

Statewide Bicycle Planning in the United States

ERIK FERGUSON AND DAWN INGLIS MONTGOMERY

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) significantly enhances opportunities for bicycle planning, funding, and coordination at the state level. Georgia Tech designed, implemented, and analyzed the results of a survey of state transportation departments regarding bicycle planning and related activities. The survey was mailed to all 50 states and the District of Columbia in March 1992. By June 1, 43 responses had been received (84 percent). Statewide bicycle planning activities increased in the early 1970s, the late 1970s, the early 1980s, and more recently after the passage of ISTEA. Most states treat bicycles as legal vehicles on state highways. About half of the states surveyed have a bicycle department or position and a citizen-led bicycle advisory committee or provide funding for bicycle programs and projects. Few states currently have comprehensive statewide bicycle plans. Several states are in the process of developing such plans. Legalization of bicycle usage on streets and highways is a clear national trend not critical to the adoption of statewide bicycle plans. Funding and institutionalization appear to be more supportive of state bicycle planning. Bicycle advisory committees often are associated with more active state involvement in bicycle planning. This may be due to the importance of recreational and tourist activities in bicycle system utilization, at least in some states. Bicycle facilities designed to serve these types of travel generally require a broader than purely local perspective to achieve success in systems planning and design.

Bicycling is becoming more and more popular in America, both for recreational purposes and as a means of regular transportation. Despite the growing numbers of U.S. bicyclists, fewer than half the states have bicycle planning programs. One impetus for change is the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), which encourages far greater bicycle planning efforts at the state level (1).

ISTEA also provides funding and requires the creation of a bicycle coordinator position in each state department of transportation (DOT). Now that federal funding is available, many states will need to move their bicycle planning efforts forward and adopt comprehensive state bicycle plans. For many states without bicycle programs, the best guide is to study key elements of successful programs already in existence in other states. A national survey of state bicycle programs was conducted by Georgia Tech to determine the extent of state bicycle planning activities. This paper discusses the results of the survey.

ISTEA has several key provisions that apply to bicycle planning at the state level. The provisions relate to planning, funding,

and bicycle coordination. Each of these provisions is important in establishing an active state bicycle program (2).

PLANNING

Several provisions of ISTEA apply directly to bicycle planning. Sections 1024 and 1025 create a new planning process for states and metropolitan areas in the preparation of long-range transportation plans and transportation improvement programs. The transportation improvement program identifies all improvements designated for a specific time period, indicates an area's transportation priorities, groups projects by staging periods, and estimates total program costs and revenues. States are required by ISTEA to include bicycle transportation facilities in such programs. Bicycle facilities will be incorporated into the transportation planning process of all states, increasing the probability that bicycle facilities will be built.

Under ISTEA, state transportation plans shall consider "strategies for incorporating bicycle transportation facilities and pedestrian walkways in projects where appropriate throughout the state." This is very important for the provision of bicycle facilities, since they often can be incorporated into major road projects through the construction of wider curb lanes. If state highway projects are reviewed automatically for the inclusion of bicycle facilities whenever new roads are constructed and existing roads are repaved, the number of miles of bicycle facilities quite probably will increase. In addition, the need for wasteful duplication of transportation facilities should decrease.

Under ISTEA, states shall develop long-range plans for bicycle transportation and pedestrian walkways in appropriate areas of the state. These plans shall be incorporated into the state's long-range transportation plan. A state bicycle plan is a key element of successful state bicycle planning programs already in existence. State bicycle plans outline existing policies and conditions and define the direction bicycle planning should take in that state. This provision of ISTEA will provide an impetus for the creation of many much more active state level bicycle programs.

FUNDING

Adequate and secure funding sources are important for the development of a state bicycle program. Funding determines whether bicycle facilities and related activities are even possible. ISTEA makes bicycle facilities eligible for National

Highway System funds, authorized at approximately \$3.6 billion annually. Bicycle and pedestrian facilities are also eligible for Surface Transportation Program funds, authorized at approximately \$4.0 billion annually. Of each state's Surface Transportation Program funds, 10 percent must be spent on 1 or more of 10 separate transportation enhancements, one of which is bicycle facilities. Transportation enhancement funds are authorized at approximately \$3.3 billion over 6 years. These various flexible funding provisions of ISTEA could provide states with the incentive necessary to develop more active state bicycle programs.

COORDINATION

The final key ISTEA element for bicycles is the requirement for creating a bicycle and pedestrian coordinator position within the DOT of every state. ISTEA allows the use of federal funds to pay for this required position. A state bicycle coordinator is an important addition to any state DOT. The coordinator is responsible for making sure that bicycles are adequately considered in all state transportation projects. In addition, the coordinator often is responsible for handling all of the department's other bicycle concerns. The bicycle coordinator should serve as a strong advocate for bicycle facilities and activities throughout each state.

DATA AND RESEARCH METHODOLOGY

Georgia Tech conducted a survey of state bicycle programs in the United States in March 1992. Surveys were mailed to state bicycle coordinators or the equivalent in all 50 states. We obtained the list of bicycle coordinators used in mailing the surveys courtesy of FHWA. All survey responses received before May 1, 1992, were included in the data base and subsequent analysis. A total of 40 surveys were returned, yielding an overall 80 percent response rate. Survey questions were developed from a previous comparative case study analysis of 10 active state bicycle programs chosen from an FHWA list of 15 more active state bicycle programs (3). The survey questions and a list of the states responding to the survey are contained in the project final report (4).

The national survey consisted of nine questions regarding the state's past, present, and future bicycle planning activities:

- **Legal vehicle:** Is the bicycle considered to be a legal vehicle? In what year was this law enacted? In states where the bicycle is considered to be a legal vehicle, bicyclists have the same rights and responsibilities as do drivers of any other type of vehicle.

- **Bicycle department or position:** Is there a bicycle department or position? Where is it located, administratively? In what year was it established? How many staff positions does it have? What is its annual budget? What are its responsibilities? The bicycle department or position is usually the focus of a state's bicycle planning activities.

- **Other departments:** Are other departments involved in bicycle planning? Which ones? In what ways? Quite often, multiple departments share bicycle activities, programs, and responsibilities. When bicycle responsibilities are scattered

among different departments, the absolute level of bicycle activity may increase, but coordination may become more difficult, and duplication of effort can occur.

- **Bicycle advisory committee:** Is there a bicycle advisory committee? In what year was it established? Who are its members? What are its objectives and accomplishments to date? Bicycle advisory committees can provide valuable citizen input and clearer policy direction to many state bicycle programs.

- **Types of funding:** What are the sources and amounts of funding used to support state bicycle activities? The amount of funding available is one of the key elements in determining the range of activities a bicycle program can afford to be involved in.

- **Types of projects:** What types of bicycle capital projects have been implemented? What are their associated costs? At what level are such projects initiated? Bicycle capital projects can be used to enhance the physical environment and to increase the likelihood that bicyclists will ride.

- **Types of programs:** What types of state level bicycle programs have been implemented? What topics do such programs cover? Bicycle programs show the range of promotional activities that states engage in and indicate the types of bicycle activities that states consider most important.

- **State bicycle plan:** Does a state bicycle plan currently exist? In what year was it adopted? What topics and activities does it cover? State bicycle plans identify existing conditions and provide guidance and direction for improving the future of bicycling in the state.

- **History:** What is the history of bicycle planning in the state, briefly noted? The history of bicycle planning in a state may provide an indication of how the state reached its current level of bicycle activity.

LEVEL OF ACTIVITY

Many states were not actively involved in planning bicycle facilities at the time the national survey was conducted. For example, only 16 percent had a state bicycle plan in place. More than half (51 percent) had a bicycle advisory committee, 58 percent had a bicycle department or position, 60 percent had a dedicated source of funding for bicycles, and six out of seven (86 percent) gave bicycles full status as legal vehicles.

To compare states in terms of their level of activity, we developed a simple activity index based on the following five factors:

- Is the bicycle treated as a legal vehicle by the state?
- Are state funds available to support bicycle activities?
- Is there a state bicycle department or position?
- Is there a state bicycle advisory committee?
- Is there a state bicycle plan in place?

If a response was not provided for any question, a negative response was assumed. The activity index is the simple summation of answers to all five questions, with a "yes" scored as 1 and a "no" as 0. This creates an index ranging from 5 for most active to 0 for least active (Table 1).

- Only five states (12 percent) exhibited the maximum score of 5: Delaware, Florida, Minnesota, Oregon, and Washington.

TABLE 1 Level of State Bicycle Activities

Activity Index	Percentage of States					N States
	Legal Vehicle	State Funds	Depart./ Pos.	Advisory Comm.	State Plan	
5	100	100	100	100	100	5
4	100	100	88	100	13	8
3	73	82	73	64	9	11
2	90	40	50	20	0	10
1	100	0	0	0	0	7
0	0	0	0	0	0	2
All	86	60	58	51	16	43

• Eight states (19 percent) had an activity index of 4. All eight treated the bicycle as a legal vehicle, provided funds for bicycling activities, and had a bicycle advisory committee. One of these states lacked a bicycle department or position, whereas the other seven lacked a state bicycle plan.

• Eleven states (26 percent) had an activity index of 3. Only one had a state bicycle plan.

• Ten states (23 percent) had an activity index of 2. None had a state bicycle plan.

• Seven states (24 percent) had an activity index of 1. All seven treated the bicycle as a legal vehicle, and that was it.

• Only two states (5 percent) had an activity index of 0.

On the basis of these results, it appears that making the bicycle a legal vehicle may be a prerequisite for greater state involvement in bicycle planning activities. Similarly, the development of a state bicycle plan seems to require the previous existence of all four other factors making up the activity index. This hypothesis will be explored further in the next section, which deals with history.

HISTORY

A total of 35 states provided information on the history of bicycle planning in their state. Ten states (28 percent) indicated that there had never been any bicycle planning in the state. Five states (14 percent) had been involved in bicycle planning in the past but had nothing recent to report. Seven states (19 percent) reported minimal effort at bicycle planning in the past, solely in conjunction with other projects. Seven states (19 percent) reported state bicycle planning from the recent past. Seven states (19 percent) had a long history of bicycle planning at the state level to report.

North Carolina is an excellent example of a state with a long history of bicycle planning (5). North Carolina had its

first bicycle week in 1975. In 1978 it developed comprehensive policies for the planning, design, construction, maintenance, and funding of bicycle facilities. The first bicycle project was included in the North Carolina transportation improvement program in 1979. In 1982 enforcement was a focus, and in 1984 safety was a focus. Funds were allocated for independent bicycle projects beginning in 1985, with funding increasing to more than \$1 million in 1990. Safety education in schools was a big push in 1986. In 1991 North Carolina substantially revised its original bicycle policies. North Carolina provides an example of a program with a long history of bicycle planning that has encompassed a wide array of activities including encouragement, enforcement, engineering, and education.

Although 37 states indicated that the bicycle was a legal vehicle in their state, only 25 (59 percent) were able to provide the year in which this doctrine was established. Far fewer states indicated having bicycle departments or positions, bicycle advisory committees (BACs), or bicycle plans in place, but a much higher percentage of these states could provide the year in which such activities were first established (Table 2). Bicycles tended to be established as legal vehicles first, with the creation of departments and BACs following much later. Too few states had developed state bicycle plans to make the mean year of plan creation comparable.

These results lend further credence to the view that state bicycle planning occurs incrementally over time, following a fairly set pattern of events. According to this scenario, the bicycle must first be legalized as a vehicle with full access to highways and streets. Funding (preferably dedicated), institutionalization (creation of department or position), and citizen participation (creation of bicycle advisory committee) would follow. Finally, with all of the other pieces to the bicycle planning puzzle in place, a state bicycle plan could be, and sometimes was, formally adopted.

Although there are certain tendencies among states that lean in this direction, the order in which the ingredients of a

TABLE 2 History of State Bicycle Planning

Type of Activity	N States Yes	N States Year	% States Year	Year of Occurrence	
				Range	Average
Legal Vehicle	37	22	59	1926 to 1991	1971
Department or Position	25	19	76	1971 to 1992	1981
Bicycle Advisory Committee	22	20	91	1972 to 1992	1984
State Bicycle Plan	7	6	86	1977 to 1991	1981

successful bicycle planning process are finally put together is by no means cast in stone. Only three states provided dates for all four bicycle planning parameters identified in Table 2: Florida, Oregon, and Washington. None of these three followed the expected chronological sequence exactly. Florida completed all four steps within a 4-year period, beginning with the creation of a department and a BAC in 1979, followed by a plan in 1981 and legalization in 1983. Oregon completed all four steps at a more leisurely pace, beginning with the creation of a bicycle department in 1971, formation of a BAC in 1973, legalization in 1983, and statewide plan adoption in 1988. Washington created a department and a BAC in 1978 and followed up with legalization and plan adoption in 1991. Clearly, local conditions are important in determining the exact sequence of events leading up to the adoption of a statewide bicycle plan.

LEGAL STATUS

In states where the bicycle is a legal vehicle, bicyclists generally have the same rights and responsibilities as do drivers of any other type of vehicle on public streets and highways (6). Most states treat the bicycle as a legal vehicle (Table 1). The few states that do not are often much less active in promoting other bicycle activities as well. None of these states has a state bicycle plan, for example. Only 21 of 37 states (59 percent) where bicycles were treated as legal vehicles were able to provide the year in which that legislation was enacted. The year of enactment ranged from 1926 to 1991, with the average year of legalization being 1971. Seven states (32 percent) passed legislation before 1970. Only two states (10 percent) passed legislation during the 1970s. Eleven states (50 percent) passed legislation during the 1980s, and two states (9 percent) passed legislation in the 1990s.

FUNDING

The nature of activities in which a state bicycle program can participate is to a large extent a function of the availability of funding (7). Thirty states provided information on sources and amounts of bicycle funding. Twenty-two states (73 percent) had some funding available and identified the source. Of the states that had bicycle funding available, 17 (77 percent) used state funds, and 12 (55 percent) used federal funds. Few states had funding available from local, private, or other sources.

Twelve states provided the amount of funding available from the state. This ranged widely, from just \$4,000 to more than \$15 million, with a median of about \$500,000 annually. Five states spent more than \$1 million, and five spent less than \$100,000 annually on their bicycle programs. Few states identified the amount of funding received from sources other than the state.

Nine of 33 responding states (27 percent) indicated that dedicated sources of funding were available for bicycle activities. Four states had dedicated bicycle revenue sources under \$400,000. Two states had dedicated sources of more than \$1 million annually. Three states had dedicated funding from a specific revenue source, such as 1 percent of the state gasoline

tax. Dedicated funding helps ensure that bicycle activities will be carried out in a timely fashion.

Bicycle capital projects enhance the physical quality of the bicycling environment (8). When bicycle facilities are safe and readily available, more cyclists are likely to ride (9–11). Fourteen states provided information on the number and costs of bicycle capital projects funded annually by the state. The number of projects identified in the survey ranged from 1 to 13, with a median of 2. The number of bicycle projects completed by each state is obviously quite low compared with other types of transportation capital improvement projects, such as those for highways or transit. The total annual cost of bicycle projects identified by responding states ranged from as little as \$100,000 to more than \$11 million, with a median value just under \$1 million. The average cost of bicycle projects varied from less than \$50,000 to more than \$5 million, with a median value of more than \$500,000. Bicycle capital projects clearly are often quite low, though more ambitious projects were funded before the passage of ISTEA.

Twenty-six states provided information on the types of bicycle capital projects funded by states. Five different types of bicycle capital projects were identified (multiple responses were possible for each state):

- System improvements [major bicycle projects, including separate bike paths, bike lanes, recreational trails, shoulder widening, and bikeways (79 percent)],
- Incidental improvements [minor bicycle projects, usually implemented in conjunction with major highway projects, including reoriented gratings and curb cuts (36 percent)],
- Crossing facilities [bicycle undercrossings and overpasses (18 percent)],
- Destination facilities [bicycle parking and rest stops (14 percent)], and
- Route marking [projects that focused on route marking or signing, without any other facilities improvements (7 percent)].

Twenty-nine states identified the origination of their bicycle capital projects, whether at the federal, state, local, or other level. In most states (86 percent), at least some bicycle projects originated at the local level. Many, but by no means all, states (62 percent) had bicycle projects originating at the state level. Few states (17 percent) had bicycle projects originating at the federal level. Only one state (3 percent) had bicycle projects originating at other levels.

Bicycle programs are different from bicycle projects (12–14). Bicycle projects deal with physical changes to the bicycling environment. Bicycle programs deal with other aspects of bicycling. Bicycle programs can be grouped into five general classifications: education, engineering, enforcement, encouragement, and “other.” Thirty-four states provided information on the types of bicycle programs available in their state, as follows: education [development of safety classes and bicycle curricula for schools (59 percent)], engineering [development of bicycle facility design standards (47 percent)], enforcement [development of courses on ticketing for code violations, safety enforcement, and bicycle law enforcement (41 percent)], encouragement [development and implementation of state bike week, helmet campaigns, bike rodeos, bicycle maps, bicycle conferences, and the dissemination of

tourist information (38 percent)], and evaluation [collection of accident data and preparation of special bicycle studies (38 percent)].

No single program category stands out, indicating the wide diversity of bicycle programs developed independently by individual states before ISTEA.

PLANNING AND PROGRAMMING

The bicycle department or position usually provides the focus of and impetus for all of a state's bicycle activities. The bicycle department or position is important in ensuring that bicycles are considered in all state projects and in handling all of the department's bicycle concerns. A total of 25 out of 43 responding states (58 percent) indicated that they had a bicycle department or position currently in place. Thus, almost half of all responding states lacked the basic foundation for a more active state role in bicycle planning and programming. Of the 25 states with a bicycle department or position, 19 (76 percent) provided the year in which the department was established. The year of establishment ranged from 1971 to 1992, with the average being 1981. A total of 10 states (53 percent) established the bicycle department or position in the 1970s, 4 (21 percent) in the 1980s, and 5 (26 percent) in the 1990s. The majority of state bicycle positions were established in the early 1970s or just the last 3 years.

The number of staff in state bicycle departments ranged from as low as 5 percent of one person's time up to seven full-time positions. The average number of staff was two. The median number of staff was one. Only three state bicycle departments had more than two full-time staff positions. Most states have very small bicycle departments, with only a limited number of bicycle planning positions. The size of the professional bicycle planning staff limits the amount of bicycle planning that can be accomplished.

Four states had no separate budget for the bicycle department or position. Eight states had annual budgets of \$100,000 or less. Only three states had annual budgets of more than \$1,000,000. The median annual budget was \$83,000. The average annual budget was \$1,437,281. The median budget more accurately reflects state-level activity, because the three states with unusually large budgets push the average well above the median value.

Departmental responsibilities varied considerably from state to state. Nine separate types of departmental responsibilities were identified from the survey responses, with multiple responses possible:

- Evaluate and develop bicycle planning guidelines and procedures, review projects for bicycle compatibility, and manage ongoing bicycle projects (72 percent);
- Coordinate bicycle issues with other agencies, coordinate the department of transportation's bicycle responsibilities, and assist local agencies (61 percent);
- Analyze data, maintain bicycle library, respond to tourist inquiries, and maintain information on other state's bicycle programs (50 percent);
- Review bicycle legislation and bicycle policy (44 percent);
- Carry out long-range planning and project planning and develop statewide bicycle plans (39 percent);

- Prepare route maps for general distribution (28 percent);
- Recommend projects for funding and identify funding sources (22 percent);
- Develop education programs and safety materials (17 percent); and
- Encourage other agencies to develop bicycle programs, participate in bicycle conferences, and promote bicycling (17 percent).

The most common departmental responsibilities dealt with policies, procedures, planning, intergovernmental coordination, and information. These responsibilities appear to be more essential to the function of bicycle departments. The remaining responsibilities were far less widespread, but they may be as important to more active bicycle programs. The majority of bicycle departments or positions and their associated activities are located within the department of transportation, with a few activities scattered among other state departments. When activities are located in different departments, each department may establish its own "territory" including certain specific types of bicycle activities. When activities are scattered among many departments, it may be more difficult to coordinate efforts, and duplication of some efforts may also occur. With the increased emphasis given to bicycle planning in ISTEA, qualifications for statewide bicycle coordinators have shifted away from basic technical assistance and support to higher-level managerial responsibilities.

More than 90 percent of all states with bicycle activities had at least some of these activities located within the state DOT. Other state departments mentioned frequently as having at least some responsibility for bicycle activities included natural resources, police, parks and recreation, and education. State natural resources and parks and recreation departments generally focused on the recreational aspects of bicycling. As much as 50 percent of all bicycle trips made and miles traveled are for recreational purposes (15,16). State police and education departments often focused on bicycle safety issues. Bicycle conflicts with trucks and automobiles seem to have increased in many places as a result of the increasing popularity of this mode of travel for recreational and other trip purposes (17,18).

CITIZEN PARTICIPATION

Citizen participation in state bicycle planning usually is accomplished through the creation of a statewide BAC (19). The BAC can provide invaluable assistance to professional bicycle planning staff on a variety of local concerns, including the interests of citizens, bicyclists, and others concerned with bicycle issues (20). In some cases, it appears that the development and promotion of state bicycle programs was assisted greatly by the creation of an active BAC (21).

The BAC typically is called on to look broadly at the current rate of bicycle usage and resource allocation within the state and to recommend policy changes or new activities to meet the existing and future needs of state bicyclists. The BAC often seems to be a critical link in the path to establishing more active bicycle planning programs and activities. Overall, 22 of 43 responding states (51 percent) reported either having or having had a BAC.

Twenty of 22 states with a BAC (91 percent) were able to provide the year in which it was originally created. The year of BAC formation ranged from 1972 to 1992, with the average being 1984. No BAC was created before 1970. A total of seven states (35 percent) created their BACs in the 1970s, eight states (40 percent) created theirs in the 1980s, and five states (25 percent) created theirs in the 1990s. ISTEA does not require the formation of a BAC, as it does a state bicycle coordinator. Nonetheless, it seems likely that many more BACs will be created as a result of ISTEA.

Eighteen states provided the composition of BAC membership. BAC members were classified as public, private, or nonprofit. Most states (94 percent) had members that were public or private. Only 28 percent of BAC members were nonprofit. Public members included representatives from other state agencies, federal agencies, legislators, and local governments. Private members included user groups, bicycle clubs, environmental groups, and citizens with specific qualifications, such as being under age 21.

Seventeen states listed the objectives of the BAC. The objectives can be grouped into eight broad classifications, with multiple responses possible for each state:

- Advise on policy issues, recommend low-cost policies, programs, and projects, and recommend statewide trails (71 percent);
- Assist bicycle program in daily work, review bicycle programs, and recommend changes (47 percent);
- Promote bicycle activities and related programs (47 percent);
- Coordinate efforts in the public and private sectors and between state agencies and provide a communications link between bicyclists and state agencies (41 percent);
- Develop estimates of current and future needs, analyze bicycle facility development potential, evaluate current resources, and inventory existing trails (41 percent);
- Identify safety concerns (29 percent);
- Identify education needs (24 percent); and
- Collect bicycle data and prepare reports (18 percent).

BACs generally are much more policy driven than are state bicycle departments. "Other" BAC objectives tend to reinforce this policy orientation, with project planning and programming details generally left to the professional bicycle planning staff. Twelve states listed the accomplishments of their BACs to date. The accomplishments fell into six general classifications, with multiple responses possible for each state:

- Development of model legislation, facilities planning guidelines, or procedural recommendations that apply throughout state government (75 percent);
- Development of bicycle program reports, reports on current conditions, case analyses of successful projects, standard planning documents, and state bicycle plans (58 percent);
- Public workshops, conferences, official bike weeks, safety classes, and helmet campaigns (33 percent);
- Adoption of an annual bicycle construction program and recommendation of specific projects (25 percent);
- Development of bicycle maps, bicycle signage, and related promotional brochures (17 percent); and

- Development of guidelines for state financial participation in bicycle projects, mini-grant programs for local governments, and grants for statewide recreational trails (17 percent).

Policy recommendations, often in the form of an annual report or draft state bicycle plan, are often the most tangible accomplishment of BACs. Funding is less often accomplished by or the direct objective of BAC activities.

STATE BICYCLE PLANS

State bicycle plans outline existing conditions and policies and provide direction for the development of expanded bicycle programs and activities in the future (16,22,23). Only 7 of 43 responding states (16 percent) indicated that a state bicycle plan was currently in force. Five additional states (12 percent) indicated that a state bicycle plan was in development.

- Delaware has just completed a draft state bicycle plan, which covers a wide range of topics: encouragement, information, recreation, funding, property acquisition, planning and design, maintenance, safety education, law enforcement, and legal and legislative affairs (24).
- Florida had an old state bicycle plan adopted in 1981 and completed a new comprehensive state bicycle plan in 1990.
- New Hampshire has a state bicycle plan adopted in 1977 that includes a statewide bikeway system plan, design and maintenance of bike lanes, and the primary objectives of the bicycle program.
- Tennessee has a plan called "Bicycling in Tennessee" adopted in 1974 and 1975. The plan includes an inventory of users, facilities, and programs; a framework for establishing state policies; a plan for bicycle facilities and programs; and a planning and design manual.
- Oregon had an old state bicycle plan adopted in 1988 and a proposed plan for adoption in 1992. The new plan is supposed to serve as a complete bicycle modal element in the state transportation plan (25,26).

State bicycle plans try to be comprehensive in dealing with all statewide bicycling planning concerns. Some states have developed shorter or more generic bicycle policies, which provide some guidance on the future of bicycle improvement programs without specifying detailed planning requirements at the state level (27-29).

CONCLUSIONS

Only about half the states surveyed had active bicycle planning programs. Only about a quarter of responding states could be considered very active in bicycle planning. For states embarking on expanded bicycle activities, perhaps for the first time, the information provided in this paper may prove to be useful.

The process of expanding state bicycle planning activities often is associated with the passage of legislation making the bicycle a legal vehicle, but this is by no means required. The

establishment of a bicycle department or position, the formation of a bicycle advisory committee, and the identification of funds, preferably dedicated at their source to bicycle activities, all are conducive to increased state involvement in the encouragement of greater use of bicycles for recreational or other transportation purposes. The development and adoption of a comprehensive statewide bicycle plan generally seem to require all or at least some of these middle steps in order to transpire.

As the planning requirements of ISTEA are clarified, state bicycle planning programs should expand. The change in the level of state bicycle planning and related activities should assist in meeting the needs of bicyclists more rapidly than in the past. As the general environment for bicycling becomes safer and more accessible, bicyclists should increase in number, bringing with them the benefits of cleaner air, less noise, more efficient use of energy resources, and more effective use of existing state transportation systems.

ACKNOWLEDGMENTS

The authors thank Kevin Heanue of FHWA for his thoughtful assistance in identifying the location of state bicycle planning programs and coordinators in the United States, without which this survey research project could not have been conducted successfully. An earlier version of this paper, authored by Dawn Inglis, won the first annual Award for the Best Student Paper in Transportation Planning from the American Planning Association, Transportation Planning Division.

REFERENCES

1. *Intermodal Surface Transportation Efficiency Act of 1991: A Summary*. U.S. Department of Transportation, 1992.
2. *The Intermodal Surface Transportation Efficiency Act of 1991: Summary of Key Provisions*. Bicycle Federation of America, Washington, D.C., 1992.
3. D. M. Inglis. *State Bicycle Planning Programs: A Survey of 10 States*. Graduate City Planning Program, College of Architecture, Georgia Institute of Technology, Atlanta, 1991.
4. D. M. Inglis. *A National Survey of State Bicycle Planning Programs*. Master's thesis. Georgia Institute of Technology, Atlanta, 1992.
5. *Major Accomplishments*. Bicycle Program, North Carolina Department of Transportation, Raleigh (no date).
6. *Sharing the Road: New York State Bicycle Laws*. Statewide Bicycle Advisory Council, Governor's Traffic Safety Committee, Albany, N.Y., April 1990.
7. *Section 10k Funding for Nonmotorized Transportation*. Michigan Department of Transportation, Lansing (no date).
8. *Independent Bicycle Transportation Improvement Projects*. North Carolina Department of Transportation, Raleigh, 1992.
9. *Bicycle Facilities Planning and Design Manual*. Florida Department of Transportation, Tallahassee, 1982.
10. *Bicycle Compatible Roadways: Planning and Design Guidelines*. New Jersey Department of Transportation, Trenton, 1982.
11. *Highway Design Manual*. New York Department of Transportation, Albany, 1986.
12. *The CALTRANS Bicycle Program*. Office of Bicycle Facilities, California Department of Transportation, Sacramento, 1992.
13. *Nonmotorized Program*. Michigan Department of Transportation, Lansing (no date).
14. *Bicycle Improvement Program*. North Carolina Department of Transportation, Raleigh, 1992.
15. University of North Carolina, Highway Safety Research Center, and HDR Engineering, Inc. *National Bicycling and Walking Study: Interim Report*. Report FHWA-PD-92-003. U.S. Department of Transportation, 1991.
16. *Plan B, The Comprehensive State Bicycle Plan: Realizing the Bicycle Dividend*. Minnesota Department of Transportation, St. Paul, 1992.
17. M. Replogle. *Non-Motorized Vehicles in Asian Cities*. Technical Paper 162. World Bank, Washington, D.C., 1992.
18. Applied Science Associates, Inc., and Bicycle Federation of America. *Bicycle Sketch Plan*. Florida Department of Transportation, Tallahassee (no date).
19. T. G. Thompson. *Creation of the Governor's Bicycle Coordinating Council*. Executive Order 122. Office of the Governor, Madison, Wis., 1991.
20. *Annual Report to the Governor*. Colorado Bicycling Advisory Board, Denver, 1991.
21. New Jersey Bicycle Advisory Council. *Bicycling in New Jersey: Findings and Recommendations*. New Jersey Department of Transportation, Trenton, 1987.
22. *Development of Nonmotorized Transportation Facilities: Fiscal Year 1990-91*. California Department of Transportation, Sacramento, 1991.
23. *Washington State Transportation Policy Plan*. Washington Department of Transportation, Olympia, 1991.
24. Wilbur Smith Associates, Bicycle Federation of America, and Mobile Marketing and Management. *Strategies for a Statewide Bicycle/Pedestrian Plan*. Delaware Department of Transportation, Dover, 1991.
25. *State of Oregon Bicycle Master Plan*. Highway Division, Oregon Department of Transportation, Salem, 1988.
26. *Oregon Bicycle Plan*. Bikeway/Pedestrian Program Office, Oregon Department of Transportation, Salem, 1992.
27. *Bicycle Transportation Policy*. New Jersey Department of Transportation, Trenton, 1989.
28. *Bicycle Policy*. North Carolina Department of Transportation, Raleigh, 1991.
29. *Bicycle Policy*. Washington Department of Transportation, Olympia, 1992.