportation trips will result from recreational trails if the trail is linked with key destinations, e.g. parks, shopping malls and schools.

The network of residential streets in North Dakota's towns and cities represents an emerging infrastructure for bicycle transportation. Modifications such as signing and lane designation for bicycles and increased bicycle awareness will improve the system. One of the challenges for communities is where these streets adjoin collector and arterial streets, which are generally preferred as these roads provide the most direct route to key destinations.

2.4.2 North Dakota Bicycling Facilities

A variety of facilities exist in North Dakota. The following listing provides an introduction to some of what is currently available in the state. The existing bicycle facilities inventory needs to be updated to include all types of bicycle facilities, including areas for off-road access to public lands.

Rail Trail

- **Roughrider Trail**

The Roughrider Trail is approximately 23 miles of railroad right-of-way used for snowmobiling in the winter months and hiking and bicycling the rest of the year. The trail begins south of Fort Abraham Lincoln State Park (Mandan) for summer use and, via a snowmobile trail lease across a private sector of land, in the park in the winter for snowmobilers.

- **Milwaukee Trail**

This four mile long abandoned rail right-of-way is part of the Fargo Trail system. It is a paved, multi-use trail with well-designed crossings for users at several major intersections. Within the next few years, the city plans to add another six to seven miles, to the south and west.

Urban Bike/Recreation Paths

The 1990 North Dakota State Comprehensive Outdoor Recreation Plan (SCORP) reported the need for more and better managed recreational facilities throughout the state. Though many trails are predominately for leisure/recreation purposes, several double as transportation routes. The greatest transportation benefit will be realized by bicycle and pedestrian users within urban or suburban communities. North Dakota's urban areas have approximately 100 miles of paved bicycle/multi-use trails available to users. When combined with sidewalks, trails account for a major pedestrian/bicycle multi-use corridor.

Bicycling facilities are found at the following locations:

- **Beulah**

One mile; paved trail, runs through the city.

- **Bismarck**

Approximately 13 miles of paved multi-use trails including a three-mile loop around two golf courses and a four-mile riverfront trail. In conjunction with the city MPO, the Bismarck and Mandan park districts have plans for additional trails, including two ISTEA Transportation Enhancement (TE) projects in the spring of 1994.

- **Devils Lake**

Five miles of paved trails.

- **Dickinson**

Nine miles of multi-use trails. The Dickinson trail system is a combination of paved and concrete sections.

- **Fargo**

Fargo has over 34.5 miles of combined bikeways and multi-use trails based on a Fargo-Moorhead COG inventory conducted in 1993. This total excludes the mileage for recently funded TE projects.

- **Grafton**

Grafton has 4.5 miles of paved multi-use trails.

- **Grand Forks**

More than 14 miles of bike paths in combination with bike lanes. The city has also incorporated approximately five miles of signed bike routes into its bikeway network. Grand Forks was also approved for a TE project

- **Harvey**

Less than one mile of paved multi-use trail, near the city's swimming pool.

- **Hazen**

Hazen has 2.3 miles along highway 200. The city plans to extend this trail in the future.

- **Hettinger**

Two miles around Mirror Lake, east of the Hettinger city limits.

- **Jamestown**

Two miles around Jamestown College; one mile from Hillcrest Golf Course to baseball field; and 1.5 miles in the downtown area. Connecting trails are under consideration.

- **Mandan**

As of 1993, Mandan had no paved bike/multi-use trails. However, 3.3 miles are planned for the spring of 1994 via the city park district in addition to a NDDOT project south of Mandan accessing Fort Abraham Lincoln State Park.

- **Minot**

Currently has no bike trails but more than one trail is under consideration.

- **Valley City**

Half mile throughout town; an addition is planned for spring of 1994 along the Sheyenne River Valley.

- **Wahpeton**

Half mile asphalt in Chahinkapa Park; three miles along Red River. Additional trails will be completed in 1994.

- **West Fargo**

West Fargo reports over 5.6 miles of bikeways based on an inventory conducted by the Fargo-Moorhead COG in 1993. This does not include the one-mile TE project approved by the State in 1993 which provides a linkage between a residential area, parks, and an elementary school.

Mountain Bicycling Areas

- **U.S. Forest Service Lands**

Gravel roads and two-track trails are available for bicycle use in western and southwestern North Dakota. Interested bikers should contact the U.S. Forest Service office in Dickinson for a map (701/225-5151).

- **Viking Highway**

Little Yellowstone County Park to Lisbon, 25 miles, gravel. Winding and scenic, this route follows the Sheyenne River. Bicyclist can stop for a break at Fort Ransom State Park.

- **Highway 1806**

Mandan to Cross Ranch State Park, 10 miles paved, 18 miles gravel. The route provides a view of Square Buttes and the Missouri River.

- **Logging Camp Ranch**

Near Amidon mountain biking is allowed on designated trails at this privately owned, working ranch in the heart of the Badlands. The ranch includes North Dakota's only ponderosa pine forest. Lodging is available by reservation.

- **Sheyenne National Grasslands**

Located in the extreme southeastern corner of North Dakota, this 70,000-acre grassland area, also called the sandhills, includes North Dakota's largest designated portion of the North Country Trail, a national scenic trail which extends from New York to Lake Sakakawea in North Dakota. The grasslands segment is 25 miles long and provides excellent hiking and horseback riding. Mountain bicycling is also permitted, though some areas are difficult to ride through due to sand.

Bike Routes

- **Old Highway 10**

Steele to Fryburg, 170 miles, paved. Bicyclers riding across North Dakota find this route an excellent opportunity to get off the more heavily travelled highways.

- **Lewis and Clark National Historic Trail**

Highway 1804 from Beaver Bay Recreation Area to Washburn, 101 miles, paved; Highway 1804 from New Town to Williston, 72 miles, paved; Highway 1806 from Fort Yates to Mandan, 63 miles, paved. Highways 1804 and 1806 have been designated as part of the Lewis and Clark National Trail system. Follow the Missouri River through rolling range land to cottonwood forests to the Dakota Badlands.

- **Highway 22**

Killdeer to New Town, 61 miles, paved. Traversing the rugged North Dakota Badlands, this route crosses two of North Dakota's most scenic bridges; Lost Bridge over the Little Missouri River and Four Bears Bridge over Lake Sakakawea.

- **Theodore Roosevelt National Park - South Unit**

Medora, 36 miles, paved. This looped road offers a spectacular look at the rugged terrain and wildlife, including buffalo.

- **Turtle Mountains**

Looped route beginning and ending at Bottineau, including Dunseith, 65 miles, paved. This route provides a look at the heavily forested Turtle Mountains and Lake Metigoshe State Park. Bicyclists can take a three-mile side trip to the International Peace Garden.

- **Grafton Loop**

Looped route beginning and ending at Grafton, including Cavalier, Backoo, Akra, Icelandic State Park, Mountain, Gardar, Edingurg and Pisek, 119 miles, paved. This route provides an excellent tour of some of North Dakota's finest small towns in the northeastern corner of the state.

- **Grand Forks Loop**

Paved, 100-mile route beginning and ending in Grand Forks, including Highway 2, Mekinock, Emerado and Mayville.

- **Fargo Area**

Paved, 113-mile route beginning and ending in Fargo, including Mapleton, Erie, Clifford, Blanchard, Kelso, Grandin, Gardner and Argusville.

3.0 REVIEW OF CURRENT ISSUES AND NEEDS

This section provides a review of current bicycling issues and needs in North Dakota. These have been identified primarily through a series of public workshops held in six of North Dakota's eight planning regions. Issues and needs were also identified in a second set of workshops held in two locations in the state after the plan was initially drafted. Comments from these workshops have been supplemented with information gathered through research. Because these comments have been compiled from all the workshops, variations on ideas and differences of opinion do occur. Summaries of the actual comments made at each workshop are provided in Appendix C.

Issues and needs are described under the subsections listed below. In each subsection, comments have been grouped under a number of key issues. Issues or needs which are general in nature, or relate to a number of topics, are presented in section 3.1. A summary of the main issues is provided at the end of the chapter.

3.1 GENERAL BICYCLING ISSUES AND NEEDS

3.1.1 Encouraging Bicycling

A variety of issues and needs relating to encouragement were identified in the workshops. Facility improvements are seen as an important aspect of increasing bicycle usage in the state: "Build them and they will come" in the words of one participant.

Other key needs which would encourage bicycling include club activities, media attention, information dissemination and associated facilities such as parking. Local differences were apparent in the workshops, largely reflecting differences in bicycling ability. The following comments were made regarding encouragement:

- need media involvement to increase public awareness and positive image of bicycling;
- need active clubs to encourage participation in the activity;
- need networking between clubs, advocacy groups and government agencies;
- need state planning conference to facilitate networking between bicyclists, government agencies, police, etc.;
- need signed, marked trails and other facilities;
- need safe places to ride (e.g. well-maintained paths and wide shoulders);
- need secure parking for bikes, showers and change room facilities to encourage biking for transportation purposes.

3.1.2 Providing Information on Bicycling Opportunities

All regions identified the need for information and promotion for local bicyclists and tourists. Maps are a high priority - the lack of information on where to ride is a big drawback. Bicyclists want a state bikeway map in addition to local urban area and tour-oriented maps. Top destination mapping requests include the Badlands, Sheyenne National Grasslands and the Little Missouri National Grasslands. Summaries of the actual comments made at each workshop are provided in Appendices C and E.

Comments and suggestions regarding information needs included:

- need information on where to bike as you enter North Dakota;
- need consistent information in print and informed personnel;
- need information on where to bike off-road for local and tourist audiences;
- need maps that are updated regularly; update the State Bikeways Map and State Bicycle Plan every five years;
- need information on agency jurisdictions, responsibilities and activities in particular areas;
- need a central repository or toll free number for information on facilities/routes.

3.1.3 Planning for Bicycling

Improved efforts to integrate planning at various levels is seen as an important aspect of improving bicycling in North Dakota. Specifically, incorporating bicycling into municipal and state transportation planning processes is needed. For example, a policy regarding minimum highway and roadway shoulder widths could be adopted to accommodate bicyclists. Such a policy would be integrated in the *design* phase of roads, rather than after they are built or reconstructed.

Other concerns mentioned include the lack of coordination among planning agencies and lack of consultation with bicycle user groups. Interagency communication should be occurring between the state Departments of Transportation and Parks & Recreation, MPO/city planners and park districts. Benefits of improved coordination among these agencies could include better use of funds and/or improved facilities. By identifying optimal riding areas and incorporating numerous agencies and users, a useful plan will result. Information was also requested regarding funding sources.

Bicyclists and bicycle user groups should be consulted by planning agencies so as to assure that the facility is truly bicycle friendly.

Limited budgets were recognized by workshop participants as well as the fact that local authorities need some latitude in the planning process to adjust for local conditions.

Comments regarding bicycle planning needs include:

- need access to services/facilities along trails;
- need more facilities, specifically on publicly-owned lands;
- need to consult cyclist user groups about facility development;
- review need for statewide bicycling advocacy/lobby organization;
- State Bicycle Plan will foster grassroots development of local (implementation) programs;
- need to increase information gathered on mountain, biking, for example through the upcoming SCORP.

3.1.4 Bicycle Facilities

Facilities are a basic, primary need statewide. A variety of facilities are desired, including those in urban and rural areas, on-road facilities and those separated from the traffic. A need consistently expressed was for facilities appropriate to families in both cities and recreational locations. Strong interests were expressed in developing mountain-biking trails in eastern North Dakota as well as designated trails on public lands in southwestern North Dakota.

As stated in the planning subsection, the development of minimum standards and improved coordination among planning agencies is desired. AASHTO design standards are available, though workshop participants said cities should be allowed to adapt these federal standards to area conditions. By working together, agencies could improve the piecemeal trail situation which exists throughout the state.

Bike paths (i.e. corridors physically separated from a road) are perceived differently among bicyclists. Recreational riders generally prefer the separated corridor while those riding for transportation often prefer to be integrated directly into the road system.

Incorporating bicycle facilities into existing transportation networks becomes a challenge especially in bottleneck areas like bridges, areas where the highway narrows and at railway crossings. These areas need to be addressed, however, as providing safe, well-maintained places to ride encourages people to cycle. These are crucial links in the system. If broken, no system exists.

Maintenance is crucial to the usability and safety of any biking facility. Well-maintained bike paths and highway shoulders are more likely to get used and are safer for riders. Facilities should be maintained year-round where the need exists.

Comments regarding bicycle facility needs included:

- traffic signal cycles need to last longer in some areas to allow riders to cross;
- urban bikepath designs need to incorporate barriers to discourage "joyriders" in motorized vehicles from using the path, yet be flexible enough to accommodate emergency vehicles and prevent injury to bicyclists; bollards, landscaping and barrels are potential barriers;
- bicyclists as a user group should be consulted about facility development;
- bike racks should be the type where the whole bike can be locked to a rack, not just a wheel;
- user groups need to take maintenance responsibilities to ensure continued use of facilities;
- need to improve incorporation of bicycle facilities into land use planning, particularly suburban developments.

3.2 TRANSPORTATION

Using bicycles for transportation is particularly important in larger communities and in those centers with universities or colleges. There is concern that bicycle paths may detract from bicyclists being seen as commuters. Increased awareness is needed among the general public and transportation planners that bicycling is a viable mode of transportation - not just a recreation activity. And transportation is not just the journey to work. The majority of transportation trips are for social, shopping and education purposes.

Options to incorporate bicycling into existing transportation systems include striping bike lanes on city roads, constructing bike paths and designating bike routes. Also helpful would be the formulation of policies regarding these facilities.

Corridor criteria when establishing bike facilities are similar to those involved when planning any other mode of transportation: bicyclists want to travel the most direct route to their destination, while scenery, safety and accessibility are also important factors.

By providing safe facilities, riding for the purpose of transportation will likely increase. Separated facilities are not used by the avid bicyclists generally because they are too short and/or contain too many obstacles, e.g. strollers, skaters and children (unskilled riders).

Comments made regarding transportation needs included:

- need to incorporate local bicycle plans into a statewide bicycle transportation network;
- universities and colleges are areas of high need for transportation facilities;
- circular routes around communities would be beneficial with linkages to rural systems;
- larger communities such as Fargo-Moorhead have difficulty retrofitting and providing facilities in congested areas.

3.3 RECREATION

3.3.1 Facility Needs

Bicycling is documented in the *State Comprehensive Outdoor Recreation Plan (SCORP)* as the second most popular recreation activity in North Dakota. Bicycling is an excellent family activity as riders of varying levels can easily enjoy a ride together. In the eastern half of the state more developed facilities were desired. In the west, the emphasis is more on public access and information.

There is a need for facilities designed with families in mind (e.g. separate bicycling facilities and shoulders in rural areas or on busy highways). The need for separate paths is perceived as beneficial as riders do not have to compete with traffic.

Again, workshop participants felt that by providing more facilities in key areas, the state will increase ridership. The routes should be planned along scenic, accessible corridors. Access to other recreation facilities, such as parks, is preferable.

A lack of mountain bicycling facilities exists statewide. Mountain bicycling trails should offer varying types of terrain with varying route lengths. Access to key off-road bicycling areas such as the Badlands and National Grasslands is desired.

Signage in recreational areas prompted mixed responses. Some workshop participants expressed a need for well-marked trails with signs designating trail length and terrain while others stated signing decreases the feeling of being able to ride in a quasi-wilderness setting.

Other needs expressed regarding recreational bicycling:

- need to provide parking facilities linked with bike trails.

3.3.2 Information Needs

North Dakota bicyclists want information on a variety of issues: where to ride bikes and what to look for when they get there. Maps as well as informational brochures are desired. The need for information along trail facilities, at trailheads or access area parking lots was emphasized.

Comments regarding information needs included:

- events must be well-publicized and promoted in advance;
- need information on what facilities are available in state parks;
- information systems are needed along trails showing where you are on the trail, topography, length of loops, where loops go, where the loops are in relation to parking areas, etc.;
- establish signing system which shows the rules of the area (e.g. what to do when you see horses on the trail) and the topography of the area;
- need information on trail ownership (e.g. whether easements are private or public land).

3.3.3 Encouragement/Promotion/Opportunities

Workshop participants noted there are many different opportunities but information and promotion were the missing ingredients. Comments included:

- encourage seniors to cycle as a means of safe exercise that is not traumatic to joints;
- encourage people to ride beyond their neighborhood;
- coordinate bike tours and rides to encourage people to ride in new areas;
- bike routes/paths should incorporate other recreational facilities (e.g. parks and golf courses);
- increase access to good off-road biking areas such as the Badlands and National Grasslands
- need state park policy on bicycling;
- tourists/campers are combining transportation and recreational aspects of biking by bringing bikes with them on vacation.

3.3.4 Safety/User Conflicts

The need to accommodate a variety of trail users is crucial as trail conflicts can create dangerous situations. Options to accomplish this task include educating users on corridor sharing to promote safety (e.g. policies on "who yields to who") and/or providing separate facilities. Common user conflicts include bicyclists/horseback riders and in-line skaters/pedestrians. There are also problems with motorized vehicles using bicycle paths.

A lack of bicycling facilities exists in state Parks. Bicyclists are generally not allowed on park trails and the roadways are often congested with motorized traffic.

Bicyclists perceive trail development processes as focusing on multi-use rather than bicycling. By cooperating with other trail user groups, bicycling groups may be able to develop more facilities.

3.4 TOURISM

North Dakota possesses a multitude of bicycling tourism opportunities. It was noted the 2-3 day travel/vacation experience is the fastest growing tourism pattern and North Dakota could easily capitalize on this trend by utilizing its open spaces and historical and cultural resources. A lack of coordination, information and tourism outfitters, however, are limiting factors. Bicycling tourism needs include maps of facilities that can be visited in a day's ride, routes which would encourage out-of-state and hometown tourists to tour the state by bike, and maps showing areas for off-road bicycling.

Key characteristics for planning a bike tour include: safety — the route should be a low-traffic corridor with well-maintained roads and shoulders; facilities — necessities include water, showers; and variety of scenery — a tour through North Dakota could incorporate prairie, riverbottom, badlands and wooded areas.

Interconnecting trails and bike routes with a theme (history, geology, environment) would greatly enhance the bicycle tour experience. The information should be reinforced with printed material, such as interpretive brochures.

Some comments regarding tourism needs included:

- need better information if state is going to promote bicycling as a tourism aspect;
- bike touring groups utilize WS.2 or ND 200 as an alternative to Interstate 94;
- should coordinate recreational areas in the rural area to service bike tours;
- facilities are needed along highways for tour groups;
- need to encourage tourism off the main highways and away from major destinations.

3.5 SAFETY/EDUCATION/ENFORCEMENT

Safety and education were key topics of discussion at all workshops. Education should be aimed at drivers as well as bicyclists. Child and adult bicyclists alike need to be educated. Opinions on helmet use are mixed. Legislation requiring helmet use is not considered a realistic option.

3.5.1 Educating Bicyclists

Top education priorities include encouraging bicyclists to obey traffic rules (signalling, communicating with traffic, acting like they are operating a vehicle); educating police departments about proper traffic safety rules with respect to bikes and encouraging them to enforce the laws; and targeting adults as well as children for bicycle education.

A potential way to reinforce children's education is to encourage parents to take a more active role in ensuring the child rides in a safe, legal manner. One suggestion was to have a parent or guardian certify that their child has properly learned how to operate a bicycle by requiring them to sign a checklist of skills/rules learned by the child.

Comments regarding bicycling education needs included:

- need greater promotion of safety education programs through schools, starting in low grades when children begin riding their bikes to school;
- mandate training courses before children are allowed to ride on roads;
- need to access available videos and knowledgeable mechanical/maintenance personnel;
- train a volunteer squad to do "on the spot" bicycling training for kids on weekends;
- develop information packet on bicycle safety and rules of the road;
- need better communication between the state officials responsible for bicycle safety education and user groups to share information, resources and distribute educational material;
- need maintenance education and information on buying a bike that fits;
- need non-intimidating seminar on repair and maintenance;
- educate cyclist about the type of equipment to use and clothing to wear to increase visibility;
- educate bicyclists to improve their skills in negotiating intersections (crossing lanes of traffic);

- need to encourage bicyclists to ride on secondary highways rather than interstates;
- a better accident prevention program is needed, especially as the number of bicyclists increase;
- need more accident data (e.g. from hospitals).

3.5.2 Educating Drivers

By law, bicyclists are entitled to all rights of the road as are motorized vehicles. Drivers often are oblivious to bicyclists when checking for traffic. There is a need to promote bicycles as a viable alternative mode of transportation and to encourage/educate drivers to pay more attention to bicyclists and to "share the road." Workshop participants stated improved driver awareness would promote safety and reduce car/bike accidents and injuries. Implementing such a campaign will require cooperation by local police authorities and media sources.

Some comments regarding drivers' education included:

- education campaign should focus on bikes as vehicles that move fast;
- incorporate bicycle safety information into drivers' education and license testing programs;
- educate drivers/bicyclists about proper hand signals;
- require drivers to be re-tested "every so many" years; incorporate bicycle safety information;
- educate truckers on bicycle traffic safety.

3.5.3 Helmet Use

The acceptance of bicycle helmets is hindered by the perception of risk (low) and the lack of a positive image. While younger riders may wear helmets because their parents require them to do so, the parents themselves do not wear helmets, thus portraying a mixed image.

Possible plans of action to increase helmet use include promotion, safety information dissemination and special events such as Safe Kids Coalition, state Health Department's neighborhood block parties and State Highway Patrol bike rodeos which promote bicycle safety and distribute free helmets to kids, when available.

Some comments regarding helmet use:

- teenagers are the worst age group for not wearing helmets;
- bike clubs encourage the use of helmets by setting an example and promoting helmet use;
- need to establish wearing a helmet as "fashionable";
- passing a state law on helmet use law would not encourage more people in North Dakota to wear a helmet.

3.6 LEGISLATION/POLICIES

Discussions were wide-ranging regarding legislation and policies, but a basic concern was the lack of knowledge about laws related to bicycling. For example, many people are not aware of applicable local ordinances which allow or prohibit bicyclists on sidewalks, or state law which requires bikes to follow all rules of the road that motorized vehicles follow. Also noted was the need for policies to address a variety of issues related to planning and land use to incorporate consideration of bicycling.

Comments regarding bicycle policies and legislation included:

- need better enforcement of state law requiring minimum bicycle equipment (e.g. mandatory use of lights on bicycles at night);
- need police to set a positive example by using bicycle patrols;
- police need to enforce applicable laws;
- North Dakota Century Code which states "bikes must ride on adjacent bike path if one is provided adjacent to road" is out of date and should be repealed;
- establish a policy/law to acquire abandoned railways for potential public trails;
- need policy review of issues related to public access to waterways (for trails);
- improve subdivision design approach to incorporate bicycling as a transportation mode;
- investigate imposing user fees and/or bicycle registration fees to raise funding for trail development and safety education;
- State Bicycling Committee needs to be formed which is representative of all bodies that deal with biking;
- pass legislation for hospitals to release bicycle injury statistics;
- change state Park rule that restricts "wheeled" vehicles to restricting "motorized" vehicles.

3.7 SUMMARY

The issues and needs identified through the public workshops, as well as interviews with key personnel at agencies responsible for providing programs in support of bicycling, have been summarized under the following six categories. These issue summaries form the basis for the State Bicycle Plan objectives and recommendations presented in Chapter 5.

Planning and Implementation

- coordinate activities amongst planning agencies
- integrate the State Bicycle Plan with municipal and state transportation plans
- consult with bicyclists and public during planning and design
- provide local authorities with some latitude in planning to adjust for local conditions

Engineering Transportation and Recreation/Touring Facilities

- all kinds of facilities are needed — if they are built, they will be used
- develop minimum design standards and coordinate with agencies providing facilities to apply these standards across the state
- facilities need proper maintenance
- incorporate bicycling facilities into existing transportation facilities
- bicycling routes for transportation purposes should be accessible, safe and provide direct access to major destinations
- recreation facilities should be separated from vehicle traffic and designed for family use
- mountain biking trails are needed as is off-road access to designated public lands
- more facilities, particularly for families, are needed in key recreation areas, with links to facilities at specific sites
- support facilities for bicycle touring are needed; parking, showers, water, etc.

Education/Safety

- educate bicyclists on obeying traffic rules, signalling, etc.
- develop a children's safety education program with parental involvement to help ensure children develop good safety skills
- improve driver awareness of bicyclists
- promote a positive image for helmet use
- educate users on trail sharing etiquette
- encourage hospitals to release bicycle injury statistics

Enforcement/Legislation/Policies

- improve knowledge and enforcement of existing state bicycle laws
- need policies to incorporate consideration of bicycling into transportation and land use planning
- repeal out-of-date laws that hinder bicycling
- establish policy to allow acquisition of abandoned railway corridor lands for potential public trails

Encouragement

- need more information and promotional activity to encourage bicycling
- facilities need to be improved and associated facilities (e.g. parking, lockers and showers) developed
- the media needs to be involved in promoting bicycling
- active bicycling clubs encourage participation
- develop 2-3 day theme rides using low-volume roads to promote bicycle tourism

Information - Routes, Facilities and Touring

- need mapped information for state, local areas and bicycle tours
- need information at trail heads, parking lots or along trails
- develop information on where to ride, where to access public land, one what amenities are available in the area

4.0 OPPORTUNITIES

In every workshop a variety of opportunities were described. Often these were related to locations or areas within the planning region where public lands were easily accessible but information or facilities were lacking. Workshop participants also had many ideas about opportunities to encourage bicycling and promote safety. These have been summarized here; a complete listing of opportunities identified at public workshops is provided in Appendix C.

4.1 PLANNING/IMPLEMENTATION

It was noted that creative funding solutions would probably be needed to help implement the State Bicycle Plan, encourage bicycling and get facilities in place.

- local bike plans may encourage people if implemented by local jurisdictions and the public is made aware of the plan's existence
- Fargo and Grand Forks have adopted bicycle plans, primarily to develop path networks
- corporate donations could be requested for bike trail maintenance/development
- need creative funding solutions: employer incentive programs, discount coupons for trail use facilities, tax breaks for purchase of safety equipment, insurance discounts for driver training education, use of taxes from sale of bikes for state trail development fund, establish bike registration/licensing system and use funds generated for maintenance and development of trails, establish user fees for trail fund
- could implement a bicycle registration/licensing system to generate revenue for maintenance and development of bicycle facilities

4.2 ENGINEERING (TRANSPORTATION, RECREATION AND TOURING FACILITIES)

Many areas were identified as opportunities for bicycling facilities or use. Others suggested teaming up with other recreational trail users would increase facilities available for bicyclists.

- Snowdon Bridge with railway tunnel is a tremendous facility opportunity but liability and maintenance/management are problem issues
- opportunity area: Little Missouri State Park - scenic, good for road riding, some land owned by Bureau of Land Management
- Highway #10 chosen for one week bike tour from Medora to Fargo because it is scenic, has lower traffic volumes, and has a lower speed limit
- abandoned railway lines are a good multi-purpose trail opportunity
- buried oil lines, other utilities and transmission lines are all done by easement (already compromising private land), are cleared and maintained and have vehicle access; could function as bike trails and/or provide bicycle access to public lands
- National Grasslands are a gold mine for off-road biking; it is public land; the public have a right to be there
- at local level, should try to tie other recreational facilities to bike trails or designated bike routes along roadways, for example, golf courses
- North Dakota has great potential for touring areas (e.g. along river system) but there has been no development undertaken
- off-road mountain biking facilities are inexpensive to develop; don't need surfacing

- a trail along the Red River from Wahpeton to Canada would be nice if the right-of-way could be preserved
- good idea to link together with other trail developers/users like Snowmobile ND, and cross-country skiers organizations; there is strength in numbers if working together towards common goal
- not many wildlife refuges are being utilized for off-road use; need multi-use development
- suggested opportunity areas: McCluskey Canal, Garrison Diversion, Sheyenne River Diversion, Pipestem Dam (just north of Jamestown)
- Mayville Zoo could be promoted as a tourism destination
- some gravel roads have recreational or tourism potential (e.g. around Fort Ransom State Park)
- could develop state-wide named bicycle corridors for tourism destination purposes; e.g. Red River Cart Trail (Pembina-Wahpeton) or Custer Trail (Bismarck)

4.3 EDUCATION/SAFETY

A variety of avenues were suggested as opportunities for promoting bicycle safety to children, adults and drivers. These involved schools, government agencies, community organizations, police departments, the media, bike shops and bike clubs. As with other aspects of bicycling, bicycle safety education was seen as a shared responsibility.

- NDDOT Traffic Safety Division is responsible for channelling federal monies available through the National Highway Traffic Safety Administration (NHTSA) to safe biking and helmet safety programs in North Dakota
- bike clubs encourage people to wear helmets by setting an example and promoting helmet use
- videotapes on bicycle safety located in video rental stores and rented at no charge would increase awareness of the issue and provide public visibility
- Invite newspaper/media to cover events and educate about bicycle safety so that the information is communicated to a broad audience
- police should combine the safety-related aspects of bicycles with their driver education programs
- bike shops should go out to the schools once per year to tell kids about proper bike handling, equipment, safety rules, etc.
- local fraternal organizations could oversee bicycle safety education (e.g. Elks, Kiwanis, etc.)
- Safe Kids Coalition and block parties concept has helped to increase the numbers of kids that wear helmets
- drivers' licenses should include an insurance discount if people have taken a driver education course that includes a bicycling component; this would function as a monetary reward
- could get Physical Education departments at universities to develop a bicycle safety program that could be used in the grade level schools
- could do a mailing to all the truck freight companies educating them about the interactions between bikes and trucks on the roadways
- if a city licenses bikes, they could also give out basic information on their rules of the road when bicyclists apply for their bike registration
- hire college students as summer bike patrols to do "on the spot" bicycling training for kids
- possible opportunity to broadcast on community access TV network in time blocked for NDDOT

4.4 ENFORCEMENT/LEGISLATION/POLICIES

Increased funding opportunities now available through ISTEA were highlighted. Suggestions were also made for policy or legislative revisions to provide better consideration of bicycling.

- educate the police departments about proper traffic safety rules with respect to bikes and get them to enforce the rules
- the North Dakota Century Code should be amended to prevent the sale of potential future transportation corridor lands to adjacent landowners; for example, abandoned railway corridors
- new subdivisions must be designed to be pedestrian/bicycle friendly
- there are several transportation funding programs available under ISTEA which can now be allocated for bicycle/pedestrian projects including: Surface Transportation Program, Transportation Enhancements, Congestion Mitigation and Air Quality Program, Highway Safety Grant Program, National Highway System, Scenic Byways, Federal Lands Highways funds, Federal Transit Administration funds, planning funds, and Symms National Recreation Trail Act funds.

4.5 ENCOURAGEMENT/PROMOTION

A number of people suggested that holding special events would encourage people to cycle. A variety of opportunities for involving agencies, community organizations, employers and local media were identified. Cooperation between various groups was seen as necessary to the success of such events. Special events could also be used to promote tourism in the state.

Others suggested incentive or discount programs to encourage bicycling to work, bicycle tourism and the use of helmets.

- could promote/advertise biking as an alternate mode of transportation during Clean Air Month
- bicyclists could work with others to educate public about responsible use of the environment
- media promotion encourages people to ride, by providing profiles of local bicyclists, coverage of events/races and letters to the editor
- bike clubs perform an advocacy role and should maintain a good relationship with the media; advocates should educate the media about what they should be looking for
- bike clubs encourage people to ride by promoting competition, providing a social environment and disseminating knowledge about bikes and bicycling
- non-profit groups like the Lung Association can promote the health benefits of bicycling; could sponsor a "Bike to Work Day"
- local groups/organizations could sponsor an aspect or a leg of a statewide bike tour, for example, MedCenter 1 sponsors sports medicine aspect; local bike shop sells equipment while tour in their area
- promote good riding through events; media can help promote events
- local newspapers should be encouraged to become involved in corporate sponsorship of bike events
- should get large employers involved with internal incentive programs to encourage their employees to ride to work, for example, hospitals, Blue Shield, etc. like Bismarck's Jeans Day charitable campaign (employees can wear jeans to work once a week if they ride their bike to work)
- giving a tax break for purchase of a bike or bike helmet would encourage more people to buy bikes and buy/wear helmets
- do trail/bike route demonstration projects in urban areas on designated streets
- limited resources for trail maintenance can be overcome with "adopt a trail" program; bike clubs could host an annual maintenance day with volunteers to assist in clearing and maintaining trails

- "Field of Dreams" theory - build the facilities and the bicyclists will come
- state Parks & Recreation Dept. together with the state Tourism Dept. should sponsor/coordinate a bike ride across the state once per year; or host a state Trail Day
- State should establish awards for creative use of funds by state Park managers for bicycle facilities and programming
- the hosting of events would fulfill a tourism objective by bringing out-of-state bicyclists to North Dakota
- the private sector could get more involved in encouraging tourists to come to North Dakota to cycle by providing coupons or discounts for facilities (hotels, restaurants, hostels)
- travel agencies and AAA could encourage bicyclists to come to North Dakota as a tourism destination for bicycling

4.6 INFORMATION

Access to more and better information about existing bicycling facilities and routes was seen as the most immediate way to increase bicycle use. Opportunities for promoting bicycle tourism were also identified.

- information on where to bike and what facilities are available in state Parks can be built into existing information
- good source for informing/educating tourists is at highway rest stops
- some of best roads to bicycle are not shown on the state highway map because they are county roads (Highway #10)
- there is lots of public land in North Dakota that would meet riders needs if people knew how to get there and what areas were open to bikers; need to be signed
- could have a 1-800 number for information on where to ride
- local Chamber of Commerce could distribute promotional bicycling information to tourists

4.7 SUMMARY

Workshop participants identified many opportunities to address all aspects of bicycling in North Dakota. They presented ideas in creating partnerships to encourage bicycling, to provide safety education, to develop new facilities and to promote bicycle tourism. Many areas of the state were mentioned as great places for bicycling if only people knew where they were and how to access them. Other areas that had bicycling potential were also identified for future consideration. These suggestions have been drawn upon in the development of the plan's recommendations presented in Chapter 5.

5.0 GOALS, OBJECTIVES AND RECOMMENDATIONS - YEAR 2000

5.1 INTRODUCTION

This plan has been developed to ensure the promotion and encouragement of safe bicycling throughout North Dakota for both transportation and recreational purposes. The mission statement and accompanying goals and objectives have been adopted to direct the development and implementation of a statewide bicycling program.

The goals and objectives outlined below address all aspects of the 4 E's traditionally associated with bicycling: engineering, education, encouragement and enforcement, as well as activities required for planning and implementation. They also address the need for public information about existing facilities and bicycling opportunities. There are many challenges to overcome, as well as many opportunities to realize, in order to ensure the routine consideration of bicycling in the policies, programs and practices of all involved agencies and in the lifestyle choices of individuals. These goals and objectives are designed to meet those challenges and build on the opportunities.

Recommendations for activities, facility planning and development, inter-agency cooperation, policies and legislation which would be used to achieve the Plan's objectives are included in this chapter. These follow directly after the objectives to which they apply. The lead agencies who would be responsible for carrying out each recommendation are also identified. Recommendations for an overall program implementation strategy are provided in Chapter 6.

The following agency abbreviations have been used throughout this Chapter:

NDDOT	North Dakota Department of Transportation
NDPRD	North Dakota Parks and Recreation Department
NDTD	North Dakota Tourism Department
MPO	Metropolitan Planning Organization
NDDPI	North Dakota Department of Public Instruction
NDDHCL	North Dakota Department of Health & Consolidated Laboratories
NDSHP	North Dakota State Highway Patrol

Mission Statement

To enhance the opportunities for, and quality of, all types of bicycling within North Dakota.

GOALS

- G1:* To promote the implementation of the State Bicycle Plan and the development of local/regional plans which are integrated with the State Bicycle Plan.
- G2:* To develop and maintain bicycle facilities that allow and encourage safe, convenient and pleasant bicycle travel.
- G3:* To educate key target groups in lawful and responsible bicycling and driving.
- G4:* To promote the consideration of bicycling at all levels of government through policies and legislation.
- G5:* To increase the number of people using bicycles for transportation and recreation.
- G6:* To provide up-to-date information about existing bicycling facilities and opportunities within North Dakota.

5.2 PLANNING AND IMPLEMENTATION

G1: To promote the implementation of the State Bicycle Plan and the development of local/regional plans which are integrated with the State Bicycle Plan.

Discussion:

The objectives and recommended strategies in this section focus on the need to integrate planning for bicycling with other associated local and state planning processes.

To successfully integrate bicycling concerns into transportation, recreation and land use planning, various agencies, authorities and bicycling organizations will need to work together to identify common priorities and the most practical means for addressing them. The formation of a State Bicycle Advisory Committee has been suggested to provide a forum for cooperation amongst various government agencies and other groups. Such a committee would lay the foundation for a statewide network or partnership to support bicycling initiatives and stimulate the policy changes needed to make consideration of bicycling a routine function for all levels of government. It could also help ensure effective public review of recommended plans, policies and facilities. At a minimum, membership of the Bicycle Advisory Committee should include representatives of each of the agencies responsible for implementing components of the State Bicycle Plan, representatives of local governments, other state and federal agencies who provide bicycle facilities and members of the bicycling public actively involved in clubs and organizations or through bicycle shops. The position

of State Bicycle Coordinator would provide a useful contact for these groups and be able to act as a secretary to the BAC.

State agencies, local authorities and the bicycling public will be able to maximize the use of available funding mechanisms and effectively implement the State Bicycle Plan throughout North Dakota by coordinating these planning activities and by cooperating to achieve common bicycling goals.

Objective 1: To develop a framework for cooperation between various agencies, authorities and bicycling organizations to implement the State Bicycling Plan.

Recommended Strategies

- (1-1) Establish a State Bicycle Advisory Committee (BAC) within 3 months with representatives from all involved agencies and bicycling groups to promote the cooperative efforts required to implement the State Bicycle Plan. Prior to establishment of the BAC, NDDOT and NDPRD members of the State Bicycle Plan Steering Committee should continue to work together to implement the State Bicycle Plan (NDDOT, NDPRD).
- (1-2) Organize a statewide bicycling conference, within six months of completing the State Bicycle Plan, to discuss priorities, adopt implementation strategies and begin building relationships between agencies and other organizations involved in bicycling (NDDOT, NDPRD with help from MPO's, local bicycling organizations and other state agencies).
- (1-3) Promote the organization of a network of bicycle organizations and clubs, with representation on the BAC, to provide an informed voice for bicyclists across the state (BAC, bicycling clubs).

Objective 2: To coordinate integration of the State Bicycle Plan with associated local and state planning processes.

Recommended Strategies

- (2-1) Ensure the goals and objectives of the State Bicycle Plan are integrated with the State Comprehensive Outdoor Recreation Plan (SCORP), the State Intermodal Transportation Plan and the State Trails Plan (NDDOT, NDPRD).
- (2-2) Review the North Dakota Tourism Master Plan and coordinate implementation with the State Bicycle Plan where objectives overlap (BAC, NDPRD, NDTD).
- (2-3) Assist local jurisdictions in the development of bicycle plans which are integrated with the State Bicycle Plan. Develop a training program to provide technical assistance. Encourage the sharing of ideas between cities or MPO's with plans and those without (NDDOT, NDPRD, MPO's, cities).
- (2-4) Encourage the integration of bicycling concerns into the transportation, recreation and land use plans developed by local planning authorities and managers of reserve lands (BAC, NDDOT, NDPRD).

Objective 3: To ensure state and local bicycle plans are evaluated and reviewed on a regular basis, with public involvement.

Recommended Strategies

- (3-1) Review the State Bicycle Plan on a regular (five year) basis and revise to reflect current needs, concerns and opportunities (BAC, NDDOT, NDPRD).
- (3-2) Incorporate a monitoring process into state/local bicycle planning to evaluate plan implementation and the achievement of goals and objectives, based on current information about use of bicycles and facilities (NDDOT, NDPRD, MPO's, BAC, other planning agencies).
- (3-3) Ensure public participation in the development and review of bicycling plans, policies, design standards and maintenance practices (BAC, NDDOT, NDPRD).

5.3 ENGINEERING (TRANSPORTATION, RECREATION AND TOURING FACILITIES)

G2: To develop and maintain bicycle facilities that allow and encourage safe, convenient and pleasant bicycle travel.

Discussion:

Improvements to existing facilities through retrofitting as well as the development of new facilities, are required to increase opportunities for the safe and convenient use of bicycles for transportation, recreation and touring. Ensuring these opportunities are identified and developed will require the cooperation and coordination of all jurisdictions and agencies responsible for facility development. Consideration must be given to planning, design, maintenance, policies and funding.

Fiscal resources will not be available to address all bicycle facility needs in the short term. The development and application of route selection criteria can help agencies decide on the appropriate allocation of funds. A suggested list of criteria has been provided in Appendix B. Priority should be assigned to the elimination of identified hazards or problems on existing facilities.

Opportunities to develop multi-use recreational trails in cooperation with other user groups should be explored. While this would address the needs of recreational bicyclists, it would also foster greater appreciation between user groups.

Objective 4: To integrate consideration of bicycling facility needs into decision-making by all relevant agencies. The need to increase facilities appropriately and cost-effectively must also be taken into account.

Recommended Strategies

- (4-1) Update the bicycle facility inventory regularly and distribute the revised inventory to other groups and agencies to aid their facility planning and development (BAC, NDDOT, NDPRD).

- (4-2) Review low cost opportunities for providing additional family-oriented bicycling facilities: identify accessible public lands; low volume county roads and highways with suitable shoulder conditions; existing multi-use recreational trails; abandoned rail lines and other linear features; and cooperation with other recreational trail users to share trail development and maintenance (BAC, State Trails Advisory Task Force, NDDOT, NDPRD, county agencies).
- (4-3) Review regional recreational bicycling needs, develop priorities for regional facility development and coordinate efforts amongst agencies to develop desired facilities. In the interim, and based on available data, priority should be given to family-oriented facilities, mountain bike trail facilities in the east, increased opportunities for access to off-road bicycling areas in the west (NDPRD, other state and federal recreation agencies).
- (4-4) Develop route selection criteria, based on such factors as current road conditions, type of bicycling trips, available support facilities, key destinations, connections to existing facilities, scenic quality and regional representation, and promote their use by member agencies and organizations to identify priorities for funding (BAC).
- (4-5) Provide information about existing funding sources for the provision of bicycle facilities on a regular basis to local governments, interested groups or agencies to encourage them to pursue facility development (NDDOT, BAC).
- (4-6) Cooperate with local and state agencies to develop a policy for conducting regular bicycle counts for transportation routes and recreational facilities to determine the current status of bicycle use (NDDOT, NDPRD).
- (4-7) Expand and supplement questions asked in the State Comprehensive Outdoor Recreation Plan (SCORP) participant surveys to improve understanding of where, why and how often North Dakotans cycle (NDPRD).
- (4-8) Cooperate with local bicycling organizations to conduct an inventory of major hazards and barriers to bicycling along road and trail networks, and identify high priority problems and the responsible authority. Establish an on-going review process (BAC, NDDOT, NDPRD, bicycling clubs).
- (4-9) Develop policies, legislation and processes to ensure consideration of bicycle facilities or bicycling needs in all new roadway plans/developments (e.g. new subdivisions) and in the retrofitting of existing transportation facilities as they are scheduled for renewal (NDDOT).
- (4-10) Work with agencies that provide recreational facilities to ensure bicycling needs are considered in the development of new multi-use trails or when existing trails are scheduled for renewal (NDPRD).

Objective 5: To provide appropriate facilities for both transportation and recreational bicyclists which address the needs of bicyclists with various skill levels.

Recommended Strategies

- (5-1) In the context of local bicycle plans, include both separated and integrated bicycle facilities in urban areas to address the needs of experienced or commuting bicyclists as well as recreational or less confident bicyclists (NDDOT, MPO's, local parks and recreation authorities).
- (5-2) Adopt a design policy which supports the development of bicycle routes for commuting bicyclists in urban areas which provide direct, safe access to major destinations and associated facilities (eg. bike racks, lockers, etc.) to support the use of these routes. Implement this policy through facility design manuals (NDDOT, BAC, local governments).

Objective 6: To develop appropriate bicycle facility design and performance standards that are consistent but flexible enough to be used by all jurisdictions and apply them to new facilities and to the retrofitting of existing facilities as they are scheduled for renewal.

Recommended Strategies

- (6-1) Review state roadway design standards and, where necessary, revise to improve the accommodation of shared use by bicycles and vehicles (NDDOT).
- (6-2) Develop training programs to encourage agencies to adopt appropriate design standards for recreational bicycle paths and trails as part of the bicycle facility design standards applied across the state (NDPRD, BAC).
- (6-3) Provide training opportunities to ensure proposed bicycle facilities comply with the adopted standards (developed in above strategies) and meet funding requirements to the extent possible (NDDOT, BAC).

Objective 7: To ensure maintenance practices for roadways and separate bicycling facilities contribute to safe, year-round bicycling.

Recommended Strategies

- (7-1) Develop and implement maintenance standards for roadway shoulders, trails, paths and other bicycle facilities which promote bicycle use and safety (BAC, NDDOT, NDPRD, local governments).
- (7-2) Encourage volunteer bicycle trail and path maintenance programs that use appropriate practises (BAC).

5.4 EDUCATION AND SAFETY

G3: *To educate key target groups in lawful and responsible bicycling and driving.*

Discussion:

Both bicyclists and drivers need to be educated about the rules of the road and how to share the roadway safely. They must be educated to recognize the bicycle as a viable means of transportation with a legal right to be on the road. Both require skill development to be able to co-exist responsibly.

Children in particular need to learn the rules of the road and develop good bicycling skills as soon as they are old enough to begin bicycling. Adult bicyclists also require programs to help them upgrade their skills, learn about traffic rules and understand their equipment and how to maintain it properly. Driver education programs must provide bicycle safety in both course content and driver licensing tests. Transit, school bus and truck drivers receive special training which must address bicycle safety and encourage respect for bicyclists using the roadways.

More complete information on bicycle accidents is also needed. Information obtained by medical professionals on non-fatal injuries not reported to the police must be collected and included in data analysis in order to evaluate the effectiveness of safety education programs and to identify risks to bicyclists and drivers so they may be addressed.

Multi-use trails can lead to conflicts between people using different modes of travel and reduced safety. Users need to learn appropriate trail etiquette to allow all users to enjoy a safe trail experience.

Objective 8: **To expand existing skill development and safety training programs for bicyclists and drivers.**

Recommended Strategies

- (8-1) Continue and expand existing school district bicycle safety and skill development programs, and explore programs which have proven effective in other states, for children in grades three through five, including on-bike training (NDDOT, NDDHCL).
- (8-2) Cooperate with other organizations to adapt school-based bicycle safety programs for their use (e.g. County 4-H programs, Scouts, other public organizations) (NDDHCL).
- (8-3) Encourage special events to promote safe bicycling and skill development for children and families through the development and distribution of a manual on how to organize events (e.g. bike rodeos, block parties, etc.) (NDSHP, NDDHCL).
- (8-4) Cooperate with bicycle clubs and bicycling groups to develop adult education classes, recreation-based programs, skill development clinics, and public information campaigns to deliver bicycle safety and skill development programs for adult bicyclists (NDDOT, NDDHCL, bicycle clubs).

- (8-5) Universities and colleges should be encouraged to develop campus-based bicycle safety programs that address the needs of their students (BAC, NDDHCL).
- (8-6) Develop bicycle safety messages tailored to children and families, to adult bicyclists and to drivers and encourage the media to present this information through public service announcements (NDDHCL, NDDOT, NDSHP).
- (8-7) Provide video tapes on bicycle safety to video rental stores free of charge and work with store owners and media to promote awareness and use (NDDHCL, NDDOT).
- (8-8) Revise the driver education program to include bicycle-related information: both in printed course material and through questions on driver licensing tests (NDDOT, NDDHCL).

Objective 9: To encourage drivers and bicyclists to "share the road" safely.

Recommended Strategies

- (9-1) Develop and target a "share the road" campaign using signage, education and media coverage to promote safe bicycle use of roads (NDDOT).
- (9-2) Incorporate information about safely sharing the road with bicyclists in training programs for truck and transit drivers. Work with the trucking industry and transit authorities to develop appropriate methods (BAC, NDDOT, NDSHP).
- (9-3) Incorporate bicycle safety education into training programs for school bus drivers (NDDPI).

Objective 10: To promote voluntary use of bicycle helmets by all bicyclists.

Recommended Strategies

- (10-1) Develop a comprehensive bike helmet promotion campaign which emphasizes the positive aspects of helmet use; include various incentives (e.g. reduced price/rebates) (NDDHCL, NDDOT).
- (10-2) Cooperate with local organizations, police departments, bicycling clubs and agencies to deliver the campaign through a variety of media and activities (e.g. block parties, bike rodeos) (NDDHCL, NDSHP).
- (10-3) Continue to support (financially and administratively) the block party concept to distribute bicycle helmets and promote their use by children (NDSHP, NDDHCL).
- (10-4) Establish a policy which requires participants in all state sponsored bicycle events to wear helmets. Encourage other event sponsors to do the same (NDDOT, NDPRD, NDDHCL, NDSHP).

Objective 11: To promote the use of proper trail etiquette on multi-use trails to improve user safety.

Recommended Strategies

- (11-1) Deliver programs and information on sharing trails safely, recognizing the rights of other trail users and ensuring a valued recreational experience for all user groups (NDPRD, BAC, local, state and federal agencies).
- (11-2) Incorporate trail etiquette information on signs at trailheads or access locations and in printed material developed for individual trail facilities (NDPRD, local, state and federal agencies).
- (11-3) Encourage cooperative efforts and dialogue between various trail users by inviting other users to attend bicycle conference and workshops (BAC, NDPRD).

Objective 12: To obtain improved bicycle accident statistics for North Dakota.

Recommended Strategies

- (12-1) Gather and analyze bicycle accident and injury data and categorize according to the crash classification system developed for the National Highway Traffic Safety Administration (NDDOT, NDSHP).
- (12-2) Cooperate with North Dakota Department of Health and Consolidated Laboratories and health institutions to develop a practical system for obtaining information on bicycle accidents and injuries not reported to police (NDDHCL, NDDOT).

5.5 ENFORCEMENT/LEGISLATION/POLICIES

G4: *To promote the consideration of bicycling at all levels of government through appropriate policies and legislation.*

Discussion:

Studies have shown that the greatest increase in the use of bicycles arises not from extensive facility development but rather from strong public policies which support the routine consideration of bicycling. Existing policies, laws and ordinances which create unnecessary barriers to bicycling should also be amended or repealed.

Enforcement of traffic laws must be applied equally to all bicyclists and drivers to ensure these laws are taken seriously and safety is not jeopardized.

Objective 13: To ensure relevant state and local government policies incorporate and support consideration of bicycling needs and do not unnecessarily restrict bicycle travel.

Recommended Strategies

- (13-1) Review all state policies which have an impact on bicycling. Where possible revise these to support and encourage consideration of bicycling (e.g. in land use planning, funding, development of traffic ordinances) if they do not already do so. Encourage local governments to review and revise their policies as required (NDDOT, NDPRD, BAC).
- (13-2) Encourage state, federal and local government agencies to adopt a policy which requires dedication of a percentage of the funds used in facility development towards initiatives to encourage and educate bicyclists (e.g. signage, public service announcements, general fund for education programs) (BAC, NDDOT, NDPRD).
- (13-3) Compare state traffic laws with the current version of the Uniform Vehicle Code and Model Traffic Ordinance and modify any existing non-motorized provisions which are out-of-date (BAC, NDDOT).
- (13-4) Encourage the State Legislature to repeal Chapter 39-10.1-05 of the North Dakota Century Code to eliminate the clause that does not allow bicyclists to ride on a roadway if the roadway has a bicycle path located adjacent to it (BAC, NDDOT, NDPRD).
- (13-5) Cooperate with agencies which manage recreational lands to encourage consistent application of each agency's bicycle use rules and regulations across all lands under their jurisdiction (NDPRD, BAC).
- (13-6) NDPRD to clarify their policy on the status of bicycling in parks (NDPRD).

Objective 14: To enforce traffic laws to improve compliance by both bicyclists and drivers and to reinforce bicyclists' training.

- (14-1) Use information on bicycling accidents to identify the most common traffic violations and develop local enforcement programs to target these key violations and locations for both bicyclists and drivers (BAC, NDSHP, local police departments).
- (14-2) Encourage the use of bicycle patrols by local police departments in urban areas to provide a good example of bicycling conduct and acceptance of bicycling or a viable transportation mode (BAC, local police departments).
- (14-3) Develop specific procedures for dealing with young violators: special tickets, special summer bike patrols to issue warning tickets (or give out awards to young bicyclists following the rules of the road — provide positive reinforcement) (local police departments, NDSHP, NDDOT).

5.6 ENCOURAGEMENT/PROMOTION

G5: *To increase the number of people using bicycles for transportation and recreation.*

Discussion:

Bicycling is the second most popular recreation activity in North Dakota. However, there are still many opportunities to promote greater use of bicycles by North Dakotans for recreation and to encourage them to use bicycles for transportation.

By providing more facilities, as well as skill development and safety education, more people will be encouraged to bicycle. There is also the need to have a network of bicycling clubs and other organizations promoting a variety of bicycling activities to introduce more people to bicycling and develop a foundation of support for bicycling across the state.

State and other agencies may be called upon to assist with and promote these activities. However, they do not have the manpower required to organize and conduct bicycling events. The success of such activities will depend on the ability of various groups to draw on volunteer resources and to get support from others (e.g. media, businesses and government agencies).

Objective 15: To increase the profile and improve the image of bicycling.

Recommended Strategies

- (15-1) Develop a bicycling awareness campaign, with the support of local media and bicycling clubs, to promote the environmental, social and health benefits of bicycling (BAC, bicycling clubs).
- (15-2) Encourage the media to develop and promote a positive image of bicyclists and bicycling by profiling the experience of current bicyclists using existing facilities for transportation and recreation (BAC, bicycling clubs).
- (15-3) Assist bicycling clubs and organizations to produce and distribute a regular public newsletter with information designed to promote and encourage bicycling in North Dakota and assist in the implementation of the State Bicycle Plan (NDDOT, NDPRD, BAC).
- (15-4) Develop a guide for local park agencies on providing opportunities for mountain biking and dealing with related issues (NDPRD).

Objective 16: To provide a variety of events and activities to encourage people to bicycle.

Recommended Strategies

- (16-1) Cooperate with local bicycle clubs, public organizations and businesses to sponsor and promote an annual bicycling event with activities across the state (e.g. cross-state bike tours, challenge rides between businesses or regions, theme rides, Bicycle Trail Day at recreation sites, cycle around North Dakota in Sakakawea Country (CANDISC), etc.). Develop and produce event organizer's manual (NDTD, NDPRD, BAC).

- (16-2) Encourage local recreation agencies to develop entry-level bicycling activities and include them in their recreational fitness programs (NDPRD).
- (16-3) Encourage state and federal agencies and local authorities to promote bicycling club events across the state (BAC, NDPRD, NDDOT).
- (16-4) Encourage bicycle clubs to lead bicycle tours open to the public, along low traffic volume roadways to visit interesting regional areas or to travel between different recreational trail facilities, and promote these as bicycle tourism opportunities (NDPRD, BAC).

Objective 17: To encourage the use of bicycles for commuting and the development of facilities to support this use.

Recommended Strategies

- (17-1) The state and cities should become a model employer by implementing incentive programs to encourage department employees to bicycle to work (e.g. allow bicyclists to adopt a more relaxed dress code at work, provide support facilities) (NDDOT, NDPRD, MPO's).
- (17-2) Develop and distribute promotional material to persuade employers to provide internal incentive programs to encourage their employees to bicycle to work (as outlined above) (NDDOT, BAC).
- (17-3) Cooperate with major institutions or business/government destinations to develop information and events to promote commuting to work by bicycle (BAC, NDDOT).
- (17-4) Develop and implement a mechanism to provide incentives to increase support facilities such as bicycle parking, showers and lockers at major urban destinations (NDDOT).
- (17-5) Encourage the state, businesses, bicycle clubs and other organizations to support and promote national events which encourage bicycling as transportation (eg. Bike to Work Week, etc.) (BAC, NDDOT, NDPRD).

5.7 INFORMATION: ROUTES, FACILITIES AND TOURING

G6: *To provide up-to-date information about existing bicycle facilities and opportunities within North Dakota.*

Discussion:

Throughout North Dakota there is a need for information on where to ride. Mapped information is seen as the greatest priority — county roads or trail maps for specific recreational locations (e.g. state parks and National Grasslands). Local universities may be able to provide assistance designing a database so information can be easily retrieved and maps created. An inventory of facilities and routes must be updated regularly in order to provide accurate information to the public and to others planning and developing bicycling facilities. Information about off-road access to public land is also required.

Existing tourist routes should also be reviewed and evaluated to determine what facilities exist and what need to be developed to support bicycle touring in North Dakota. These efforts should be integrated with activities being undertaken through the North Dakota Tourism Master Plan.

Objective 18: To develop a detailed database of all bicycling facilities and routes in North Dakota.

Recommended Strategies

- (18-1) Building on the information provided in this Plan, cooperate with federal and state agencies, local authorities and bicycle clubs and shops to identify all known facilities, routes and off-road access areas (NDPRD, NDDOT, BAC, North Dakota Trails Advisory Task Force).
- (18-2) Design a database system to store information on bicycling facilities in which information can be easily updated and retrieved (NDPRD, NDDOT).

Objective 19: To produce a revised State Bikeways Map.

Recommended Strategies

- (19-1) Include ratings of state roadways for bicycling use; provide information on traffic/truck volumes, shoulder and pavement widths, facilities, degree of difficulty, scenery, etc. (NDDOT).
- (19-2) Include all county roads that are suitable for bicycling (e.g. gravel roads around Fort Ransom provide good opportunities for bicycling but bicyclists are unaware that the roads are suitable for bicycling) (NDDOT, county agencies).
- (19-3) Include connections to bicycle routes in neighboring states and provinces and incorporate information from the State Tourism Master Plan as appropriate (e.g. include regional themes and identify key destinations) (NDDOT, NDPRD, NDTD).
- (19-4) Strive to update this map on a regular basis (every five years) to support the promotion of new facilities (NDDOT, NDPRD).
- (19-5) Produce and distribute the State Bikeways Map throughout the state and to tourists (NDDOT, NDPRD, NDTD).

Objective 20: To encourage the development of information on individual, site-specific bicycling facilities and opportunities.

Recommended Strategies

- (20-1) Encourage operating agencies for individual recreation sites to develop information to promote bicycling use of their facilities; incorporate into existing information packages where possible (NDPRD, BAC).

- (20-2) Promote the development and use of roadway signage to inform bicyclists of access points onto public lands in areas with no developed facilities (NDPRD, NDDOT, BAC).
- (20-3) Encourage operating agencies to establish a standard system for multi-use trail signage to indicate distance travelled, direction/distance to nearest facilities, direction of travel, etc.(NDPRD, BAC).
- (20-4) Review major tourist routes to identify existing facilities available to support bicycle tours and provide information on these opportunities to the public (NDTD, NDPRD).
- (20-5) Encourage the development of information and facilities away from the major traffic routes to promote bicycle tours on roads with lower traffic that can provide an interesting bicycle tour experience (e.g. Sheyenne River Valley south of Valley City) (NDTD).
- (20-6) Adopt a policy to include information on bicycling facilities or opportunities in every tourism information package. Feature bicycling as an activity in all appropriate state tourism maps and guide books (NDTD).

6.0 RECOMMENDATIONS FOR AN IMPLEMENTATION STRATEGY

The goals and objectives in this State Bicycle Plan provide an overall strategy to enhance the opportunities for, and quality of, all types of bicycling within North Dakota. To achieve these goals, a coordinated and cooperative effort will be required with active involvement by state agencies, federal agencies, local governments, bicycling organizations and others over the life of this Plan and beyond the year 2000.

Institutionalizing the consideration of bicycling needs into the framework of agency policies, plans and developments can only be realized through the long term implementation of the various recommendations presented in this Plan.

The practical implementation of any plan consists of a series of steps. By focusing on the immediate needs first, the groundwork is established to meet the challenges of the future. The implementation strategy for this State Bicycle Plan must:

- recognize that the majority of bicyclists in North Dakota are not experienced riders;
- address, as a first priority, those recommendations which meet the needs of most bicyclists, taking into consideration their average skill level;
- focus in the short term on education and encouragement, combined with short, easy facilities designed for inexperienced bicyclists, so that in the long term they will be prepared for more challenging experiences and facilities;
- consider providing some separated bicycle facilities in urban areas in the short term but move to integrate bicyclists and motorists on roadways over the long term;
- build on existing opportunities and funding but be flexible enough to move some recommendations ahead of others to take advantage of new opportunities as they arise;
- include consideration of regional needs and allow local governments and citizens to incorporate their priorities into initiatives undertaken to achieve Plan goals;
- develop partnerships between agencies and organizations to ensure the cooperative efforts needed to implement this plan and actively support bicycling.

An implementation strategy has been developed which identifies the schedule for undertaking the activities recommended in this Plan. This schedule (see Table 1) has been divided into a number of time periods to facilitate plan implementation over the next five years.

This Plan can be implemented with or without the help of a full time State Bicycle Coordinator. The presence of a State Bicycle Coordinator provides an opportunity to begin implementing the plan quickly and developing the partnerships between government and non-government organizations which are key to ensuring the successful implementation of the Plan. Coordination would be an important benefit of the position, as would be the advantage of providing a single source of information. In the absence of a full time State Bicycle Coordinator, implementation would be a more difficult and time-consuming task. Then training aspects of the Plan and the formation of the Bicycle Advisory Committee would, however, provide the key means to ensure fulfilment of the goals within the planning period.

A training component has been identified which would be developed and completed within the first and second years of the plan. This would provide for the transfer of a number of skills to other organizations and jurisdictions, to allow them to take on greater responsibilities for ensuring various aspects of the plan are implemented. Training others increases the value of their contribution and ensures their interest in the successful implementation of the plan.

Activities which focus on addressing the immediate needs of bicyclists and establishing the foundation to support more wide-ranging initiatives in future years are identified for implementation within the first six months. These support identification and promotion of existing bicycle routes, facilities and opportunities, while beginning the process to review the development of new facilities and improve those which exist. The need to review implementation priorities with interested agencies and organizations at the outset, and to work cooperatively through a statewide conference and the formation of the Bicycle Advisory Committee, is also recognized.

Resources available from other jurisdictions or federal bicycling organizations have been listed in Appendix A. A number of these can provide a ready starting point for plan activities. For example, the use of existing bicycle safety education kits or manuals for organizing special events would help to get these activities underway and provide a framework for developing resources specific to the North Dakota environment.

The activities recommended in this Plan will put into place the policies, procedures and programs required to ensure the consideration of bicycling to the year 2000 and beyond, over the twenty year life of the long range transportation plan. The development and adoption of these policies and mechanisms will provide the lasting framework within which bicycling can grow and flourish in North Dakota.

TABLE 1: SUMMARY OF BICYCLE PLAN IMPLEMENTATION STRATEGY

TIME FRAME	LEAD AGENCY	RECOMMENDED STRATEGIES
<p>6 MONTHS (priority)</p>	<p>NDPRD\NDDOT NDPRD BAC NDDOT NDDHCL NDDHCL NDDHCL NDDHCL NDDOT NDPRD BAC NDDOT</p>	<p>1-1 BAC Established 1-2 Statewide Bicycling Conference 2-2 Review Tourism Master Plan; Coordinate Implementation 4-5 Funding Brochure Published 8-1 & 8-2 Bicycle Safety Programs for Children 8-6 Develop PSA's 8-7 Distribute Videos 10-1 & 10-2 Helmet Promotion Campaign Launched 10-4 State Helmet Policy (rides) 11-1 Sharing Trails Safely Program; Report to BAC 11-3 Invite Trail Users to Attend Conference/Workshops 13-1 Policy Review</p>
<p>1 YEAR</p>	<p>BAC NDDOT/NDPRD NDDOT BAC NDPRD BAC BAC NDDOT NDDOT</p>	<p>1-3 Network of Bicycling Organizations; State Advocacy Group 2-1 Integrate State Bicycle Plan with SCORP and State Transportation Plan 2-3 Pilot Training Program - Engineering/Planning for Bicycling 4-2 Review Low Cost Opportunities for Facilities 4-3 Recreational Needs Assessment to BAC 4-4 Route Selection/Suitability Process Defined 4-8 Hazard Report Completed; Ask locals @ State Bike Conference 4-9 Draft Facilities Policy for New/Improved Roads 5-2 Design Policy for Commuting Facilities in urban areas adopted</p>

TABLE 1: SUMMARY OF BICYCLE PLAN IMPLEMENTATION STRATEGY

TIME FRAME	LEAD AGENCY	RECOMMENDED STRATEGIES
1 YEAR (cont'd)	NDDOT NDPRD NDPRD BAC NDPRD NDPRD/NDDOT NDTD NDDOT BAC NDPRD NDTD NDTD	6-1 Develop Design Standards 6-2 Design Standards for Recreational Facilities Adopted 11-2 Trail Etiquette Information 13-3 Review Traffic Law, Develop Slate of Changes 13-5 Consistent Land Management Policy for Off-road Trails 15-3 Statewide Newsletter 16-1 Bike Event Organizers Manual 17-1 Model Employer Program Adopted, Implemented 17-3 Promote Bicycle Commuting to Work 20-1 Bicycling information at Recreation Sites 20-4 Information on Existing Bike Tour Facilities 20-6 Bicycling information in all Tourism packages
2 YEAR	NDDOT NDDOT NDDOT/NDDHCL BAC NDDOT BAC NDDOT NDDHCL BAC NDPRD BAC/NDSHP	2-3 Training Program for Engineering/Planning in Place 4-6 Policy on Bicycle Counts Adopted 6-3 & 8-8 & 9-3 Series of Training Courses; annual course 7-1 Standards for Maintenance 9-1 Share the Road Campaign Launched 9-2 Share the Road II - Truckers and Transit Courses 12-1 Crash Report I - Police Records 12-2 Crash Report II - Hospital 13-3/4 Legislative Package Passed 13-6 Policy on Bicycle Status in Parks 14-1 Enforcement Priority Report Completed

TABLE 1: SUMMARY OF BICYCLE PLAN IMPLEMENTATION STRATEGY

TIME FRAME	LEAD AGENCY	RECOMMENDED STRATEGIES
2 YEAR (cont'd)	BAC NDDOT NDDOT/NDPRD NDDOT/NDPRD NDPRD	15-1 Awareness Campaign Kick-off 17-2 Employee Incentives Program Manual Available for Other Agencies 18-1 & 18-2 Complete Facility Inventory Database 19-1 to 19-5 State Bike Map, Suitability Ratings for Bicycling 20-2 & 20-3 Draft Trail and Public Access Signing
3 YEAR	NDDOT BAC NDSHP NDPRD NDDOT	3-2 Bicycle Plan Evaluation Process in Place 13-2 Percentage Guideline 14-3 Trial Enforcement Program, Evaluation 15-4 Develop Guide for Mountain Biking 17-4 Mechanism for Incentives for Support Facilities
5 YEAR	BAC NDPRD NDSHP BAC BAC	3-1 Update State Bicycle Plan 4-7 Expand SCORP survey 14-3 Enforcement Program in Place Statewide Review Policies Evaluate Programs
ON GOING	BAC BAC BAC NDDOT NDPRD NDDOT BAC	2-4 Integration of Cycling Concerns 3-3 Public Participation in program/plan review & development 4-1 Update Inventory & Distribute 4-6 Conduct/Coordinate Regular Bicycle Counts 4-10 Consider Bicycling in new and renewed recreational trails 5-1 Plan integrated & separate bike facilities in urban areas 5-2 Commuting Facilities Design Manual implemented in urban areas

TABLE 1: SUMMARY OF BICYCLE PLAN IMPLEMENTATION STRATEGY

TIME FRAME	LEAD AGENCY	RECOMMENDED STRATEGIES
ON GOING (cont'd)	BAC	6-5 Implement Facility Design Standards and Training
	BAC	7-2 Volunteer facility maintenance programs
	NDDHCL/NDSHP	8-3 Organizer's Manual for Bicycle Safety Events
	NDDHCL	8-4 Programs for Adult Bicyclists
	BAC/NDDHCL	8-5 Campus Bicycle Safety Program
	NDSHP	10-3 Support Block Parties
	NDPRD	11-1 Sharing Trails Safety Program
	BAC/local police	14-2 Police Bike Patrols in Urban Areas
	BAC	15-2 Media Profiling Bicyclists
	NDPRD	16-2 Bicycling in Local Fitness Programs
	BAC	16-3 Promotion of Bicycle Club Events
	BAC	16-4 Public Bicycle Tours
	NDDOT	17-4 Incentives for Support Facilities
	BAC	17-5 Support Events for Bicycle Transportation
	NDTD	20-5 Promote Bicycle Tours on Low Volume Roads

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APPENDIX "A"

RESOURCES



APPENDIX A: RESOURCES

Bicycle Programs/General References

<p>Bicycling Reference Book (1993-94 issue focuses on transportation issues)</p>	<p>Bicycle Institute of America 1818 R St. NW Washington, DC 20009 (\$8.00)</p>
<p>The Bicycle Transportation Network on ECONET (brochure on e-mail service)</p>	<p>EcoNet 18 De Boom St. San Francisco, Calif. 94107 Ph. (415)442-0220</p>
<p>The Cyclist' Yellow Pages, 14th Edition</p>	<p>BikeCentennial P.O. Box 8308 Missoula, MT 59807</p>
<p>The Bicycle Federation of America Bicycle Advocate's Action Kit</p>	<p>Bicycle Federation of America 1818 R St. NW Washington, DC 20009 (\$1.00)</p>
<p>National Bicycling and Walking Study, Final Case Study #7 Transportation Potential and Other Benefits of Off-Road Bicycle and Pedestrian Facilities</p>	<p>Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590</p>
<p>National Bicycling and Walking Study, Case Study #8 Organizing Citizen Support and Acquiring Funding for Bicycle and Pedestrian Trails</p>	<p>Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590</p>
<p>National Bicycling and Walking Study, Case Study #11 Balancing Engineering, Education, Law Enforcement, and Encouragement</p>	<p>Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590</p>
<p>National Bicycling and Walking Study, Case Study #14 Benefits of Bicycling and Walking to Health</p>	<p>Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590</p>

Bicycle Programs/General References

National Bicycling and Walking Study, Case Study #15 The Environmental Benefits of Bicycling and Walking	Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590
National Bicycling and Walking Study, Case Study #17 Bicycle and Pedestrian Policies and Programs in Asia, Australia, and New Zealand	Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590
National Bicycling and Walking Study, Case Study #18, Final Report Analyses of Successful Provincial, State, and Local Bicycle and Pedestrian Programs in Canada and the United States	Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590
National Bicycling and Walking Study, Case Study #22 The Role of State Bicycle/Pedestrian Coordinators	Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590
National Bicycling and Walking Study, Case Study #23 The Role of Local Bicycle/Pedestrian Coordinators	Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590
Bicycle Forum Technical Note Series	BikeCentennial Box 8308 Missoula, MT 59807 Ph. (406)721-1776
Pro-Bike News; Pro-Bike Directory; Pro-Bike Conference Proceedings	Bicycle Federation 1818 R St. NW Washington, DC 20009
Minnesota Biking (8 pp resource guide with trails, maps, accommodations, clubs, rentals, etc.)	Minnesota Office of Tourism 375 Jackson St., 250 Skyway Level St. Paul, Minn. 55101-1848

Bicycle Programs/General References

Bicycle Forum
(quarterly journal of bicycle programs)

BikeCentennial
P.O. Box 8308
Missoula, MT 59807

<p>Community-based Planning Under ISTEA (64 pp guide to public participation strategies under ISTEA)</p>	<p>Bicycle Federation of America 1818 R St. NW Washington, DC 20009 (\$20.00)</p>
<p>ISTEA Video</p>	<p>AIA Marketing Dept. 1735 New York Ave. NW Washington, DC 20006 (\$19.95 or \$9.95 govt. agencies)</p>
<p>Enhancing America's Communities: A Nationwide Survey of the Transportation Enhancements Provisions of ISTEA (report=190 pp; summary=30 pp)</p>	<p>Enhancements Report, Rails to Trails Conservancy 1400 16th Street NW, Suite 300 Washington, DC 20036 (summary \$12.95, full report \$29.95+\$3.50 shipping)</p>
<p>National Bicycling and Walking Study, Case Study #5 An Analysis of Current Funding Mechanisms for Bicycle and Pedestrian Programs at the Federal, State, and Local Levels</p>	<p>Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590</p>
<p>Bicycle and Pedestrian Provisions under ISTEA, 1992 (10 pp summary)</p>	<p>Federal Highway Administration HEP 50, 400 Seventh Street, SW Washington, DC 20590</p>

Facilities

<p>National Bicycling and Walking Study, Case Study #9 Linking Bicycle/Pedestrian Facilities with Transit Enhancing Bicycle and Pedestrian Access to Transit</p>	<p>Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590</p>
<p>A Bicycle Parking Cookbook (30 pp guide)</p>	<p>B.P. Engineering P.O. Box 974 North Highlands, Calif. 95660-0974 Ph:(916)331-2769</p> <p style="text-align: right;">(\$5.00)</p>
<p>Mountain Bike Trails: Techniques for Design, Construction and Maintenance, 1992 (20 pp guide)</p>	<p>Bikecentennial P.O. Box 8308 Missoula, MT 59807</p> <p style="text-align: right;">(\$5.95)</p>
<p>Linking Bicycle/Pedestrian Facilities with Transit (103 pp)</p>	<p>US Federal Highway Administration</p> <p style="text-align: right;">(\$15.00)</p>
<p>Design & Management Manual for Multi-Use Trails (275 pp)</p>	<p>Rails-to-Trails Conservancy/Island Press Washington, DC</p>
<p>Technical Handbook of Bikeway Design: Planning, Design, Implementation (169 pp)</p>	<p>Velo Quebec Montreal, Quebec</p>
<p>Selecting Roadway Design Treatments to Accommodate Bicycles, 1992</p>	<p>Bicycle Federation of America 1818 R St. NW Washington, DC 20009</p>
<p>National Bicycling and Walking Study, Case Study #20 The Effects of Environmental Design on the Amount and Type of Bicycling and Walking</p>	<p>Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590</p>

<p>Evaluation of a Bicycle Safety Curriculum for Elementary School Age Children</p>	<p>Highway Safety Research Center University of North Carolina, HSRC-PR170 Chapel Hill, North Carolina</p>
<p>Procedures and Resource Guide for Bicycle Helmet Promotions: A Review of Bicycle Helmet Promotions in the U.S.</p>	<p>Darlene Curtin, NHTSA NTS-23, 400 Seventh St. SW Washington, DC 20590</p>
<p>Effective Cycling (national adult education program)</p>	<p>League of American Bicyclists 190 W. Ostend, Suite 120 Baltimore, MD 21230</p>
<p>The Basics of Bicycling (on-bike/in-class program for 10-12 year old)</p>	<p>Bicycle Federation of America 1818 R St. NW Washington, DC 20009 (\$99.00)</p>
<p>Effective Cycling at the Elementary Level (on-road training for elementary grades)</p>	<p>Custom Cycle Fitments 7620 Madrone Ave., Sunnyvale, CA 94086</p>
<p>National Bicycling and Walking Study, Case Study #12 Incorporating Consideration of Bicyclists and Pedestrians into Education Programs</p>	<p>Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590</p>
<p>Bike-Ed America Program (on-bike/in-class/on-road program for 4th grade)</p>	<p>Bike-Ed America 11150 Napton Way Lolo, MT 59847</p>
<p>National Bicycling and Walking Study, Case Study #13 A Synthesis of Existing Bicyclist and Pedestrian Related Laws and Enforcement Programs</p>	<p>Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590</p>
<p>Bicycle Helmet Neighbourhood Block Party</p>	<p>ND Dept. of Health and Consolidated Labs Injury Prevention Program (MCH)</p>

<p>Rules of the Road Manual: 1991-1993 (booklet)</p>	<p>NDDOT Drivers License and Traffic Safety Division</p>
<p>Pedestrian and Bicyclist Safety: A Review of Key Program and Countermeasure Developments During the 1980s</p>	<p>University of North Carolina Hwy Safety Research Center Library Trailer 13 CTP 197-A Chapel Hill, NC 27514</p> <p style="text-align: right;">(\$13.00+\$2.50 shipping)</p>
<p>Bicycle Law Enforcement Manual</p>	<p>Curt Yates, Bicycle Coordinator North Carolina DOT P.O. Box 25201 Raleigh, NC 27611</p>
<p>Pedal Power Manual: Bicycle Safety Activities for Communities</p>	<p>Clark and Wagner, Pedal Power Manuals 340 Coffey Hall, University of MN St. Paul, MN 55108</p>
<p>Bicycling with Nick (series of films on bicycle repairs)</p>	<p>Crank Productions/Crank Video Verite 521 Clark St., Iowa City, IA 52240</p>
<p>Bicycle with Nick PSAs (videos)</p>	<p>Crank Productions/Crank Video Verite 521 Clark St., Iowa City, IA 52240</p>

<p>Bicycling to Work Seminar Information, 1983</p>	<p>N. Dianne Rowe, US EPA</p>
<p>National Bicycling & Walking Study, Case Study #1 Reasons Why Bicycling and Walking Are and Are Not Being Used More Extensively As Travel Modes</p>	<p>Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590</p>
<p>Consider Bicycle Commuting (brochure)</p>	<p>Minnesota DOT Room B-20, Transportation Building St. Paul, Minn. 55155</p>
<p>A Colorado Guide to Everyday Bicycle Transportation</p>	<p>Colorado Department of Transportation 4201 E. Arkansas Ave., Room 225 Denver, Colo. 80222</p>
<p>Wheels to Work (folder on commuter demonstration program for local employers)</p>	<p>Barbara Bray RBCC, P.O. Box 7133 Riverside, Calif. 92513 Ph: (909)798-1075</p>
<p>Shifting Gears: The Joy of Bicycle Commuting (17 min. video)</p>	<p>Cascade Bicycle Club, BATS Video P.O.Box 31299 Seattle, Wash. 98103 (\$20.00)</p>
<p>Buddy Bicyclist Program (program to match potential bicycle commuters)</p>	<p>Sacramento Rideshare, MS-41 P.O. Box 942874 Sacramento, Calif. 94274-0001</p>

Mountain Bikes on Public Lands: A Manager's Guide to the
State of the Practice, 1990

Bicycle Federation of America
1818 R Street, NW
Washington, DC 20009

(\$20.00)

The Bicycle Advocates Handbook, 1989	League of American Wheelman 190 West Ostend Street, Suite 120 Baltimore, MD 21230 (\$15.00)
National Bicycling and Walking Study, Case Study #3 What Needs to Be Done to Promote Bicycling and Walking?	Federal Highway Administration 400 Seventh Street, S.W. Washington, DC 20590
Bicycle Event Organizer's Handbook (100 pp manual)	Texas Bicycle Coalition P.O. Box 1121 Austin, Texas 78767 (\$50.00)
Bicycle Forum Emporium (free listing of inexpensive safety and encouragement materials)	Bicycle Forum BikeCentennial P.O. Box 8308 Missoula, MT 59807

APPENDIX "B"

ROUTE SELECTION CRITERIA



APPENDIX B

Route Selection Criteria

1. Representation across all State Planning Regions or across physiographic regions
 2. Road Conditions
 - paved shoulders
 - width of lanes
 - traffic levels
 - speed limits (maximum)
 - road surface
 - level of road maintenance
 3. Types of trips
 - touring, recreation or transportation/utilitarian
 4. Facilities
 - services (restrooms, restaurants, stores, motels, campgrounds, rest areas)
 5. Destination
 - Recreation points
 6. Scenic/aesthetic quality
 - positive/negative
 - variety - hills, curves
 - points of interest
 7. Establish Route Selection Advisory Committee
 - include representation from a cross-section of users and officials, and a representative with design/landscape architectural qualifications
 - composition of committee should include representation from across the state
 - could Trails Advisory Task Force perform/cover this function?
- * as developed by Ruth Marr and Valdene Buckley



APPENDIX "C"

**FIRST ROUND PUBLIC CONSULTATION
WORKSHOPS**

DETAILED WORKSHOP LISTS



WORKSHOP #1 - Dickinson

Encouragement

- media involvement to increase profile and visibility of cycling, create public awareness
- seniors need encouragement for cycling as a safe exercise that it not traumatic to joints
- cities and the state should provide safe places to ride (facilities) to encourage people to cycle (wider shoulders, good surface, well-maintained)
- bike clubs assist in encouraging people to ride by keeping competitive aspect out, providing a social environment and disseminating knowledge about bikes and bicycling
- local bike plans may encourage people if implemented by local jurisdiction, and public made aware of their existence
- need to be able to advertise clinics
- need networking to encourage bicycling
- in urban areas, have to encourage people to ride on the road
- need to provide shortest distance between points if you want to encourage people to ride for utilitarian purposes
- must encourage children to ride on safest route possible
- need to increase skill level of rider to encourage them to ride in traffic on road
- more families are participating in cycling
- signed, marked trails would encourage more people to ride

Education/Safety/Skills Development

- need maintenance education and information on buying a bike that fits
- people need to realize that bike is a vehicle, not a toy
- need to encourage parents to come out to seminars with their children (family affair)
- women need non-intimidating seminar on repair and maintenance
- bicycling should be part of high school drivers' education program
- education about good biking habits should start at a young age
- traffic safety rules should be stressed to both bikers and drivers
- videos and knowledgeable mechanical/maintenance personnel are available for education purposes
- need to keep message out there at all times
- State Health Dept. neighbourhood block parties and State Highway Patrol bike rodeos are wonderful concept
- adults need information to encourage them to ride
- need "share the road" training to educate drivers about joint roadway use with bikes

Engineering (Facilities)

- trail development does not focus on bicyclists; trail is multi-use

- Badlands is a great place to mountain bike but there are no trails
- lack of information on where to bike (off-road) for both local and tourist audiences
- there are no publications on the best places to bike
- conflict with horses - don't want to share their information or trails
- abandoned rail lines are a facility/trail opportunity
- Snowdon Bridge with railway tunnel is a tremendous facility opportunity but liability and maintenance/management are problem issues
- Little Missouri National Grasslands are a biking opportunity area
- need access to services/facilities along trails being developed
- opportunity area: Little Missouri State Park - scenic, good for road riding, some land owned by BLM
- agency jurisdiction at particular areas is confusing - need information on who to contact
- need a central repository of toll free number for information on facilities/routes
- trail user conflict is not a big issue yet
- conflicts are on roadways with vehicles
- obstacles to cycling on highways: buffalo/cow grates, railroads, shoulder surface, maintenance level, wake-up bars
- shoulders are maintained differently in various areas of the state
- design standards - slough, shoulder width, line painting
- problems at DOT are 4 M's: manpower, machines, methods, materials; solution is money/funding
- funding for facilities is important
- need creative funding ideas for facilities
- trail ownership issue - is it public or private land - responsibility is on rider to find out

Enforcement/Laws/Ordinances

- statewide plan is sufficient for conceptual level but need local plans related to implementation
- need a review of laws, for example, so that potential public uses would get priority over sale of abandoned lands to adjacent private landowners
- need for policy to ensure preservation of existing and future transportation corridors
- need for policy review related to public access to waterways (for trails)
- should review need for statewide bicycling advocacy/lobby organization
- local jurisdictions are responsible for establishing policy of riding bikes on sidewalks
- transportation planners need to designate more bike routes along roadways as they are being developed

WORKSHOP #2 - Bismarck

Encouragement

- non-profit associations (Lung Association, Girl/Boy Scouts, churches) can assist with encouragement
- could promote/advertise biking as an alternate mode of transportation during Clean Air Month
- bike clubs encourage people to wear helmets by setting an example and promoting helmet use
- media promotion encourages people to ride with cyclist profiles, coverage of events/races, letters to the editor, etc.
- if you can encourage people to ride, it will improve their skills in both riding and driving
- bike clubs perform an advocacy role and should maintain a good relationship with the media; advocates should educate the media about what they should be looking for
- non-profit groups like the Lung Association can promote the health benefits of cycling; could sponsor a "Bike to Work Day"
- if goal is to get more people to ride then do not emphasize racing; racing only targets a certain group
- more people would ride if they felt safer, for example, on a separated facility or route

Education/Safety/Skills Development

- conflict on roads between bicycles and cars
- both kids and adults need to be educated about traffic safety
- get newspaper/media on stream to notify, advertise and educate about bicycle safety
- educate the police departments about proper traffic safety rules with respect to bikes and get them to enforce the rules
- skills learned in cities are also useful on highways
- have to convince adults to build their skills
- can't scare people with statistics; doesn't work
- education campaign should focus on bikes as vehicles that move fast
- police should the safety-related aspects of bicycles with their driver education programs
- poor bicycle equipment is a safety concern
- need State Bike Planning conference to bring together cities, tourism people, demonstration projects, police over a 2 day period; would help to increase awareness, and assist with networking between groups; invite horse people
- need education to resolve conflicts on trails between bikes and horses; mountain bike should yield to horse; put signs up that cyclists to yield right-of-way
- must provide information so people will know where to ride
- need better information is state is going to promote a tourism goal

Engineering (Facilities)

- separated bike trails are safe from the automobile

- Highway #10 chosen for one week bike tour from Medora to Fargo because it is scenic, has lower traffic volumes, and has a lower speed limit
- abandoned railway lines are a good multi-purpose trail opportunity
- do trail demonstration projects in urban areas on designated streets
- key elements of a successful facility are: public visibility, arterial, not too hilly, employment generators located nearby, proximity to schools, serve a public need
- should connect recreational areas in the rural area to service bike tours
- must encourage cities to start bikeway facility planning from the "ground up" with systems that are conducive to biking, in addition to altering existing facilities to accommodate bikes
- encourage local governments to pursue facility development with available federal/state funds
- encourage county/state/local governments to get involved together and develop a bike path
- the mandate of the State PRD is to provide bike facilities for recreational purposes, and to provide safe access to recreational areas within and outside cities
- lack of communication between State PRD and city engineers/planners on facility development
- need coordination of off-road facilities between Parks Service, Snowmobile ND, etc.
- buried oil lines, other utilities and transmission lines are all done by easement (already compromising private land), are cleared and maintained and have vehicle access which could function as bike trails and/or bicycle access
- conflicts on trails with horses
- National Grasslands are a gold mine for off-road biking; public land; have a right to be there
- no consistent approach from Park Rangers on whether bikes are welcome in State Parks
- wherever there is government land, there is public access and trails available; need to be signed
- frustrating when you don't know where you can ride and there is no consistent information or informed personnel; need information in print so there is no confusion
- key characteristics for planning a bike tour: safety (safe route), not competing with traffic, surface conducive to ride on, facilities (water, showers, etc.), variety of scenery (prairie, riverbottom, curves, hills, trees)
- incorporating bicycle facilities into existing transportation networks becomes a problem especially in bottleneck areas like bridges, areas where the highway narrows, and at angled railway crossings
- as a general rule, bicycle facilities should be integrated into the existing transportation system, not grade separated
- a separated facility provides a pleasurable experience for the recreational rider
- need to provide parking facilities linked with bike trails

Enforcement/Laws/Ordinances

- police can set an example by having bicycle patrols
- State DOT connection with cities and MPO's and State PRD connection with local Parks Districts could work better together
- design specifications for bicycle facilities require a minimum 20 mph design speed; becomes a problem with underpasses where wide swooping curved pathways are required; recreational

WORKSHOP #3 - Minot

Encouragement

- local groups/organizations sponsor an aspect or a leg of a statewide bike tour, for example, MedCenter 1 sponsors sports medicine aspect, local bike shop sells equipment while tour in their area
- events must be well-publicized and publicized early in advance of the event
- need for a statewide bicycle organization to lobby for funds

Education/Safety/Skills Development

- first step is education; develop program like hunter safety classes
- start educational process with young kids; it will last a lot longer
- do safety education programs through schools
- hire young people (college age) as summer bike patrols to do "on the spot" training of kids or could train a volunteer squad to do this on weekends
- get newspaper/media to cover events and other initiatives so that the information on education and safety is communicated to a broad audience
- bike shops should go out to the schools once per year to tell kids about proper bike handling, equipment, safety rules, etc.
- local fraternal organizations could oversee bicycle safety education (Elks, Kiwanis, etc.)
- need information packet on bicycle safety and rules of the road

Engineering (Facilities)

- tourists/campers are combining transportation and recreational aspects of biking by bringing bike with them on vacation
- recreational riders are looking for a safe place to ride; mountain bikers are looking for a different type of terrain
- don't know if we can meet everyone's needs for their type of facility
- families need a traffic free place to ride of a reasonable length with some scenery
- recreational riders need "park and ride" facilities
- need signage as to difficulty of trail, layout of area, etc.
- there is lots of public land in ND that would meet riders needs if people knew how to get there and what areas were open to bikers
- signing decreases the feeling of being able to ride in a quasi wilderness setting
- people in urban area are looking for a trail on the road where they can ride safely
- a circular route around a city would be a great idea with linkages to a rural system
- from a transportation perspective, cyclists want a straight line between their origin and destination points
- need a range of facilities from easy, short trails in cities to longer, more difficult trails in scenic rural areas like the Badlands

- in State parks there are conflicts on trails with other users (hikers, joggers, walkers, cars); if you separated the peds from the other users, it should solve the problem
- conflicts between horse groups and mountain bikers; bikers should be educated about horses
- set up areas with parking facilities and signs showing the rules of the area (what to do when you see horses on the trail, etc.) and the topography of the area
- could use coloured posts along the trails to indicate whether you are proceeding either away from or toward the camp
- should cooperate with other trail user organizations to develop (mutual) trails
- there needs to be more responsibility put on the groups that use the facilities either through user fees or commitment of volunteer time to maintain or develop trails
- bike group could host an annual or biannual fundraising pancake breakfast charging each person \$2-3 and then have a maintenance "bee" to go out and work on the trail(s); this would work especially in high use areas
- corporate donations could be requested for bike trail maintenance/development
- could have a 1-800 number for information on where to ride
- there is a need for a central information agency for general information
- store owners should provide a place for kids to store bikes

Enforcement/Laws/Ordinances

- general population does not know basic information on cycling, for example, whether local ordinances allow them to ride on sidewalks or not
- if a city licenses bikes, they could also give out basic information on their rules of the road trails can be constructed to lesser standards

WORKSHOP #4 - Jamestown

Encouragement

- need more facilities/paths to encourage cycling
- need local facilities to encourage families to ride
- more recreational riders would be encouraged to ride if there were separate facilities
- need facilities at a day's ride distance along bike tour routes to encourage out-of-state and hometown tourists to tour the state by bike
- develop a cross-state bike tour to be conducted once a year
- need active clubs to encourage participation in the activity
- promote good riding through events
- media can help to promote events

Education/Safety/Skills Development

- difficult to see a cyclist on the road; visibility is an important safety issue; should educate cyclist about the type of clothing to wear, colour of clothing to wear, bicycle equipment to be seen (reflectors, etc.)
- if you could improve safety, then more recreational riders would use the facility and it would eventually evolve into a utilitarian bicycle transportation network
- children cycle the wrong way down streets facing traffic
- signed/marked bike paths are important but don't necessarily have to be published
- information systems are needed along trails showing where you are now on the trail, length of loops, where loops go, where are the loops in relation to parking areas, etc.
- perception of risk is the problem in why people don't wear bike helmets
- won't see bike helmets become fashionable until there is a motorcycle helmet law
- younger kids wear helmets, not older age group (12-13 years)
- parents are the members of the family who do not wear helmets
- the top safety issue is obeying traffic rules (signals, communicating with traffic, acting like they are a vehicle)
- big problem is negotiating intersections (crossing lanes of traffic)
- both bikers and truckers have to be educated about interfacing on the road
- both groups, drivers and riders, have to develop a mutual respect for each other

Engineering (Facilities)

- feasibility of implementing bikeway facility construction obstructed by railway tracks (signals, angle of crossing, grade separation, etc.)
- abandoned railway rights-of-way are a good opportunity
- build facilities and they will be used
- at local level, should try to tie other recreational facilities to bike trails or designated bike routes along roadways, for example, golf courses

- facility development should start out with its main purpose being for recreation, and then tie into the overall transportation network later
- separated facilities are not used by the avid cyclists because they are too short and contain too many children
- in urban areas, don't need a separate pathway, but a striped line would help (to designate a bike lane on roadway)
- conflict with parkers on city streets; implementation of facilities on roadways is a political issue
- complaint with pararamps; they encourage cyclists to ride on the sidewalk
- urban bike pathway design has to incorporate barriers to discourage joyriders in motorized vehicles from using path yet be flexible enough to accommodate emergency vehicles and prevent injury to cyclists (bollards, landscaping, barrels, large boulders)
- each city will have its own policy on design features for bike paths

Enforcement/Laws/Ordinances

- incorporate local (bike) plans into a statewide bicycle transportation system
- State law requires minimum bicycle equipment but not many bikes follow those rules
- unaware of local ordinances or state laws dealing with bicycles
- national rules do not apply in North Dakota

WORKSHOP #5 - Grand Forks

Encouragement

- Mayville Zoo could be promoted as a tourism destination
- There are not a lot of recreational opportunities for teenagers.
- Encouragement can come from cycling clubs.
- State should recognize Park Managers that are willing to help with awards.
- State should host a State Trail Day.

Education/Safety/Skills Development

- People like to ride on same route they drive.
- Road cyclists have a legal right to the road; drivers must be educated that bikes will be on the road.
- Lack of information on where to bike as you enter ND.
- Information on where to bike and what facilities are available in State Parks can be built into existing information.
- The media can help with publicity on safety and events.
- The #1 safety issue for kids in riding the wrong way in traffic.
- Safe kids coalition and block parents concept has helped to increase the numbers of kids that wear helmets.
- Wearing a helmet has to become fashionable.
- Teenagers are the worst age group for not wearing helmets.
- Start education with Grade 3 students, the age when they start riding their bikes to school.
- Must educate drivers about what hand signals means.
- Drivers don't pay attention to cyclists.
- Drivers' test should consider cyclists.
- Country drivers don't understand what drafting is.
- Bikers should be educated about responsible use of the environment.
- Drivers should be re-tested every so many years (situations change, skills are forgotten, rules change).
- Mandate training before kids are allowed on roads with bikes (like hunter, snowmobile safety courses).
- Parents should be involved in training.
- Bicycle safety education booklet is not available to be taken home by kids.
- Provide checklist of skills/rules kids should know and parents to sign it off.

Engineering (Facilities)

- Opportunities like abandoned railway rights-of-way must be acted upon by the State for presentation of trail use.
- Problem in ND urban areas is that trails are piecemeal, not continuous.

- There are not enough facilities especially in rural areas.
- No decent opportunities for bicyclists in State parks; safety and congestion become a concern on existing park roadways.
- ND has great potential for touring areas (i.e. along river system) but there has been no development undertaken.
- Bike touring groups use Highway #2.
- Facilities are needed along highways for tour groups.
- Have to have a grid to start development of facilities and then interlocking loops can be developed from it.
- State should put a little extra effort into a maintenance program (on highways).
- The State DOT does not think in multi-modal terms; only thinks about roadways, not bikeways; bike facilities must be integrated into new projects.
- Conflict on path raises degree for accidents.
- Major arterial streets have the most bicycle traffic.
- Bikeways should be accommodated on major streets during the design phase.
- Not all roads will contain bike systems; State must allocate monies to determine/direct where the system will be.
- Bikeway systems must be developed in phases.
- Difficult to respond to mountain bikers desires; there is no place for them to ride.
- Highway sealants are a facility issue (chip seal or sand seal?).
- Bikers ride on roads; don't need bike paths.
- Off-road mountain biking facilities are inexpensive to develop; don't need surfacing.
- Trail use conflict in State Parks; all users/sides need to be educated to make trail work for the park as a whole.
- A trail along the Red River from Wahpeton to Canada would be nice if the right-of-way could be preserved.
- "Field of dreams theory" - built the facilities and the people will come.
- Good ideal to link together with other trail developers/users like snowmobile ND, and cross-country skiers.
- Not many wildlife refuges are being utilized for off-road use; need multi-use development.
- Limited resources for trail maintenance can be overcome with "adopt a trail" program.
- Gravel roads can be dangerous to cycle on (depth of gravel, flying stones).

Enforcement/Laws/Ordinances

- Ensure representation of all bodies that deal with biking on a State Bicycling Committee.
- The ND century code should be amended to prevent the sale of future transportation corridor lands to adjacent landowners.
- Common minimum design standards across the State would make sense.
- Must build flexibility into the rules (design standards) especially when dealing with existing conditions.
- The State needs to implement an oversight function so that bikeways are considered during the design and construction process of distinct and county roads.
- Cyclists as a user group should be consulted about facility development.
- Traffic signals don't last long enough for rider to cross.

WORKSHOP #6 - Fargo

Encouragement

- use of videotapes on bicycle safety located in video rental stores would increase awareness of the issue and provide public visibility
- Parks & Recreation Dept. together with the Tourism Dept., should sponsor/coordinate a bike ride across the state once per year
- local newspapers should be encouraged to become involved in corporate sponsorship of bike events
- the hosting of events would fulfil a tourism objective and bring foreign bikers to North Dakota
- bicycling is a family-oriented recreational activity
- see more bikes today than ever before
- the private sector could get more involved in encouraging tourists to come to North Dakota to cycle by providing coupons or discounts for facilities (hotels, restaurants, hostels)
- travel agencies and AAA could encourage cyclists to come to North Dakota as a tourism destination for cycling
- giving a tax break for purchase of a bike or bike helmet would encourage more people to buy bikes
- providing secure parking for bikes, bike check areas, bike lockers, showers and changeroom facilities, and/or bike racks would encourage more people to use them (for utilitarian purposes)
- bike racks should be of the type where you can lock the whole bike to the rack, not just the front wheel
- should get large employers involved with internal incentive programs to encourage their employees to ride to work, for example, hospitals, Blue Shield, etc. like Bismarck's Jeans Day charitable campaign (employees can wear jeans to work once a week if they ride their bike to work)
- need to encourage people to ride beyond their immediate living area; this could be accomplished with bike tour/bike race/bike ride events
- bicycling related events help to bring tourists in

Education/Safety/Skills Development

- must educate drivers to respect rights of cyclists
- if drivers respected cyclists it may reduce or eliminate the need for separated bike paths
- riders must ride seriously obeying all traffic rules
- riders should integrate themselves with traffic flow
- media would help to disseminate information to the general public
- police must be educated about proper bicycle traffic laws
- too many people view bikes as a toy
- add questions to driver education test related to bicycles
- bicycles must be viewed as a vehicle

- bicycle must be viewed as a viable transportation tool; as an alternate mode of transportation
- could supply free videotapes to video rental outlets containing safety education message
- drivers' licenses should include an insurance discount if people have taken a driver education course that includes a bicycling component; this would function as a monetary reward
- should be able to get more Public Service Announcements on safety education, etc.
- best source for informing/educating tourists is at highway rest stops
- could get Physical Education Dept. at universities to develop a bicycle safety program that could be used in the grade level schools
- safety education is needed for adult riders
- continuing education is needed for adult riders
- truckers need to be educated on bicycle traffic safety
- could do a mailing to all the truck freight companies educating them about the interactions between bikes and trucks on the roadways

Engineering (Facilities)

- should it be a state standard that all county roads have a shoulder
- no pedestrian access to commercial areas (shopping mall) on sidewalks
- biggest geographical area of concern in Fargo-Moorhead is central city for difficulty in retrofitting and providing facilities
- as cities place emphasis on bike paths, it reinforces the bike as strictly recreational
- bike paths are seen as a viable substitute to integrating the bicycle into traffic, by planners
- cities must provide facilities for all (skill) levels of bicyclists
- maintenance issue on bike paths
- jurisdictional changes are needed so that the city is the responsible agency, not the Parks Branch
- could implement a bicycle registration/licensing system to generate revenue for maintenance and development of bicycle facilities
- bicycle path conflicts with walkers, rollerbladers, etc.; should paths be exclusive
- like to use designated bicycle routes where you don't have to cross private lands illegally
- suggested opportunity areas: McCluskey Canal, Garrison Diversion, Sheyenne River Diversion, Park Rapids-Walker (5-27 miles)
- support "field of dreams" theory - build the facilities and the bicyclists will come
- the least expensive trail material to maintain is woodchips; cuts down on injuries, can be for multiple uses, easy to maintain in our climate
- trail development needs to be interconnected with a theme (history, geology, environment) to add to the trail experience; this information should be included in promotional material
- designated bike trails should be developed on state-owned lands
- gravel roads are an adequate facility for mountain bikers to use but not for road bikes

Enforcement/Laws/Ordinances

- local control is necessary for implementation of plan
- too many of our (tax) dollars are being channelled toward the automobile
- police should get tougher but with a friendly, positive approach

- our approach to subdivision design is not conducive to bicycle transportation as a alternate mode of transportation
- new subdivisions must be designed to be pedestrian/bicycle friendly
- a bicycle is a vehicle under state law; bicyclists have a legal right to be on the roadways
- law that states bikes must ride on adjacent bike path if one is provided adjacent to road, should be repealed
- it is worthwhile to develop a plan on a statewide basis



APPENDIX "D"

**FIRST ROUND PUBLIC CONSULTATION
WORKSHOPS**

LIST OF ATTENDEES



**FIRST ROUND PUBLIC CONSULTATION WORKSHOPS
LIST OF ATTENDEES**

WORKSHOP 1

**State Planning Regions 1 and 8
July 27, 1993 7:00 - 10:00 pm
Hospitality Inn, Dickinson**

Janet and Phil Rutledge
Darrel Hestdalen
David J. Steinbach
Lu Burger
Dale C. Heglund

Craig Pool
Cary Gress
Deb Nelson
Bruce Kary
Jerry J. Mead
Richard Benz
Bob Shannon
Tim Mueller

Bicycling Advocates
Bicycling Advocate
Badlanders Bicycle Club
US Forest Service
NDDOT/Badlanders Bicycle
Club
Belfield Park District
Badlanders Bicycle Club
Traffic Safety Council
Dickinson Parks and Recreation
Dunn Center Park Board
NDDOT
NDDOT Bicycle/Pedestrian Coordinator
ND Parks and Recreation Dept.

WORKSHOP 2

**State Planning Region 7
July 28, 1993 7:00 - 10:00 pm
Kelly Inn, Bismarck**

Jeannette Martin
Cindy Hendry
Steve Stelton

Bob Shannon

Doug Melby

Marlina Walth

Chuck Erickson

Jennifer Morlock

Tim Mueller

American Lung Association
NDDOT Traffic Safety
Dakota Roughriders
Mountain Biking Club
NDDOT Bicycle/Pedestrian
Coordinator
Bike Route/Northern
Lights Wheelmen
ND Parks and Recreation
Dept.
Fort Abraham Lincoln
State Park
Dakota Cyclery/Dakota
Roughriders Bike Club
ND Parks and
Recreation Dept.

WORKSHOP 3
State Planning Region 2
July 29, 1993 7:00 - 9:30 pm
Best Western International Inn, Minot

Erik Lehner
Mike Nilson
John Tunge
Larry A. Hagen
Charles Routledge

Tim Mueller

Val's Cyclery
Minot Park District
Lake Sakakawea State Park
Lake Metigoshe State Park
Renville County
Commissioners
ND Parks and Recreation
Dept.

WORKSHOP 4
State Planning Regions 3 and 6
August 10, 1993 7:00 - 9:30 pm
Dakota inn, Jamestown

Jimmy M. Kunz
Harry Mason
Jim Sullivan
Bob Shannon

Marlina Walth

Wells County Commissioner
Jamestown Traffic Safety
Valley City Park District
NDDOT Bicycle/Pedestrian
Coordinator
ND Parks and Recreation
Dept.

WORKSHOP 5
State Planning Region 4
August 11, 1993 7:00 - 9:30 pm
Best Western Townhouse Inn, Grand Forks

Sally Thompson
Nancy Johnson

Vince Ames
Earl Haugen

Charles Durrenberger

Jennifer Gustafson

Hillsboro Banner
Traill County Economic
Development Commission
North Star Bike Club
City of Grand Forks and
GF/EGF Metropolitan
Planning Organization
City of Grand Forks and
GF/EGF Metropolitan
Planning Organization
Grand Forks County
Sheriff's Dept.

Roger Hille

Kris Koozin
Terry Knudson
Paul Gronhovd
Mike Peterson

Bob Bushfield
Scott Kudelka
Steve Crandall
Marlina Walth

Bob Shannon

Minnesota Dept. of
Transportation
North Star Bike Club
Ski & Bike Shop Owner
North Star Bike Club
Grand Forks Bike Path
committee
City of Grand Forks
Icelandic State Park
Turtle River State Park
ND Parks and Recreation
Dept.
NDDOT Bicycle/Pedestrian
Coordinator

WORKSHOP 6
State Planning Region 5
August 12, 1993 7:00 - 9:30 pm
Kelly Inn, Fargo

Roger Johnson
John Peterson

Don Brummond
Charles Kahl

Richard G. Lane
Mark Sloan

Ron Christopherson
Scott Gilman
Dean Dormanen

Chris Bredlow

Kit Sherber
Marlina Walth

Bob Shannon

Interested Citizen
Fargo-Moorhead
Council of Governments
Bikeway/Pedestrian
Committee
Interested Citizen
NDDOT - Fargo District
Engineer
City of Fargo
Fargo-Moorhead Council of
Governments
Bikes Unlimited
Fargo Police
Great Plains Bicycling
Club
Interested Citizen
(Moorhead)
ND State Senate
ND Parks and Recreation
Dept.
NDDOT
Bicycle/Pedestrian
Coordinator



APPENDIX "E"

**SECOND ROUND PUBLIC CONSULTATION
WORKSHOPS**

LIST OF ATTENDEES

DETAILED WORKSHOP LISTS



**SECOND ROUND PUBLIC CONSULTATION WORKSHOPS
LIST OF ATTENDEES**

**Workshop 1
May 24, 1994
Kelly Inn, Bismarck**

Muriel Nitschke
Anne Iszler
Jennifer Morlock
Cindy Hendry
Neil Johnson
Doug Melby
Tim Mueller
Marlina Walth
Bob Shannon

Kidder Co. Health District Unit - Steele
Kidder Co. Health District Unit - Steele
Dakota Cyclery
NDDOT Traffic Safety
ND Highway Patrol
Bike Route
ND Parks & Recreation
ND Parks & Recreation
NDDOT

**Workshop 2
May 25, 1994
Townhouse Inn, Fargo**

Dean Dormanen
Don Brummond
Harry Mason
Mark Bittner
John Peterson
Steven Voss
Gary Malm
John Shepard
Scott Gilman
Bob Shannon
Marlina Walth

Great Plains Bicycling Club
Fargo
Jamestown Traffic Safety
City of Fargo
GPBC/F-M COG Bikeway Committee
F-M COG
Grand Forks County Commission
Trail County Economic Development
Fargo Police
NDDOT
ND Parks & Recreation

SECOND ROUND CONSULTATION

WORKSHOP #1

Education

- work together with other agencies - NDHP, NDDHCL or with Optimists, Rotary so that they can conduct bicycle rodeos
- community access network (2.5 hours to fill up); schedule safety videos; advise schools of broadcast times
- provide videos to video rental stores; supply with free videos with administration of rental to be handled by store
- Conference; focus on safety and education; 1-2 day conference
- Conference could likely be planned for Fall; cover four E's
- have one every year; may be two or four small sessions on each of the four E's
- establish a clearinghouse - what do we have available? what is demand?
- literature - promotional; comic book, colouring book; costs?; funding available?
- young elementary, pre-school ages are a priority
- need \$ and to be able to talk to others
- Governor's Colouring Book; contact local Highway Patrol; could add pages to book without requiring a full reprint to emphasize bicycle and helmet safety
- implementation of education programs; two key elements: (1) key target group is pre-school; (2) look at accident statistics
- focus on other target groups; follow-up education programs needed, for example, for teens?
- develop an adult education program to target drivers
- after a few years of implementation will have broad-based education program in place
- education needed for on-street bicycle use
- more mature rider needs to be targeted for safety purposes - don't know the rules
- departmental personnel resources already committed - can't shift focus very easily
- implementing new programs could be a problem
- need evaluation of priorities
- add 1 or 2 staff people at DOT to address this issue?
- kids and adults don't know the basic rules of the road; need education

Encouragement

- NDPRD has done studies every 5 years on outdoor recreation
- participation in bicycling is in top 3 of recreational activities by people in the State under SCORP exercise
- two points: (1) some routes identified for bikes are not the best - want to keep people riding for recreation; (2) resource guide for bike touring has great potential for at home (ND) and tourist bike drivers
- SCORP studies every 5 years inevitably have one activity that gets lost; in this case it is mountain biking; next SCORP update due next year
- trying to get a grip on mountain biking issue; developing companion document with Bicycle Plan for mountain biking including preferences for mountain bikes by Parks Managers
- 90% of bikes sold are mountain bikes; sold to every age group (7-70); will be used for transportation, recreation and off-road
- encouragement must be top-down; ND is slow to change; must be committed from the top
- at NDDOT, chief policy makers walk and ride to work and Governor is active (Bike to Work Day declared by Governor)
- ND has foot in door - top decision makers are on-stream
- must come from both sides - grassroots and top-down

Engineering (Facilities)

- need suitability ratings for bicycling; DOT's may be different from those of the actual bikers
- need suitability ratings to develop maps, (i.e., shoulder width, hills or lack thereof, gravel road, distance between water outlets, etc.)
- Highway Engineers build roads at a strength to hold big heavy trucks; don't focus their efforts on paving or sweeping shoulders; must decide whether to put economics or bicycles first
- Old Highway #10 - is in bad shape now under county jurisdiction; who is responsible for upgrades?

Enforcement

- collection of accident statistics; hospitals only report bicycle accident if a bike runs into a fixed object
- target improvement areas, (i.e., facilities improvements - are there bike traps for kids?)
- accident statistics have changed since 1975 when average age of fatality was teenage and in 1993 was 27 years of age

Bicycle Advisory Committee (BAC)

- establish BAC to leverage some funding and to prioritize issues
- BAC could include representatives from the State, local agencies, and advocacy groups
- help establish priorities; concerns of public; not ivory tower; disseminate information to local level
- who will sit on BAC role? citizens group? some citizens and some professionals?
- BAC would make sure plan gets implemented
- should it include representatives from State and local agencies, insurance agency, retail industry, bike advocates, land use management interests (railways), property owners (BOR, etc.), mountain bikers
- if all citizen members, not constructive; not enough knowledge
- with professionals, lends a little more permanency to Committee
- needs structuring - honour or privilege to be on it as a citizen member (volunteer)
- may need selection criteria, or application process, or appointments
- can't be all professionals; must be balanced
- would there only be one at State level or 4 local BAC's at city level?; must be consistent if there are 4
- include representatives from each part of the State from different sizes of communities
- could use teleconferencing and interactive video network as techniques for input and interaction instead of travel, or could have rotating meeting locations
- State has no preconceived structure in mind
- models from other states? other states have 6-8 staff people dedicated and have been in operation for 20 years
- BAC establishment may be delayed until after Bike Conference

WORKSHOP #2

Education

- like to see statewide education program for children, like the one in Texas - as a strategy for the plan
- Bike conference - should be held in first 6 months; this Fall
- conference to include sessions on funding, design standards, safety and education programs, etc.
- invite everyone - recreational facility planners, traffic safety officers, etc.
- get awareness up

Encouragement

- mountain bikes being sold will continue to increase
- bike is considered legally a vehicle in all 50 states; must fit them onto street
- FHWA - report on dealing with bikes on roadways (released in past six weeks)
- Clinton has stated that he would like to double the number of utilitarian trips on bikes
- how do we accommodate all that plus accommodate all that we have to do outside of bikes?
- what are economic benefits of cycling (attach dollars)
- encourage commuting; how do we get you to your destination
- develop corridors, off routes?
- bring the cycling community through the BAC into the planning phase; will help engineers with process
- quantify what benefits are

Engineering (Facilities)

- as subdivisions have meaningful transportation plan incorporated, large collector roads become obvious choice for bike paths
- Urban Land Institute - have a methodology for designing subdivision, with reasonable separation of cars and bike areas
- design of cities is basic problem for bike transportation - don't acknowledge that people bike or walk
- must educate land developers about this as a strategy that perimeter roads are not key routes
- some developers don't put sidewalks in any more
- should provide reasonable path if separating bikes and cars - reasonable transportation routes for bikes
- plan too much for cars today
- subdivision ordinances include provision for percentage of recreation facilities
- City of Fargo is currently reviewing its comprehensive land use plan

- battle on whether to include sidewalks - Planning Commission - first target for education on how to design
- two types of facilities:
 - (1) paths for unskilled/recreational rider
 - (2) roads for skilled riders integrated with transportation system (utilitarian rider)
- a lot of bike safety is common sense driving safety
- pent up demand for facilities; at bike shops, all kinds of bikes are being bought/sold
- there are more bikes in ND than cars
- demographics are shifting - average age of cyclist is increasing
- what studies are available on widened streets vs. separated facilities? (extra road lanes or bike paths)
- hard evidence - cost/benefit analysis needed
- no specific study available
- what would it cost to widen road vs. 10 ft. wide bike facility plus what are maintenance costs. It requires a different piece of equipment (costs are hard to determine).
- streets are already being swept and plowed
- question isn't either/or; it is who are we trying to serve?
- bike paths are recreational facilities, they are not commuter facilities
- recreational trails are very important to a large group of citizens
- have to have both - separated paths and on-road use
- wide curb lane: cost is \$200 k/mile = 4 miles of separated facilities
- Fargo 45th Street Corridor: major drainage ditch, high voltage power lines, plus adding bike path; developing as a major N-S corridor - not a good biking environment
- need more Class 1 facilities
- recreational path needs to be associated with parks; needs to go from place to place (point A to point B)
- cities can't defend putting a Class 1 facility on an arterial road - legally
- major arterial corridors are not the place to put less experienced, less skilled riders (i.e., 45th Street)
- where do you put them if you don't put them there? there are reasons for having those facilities; attractions bring less skilled riders
- 45th Street corridor provides connecting link in system; there is not much development along the corridor now
- City can control access to corridor plus the Class 1 trail along it
- can't separate four E's; all four E's to be represented with people as representatives on BAC
- long range highway plan attempts to address needs of all bicycle user groups
- 45th Street corridor, (i.e., provide separated facility and a widened curb lane)
- engineers have taken a lot of abuse on what is built or not built
- lots of competition for funds for facilities being built
- bike facilities should not come just out of already dedicated transportation funds; must champion for other sources of funds
- only serving a very small percentage of public; not that many ride
- we are here to deal with cost/benefit as sole driving force
- what's next; skateboarders/in-liners want their own facility; don't provide separate facilities for buses, cars, bikes, pedestrians, etc.

- to enhance ability to ride on street system costs money (extra); there won't be any money, someone has to come up with funding system
- own source of funding needed because there won't be money available; roads come first - where does maintenance money come from; who is responsible?
- car drivers pay taxes on tires, gas, etc.; bike drivers don't pay; State intervention needed?
- over width on roads is coming from Sales Tax (we all pay); \$200 k/mile for 3 ft. curb lane is a substantial investment
- not diverting enough money to existing infrastructure, renovation, maintenance, breakdowns; ISTEA was intended for "enhancements" related to existing infrastructure not "new" fluff
- planning and design of subdivision/subdivision review; can't retrofit an existing community once built
- stretch funding sources; link projects to extend corridors with little local money being required

The Plan Generally

- comment on distribution between types of riders (pg. 30)
- SCORP stats; fall/winter ridership similar to summer/spring?
- types of accident data - compare with National data.
- funding; will dollar amounts be attached? (pg. 13)
- inventory of Metro bikeway system done last summer - numbers to be updated in plan; also completed a condition inventory at the same time (Fargo)
- Transportation Enhancement (TE) funds for rehabilitation of existing paths or only new construction? - available for new or rehab
- brochure available on TE funding
- Class 1 paths are not really bike paths, they are multi-use
- distinguish features of transportation facility from recreational facility is by where it goes - point A to point B, or a loop around a recreational facility
- to be eligible for TE funds - should meet AASHTO design guidelines/standards.
- can Federal funds be used for TE projects (bike-related)?
- is there a review structure built into plan for ongoing and 5 year review?
- like to see an evaluation chapter after implementation chapter and establish performance measures with provision to redirect as it goes along
- as local plans get updated, incorporate guidelines from State in our own local plans
- annual evaluation from Bike coordinator on implementation/evaluation to his boss; look for guidance from BAC

Bicycle Advisory Committee (BAC)

- what is structure of committee?
- Task Force structure of FHWA works well for others in balancing four E areas
- rely too heavily on engineers for approaches on biking (meeting attended in Fargo for first round was mostly engineers)
- use Internet/Compuserve to communicate; set up "list serve" - will only cost you the time
- lots of new groups in bicycling

