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1996 AGENCY PERFORMANCE REPORT

EXECUTIVE SUMMARY

MINNESOTA DEPARTMENT OF TRANSPORTATION



Minnesota Department of Transportation Executive Summary November 1996

Measurement efforts have been underway at Mn/DOT since 1993 with the development of the Mn/DOT Department level Family of Measures. A Family of Measures is a mix and balance of measures created to support different levels of an organization. Families of Measures are currently being developed throughout the agency at the division, office, district and special project levels with guidance from Mn/DOT's Measurement and Evaluation Section. Input from Management Teams and employees in the various divisions, offices, districts and projects has been used to define outcomes or goals, and performance measures. Where appropriate, these outcomes (goals) and measures were incorporated into the Agency Performance Report.

In program areas where Families of Measures have not yet been developed, Measurement and Evaluation Section staff met with the Program Manager and several employees to review and revise goals and measures from the 1994 APR, and other appropriate Mn/DOT Families of Measures. As Families of Measures are developed in these program areas with more input from staff and customers, goals and measures in future APRs will be revised or supplemented.

The following pages will reflect key measure(s) from the program goals listed for each program area within Mn/DOT. The graphs portray current as well as projected target data for the key measure(s). A summary for each measure further explains what each graph is representing. The measures within this Executive Summary are a portion of the the total measures within the full Agency Performance Report as shown in the table below. The following pages follow the program order as shown in the table below.

| PROGRAM | GOALS | OBJECTIVES | MEASURES |
|-----------------------|-------|------------|----------|
| Aeronautics | 7 | 9 | 11 |
| Transit | 4 | 4 | 6 |
| Railroads & Waterways | 3 | 3 | 4 |
| Motor Carrier | 3 | 6 | 6 |
| Local Roads | 2 | 3 | 3 |
| State Roads | 5 | 19 | 20 |



Minnesota Department of Transportation Executive Summary

Agency Mission

Mn/DOT will manage a transportation system to serve the people in Minnesota by creating quality transportation through people who make a difference.

The Minnesota Department of Transportation (Mn/DOT) was established and operates in accordance with statutory authority “. . .to provide a balanced transportation system, including aeronautics, highways, motor carriers, ports, public transit, railroads and pipelines. . .” Further, Mn/DOT is sanctioned to function as the “. . .principal agency of the state for the development, implementation, administration, consolidation, and coordination of state transportation policies, plans, and programs.”

In accordance with the transportation goals outlined in M.S. 174.01, Subd. 2, as well as Mn/DOT's internal strategic planning efforts, the department's mission goes well beyond a role perceived by most citizens to plan, design, construct, maintain, and operate a transportation infrastructure.

Mn/DOT seeks to establish a seamless transportation system that offers more choice, flexibility, and ways of moving people and goods. Fundamental to this mission is the need to provide connectivity to local, regional, national, and international markets at the greatest possible cost advantage consistent with the state's economic, social, environmental, and safety values.



Aeronautics

Program Goals:

1. Air travel accessibility provides opportunity for economic development and supports community vitality (M.S. 360.011)
2. Life of capital investments in airports is maximized through effective maintenance programs (M.S. 360.011, 360.015)
3. Improve reliability and increase utility of state aviation system (M.S. 360.015)
4. Airport owners, aircraft owners and pilots are provided information and resources needed to operate more safely (M.S. 360.011)
5. Number of aircraft accidents is reduced (M.S. 360.011)
6. Awareness of career opportunities in the aviation industry improves (M.S. 360.015)
7. Understanding and awareness of the role of aviation in Minnesota is enhanced (M.S. 360.015)

Summary

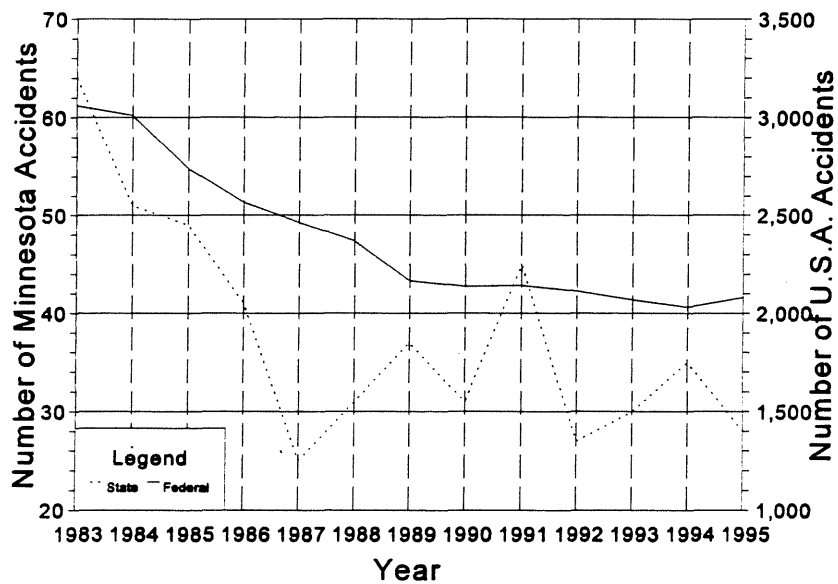
The Aeronautics program exists to accomplish the following goals identified in Minnesota Statutes 360.011 to 360.076:

- Provide for promotion of aviation safety
- Support development and maintenance of a system of airports
- Establish and operate a system of navigation aids
- Foster the development of aviation

Aviation safety is consistently a top priority for the aviation program. However, because of the number of interrelated factors that are beyond the control of the agency, it is impossible to specifically measure the effectiveness of individual activities. Factors such as weather, pilot decision making, mechanical problems with aircraft, and airport maintenance all influence safety performance. Recognizing this, the agency focuses its activities on elevating an awareness of the importance of aviation safety; providing current weather information to pilots to enhance their decision making; and inspecting landing areas to see that they are maintained in a safe condition. The overall effectiveness of these activities is seen by comparing the trend in Minnesota's accident history with the national trend.



Aircraft Accident History



AERONAUTICS: Goal 1 Objective 1 Measure 1



Transit

Program Goals:

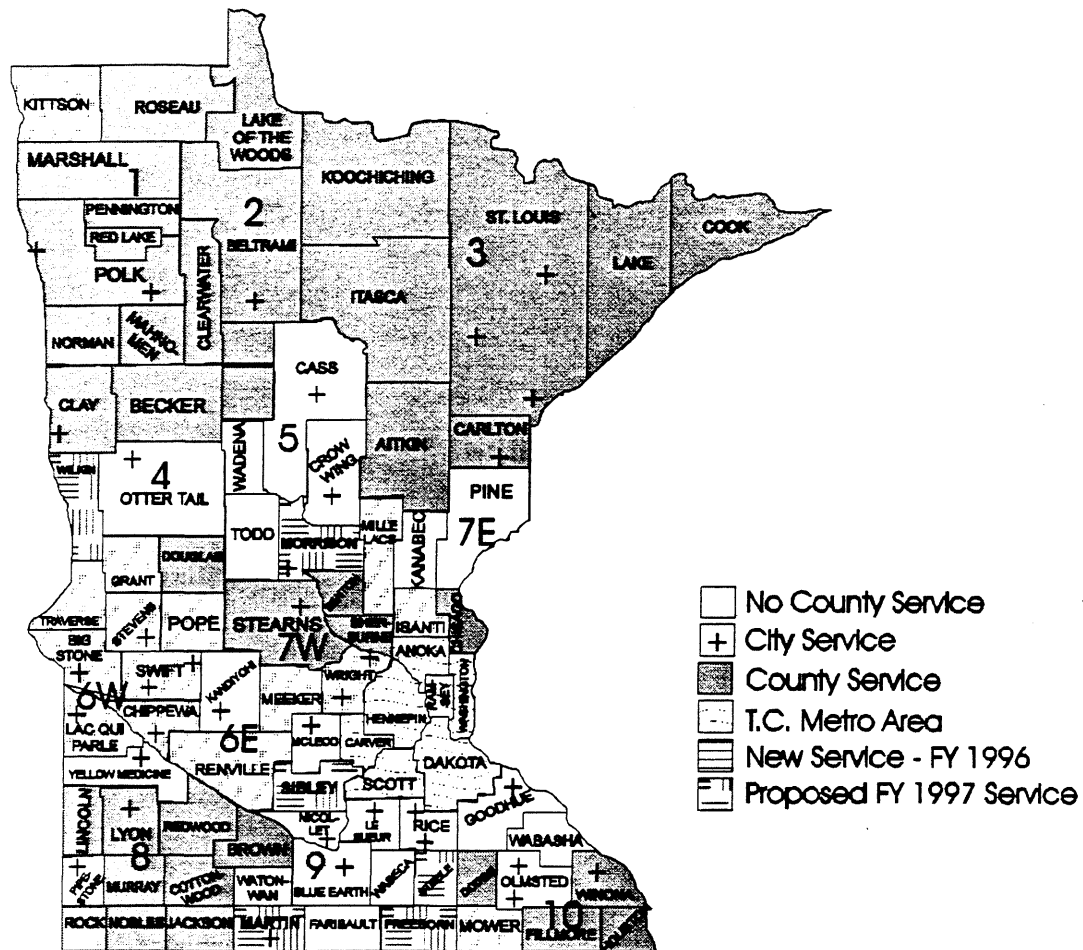
1. To provide access to transit for persons who have no available alternative mode of transportation (Minnesota Statute 174.21).
2. To provide transit services throughout the state to meet the needs of transit users (M. S. 174.01).
3. To maintain a state commitment to public transportation (M. S. 174.21).
4. To increase the efficiency and productivity of public transit systems (M. S. 174.21).

Summary

In 1995 sixty-nine Greater Minnesota transit systems provided over 8,258,000 trips for people going to work, accessing medical services, traveling to retail outlets, enjoying local recreational functions, getting to a variety of appointments, and reaching congregate meal sites. Providing transit service in Minnesota has been achieved through a long standing partnership among federal, state, and local governments. The people who benefit from this joint effort, especially in rural areas, are typically older, disabled, or economically disadvantaged. The following map shows county-level transit service.



MINNESOTA PUBLIC TRANSIT SYSTEMS



52 counties with county-level service
 16 counties with municipal-only service
 12 counties without service



TRANSIT: Goal 1 Objective 1 Measure 2



Railroads and Waterways

Program Goals

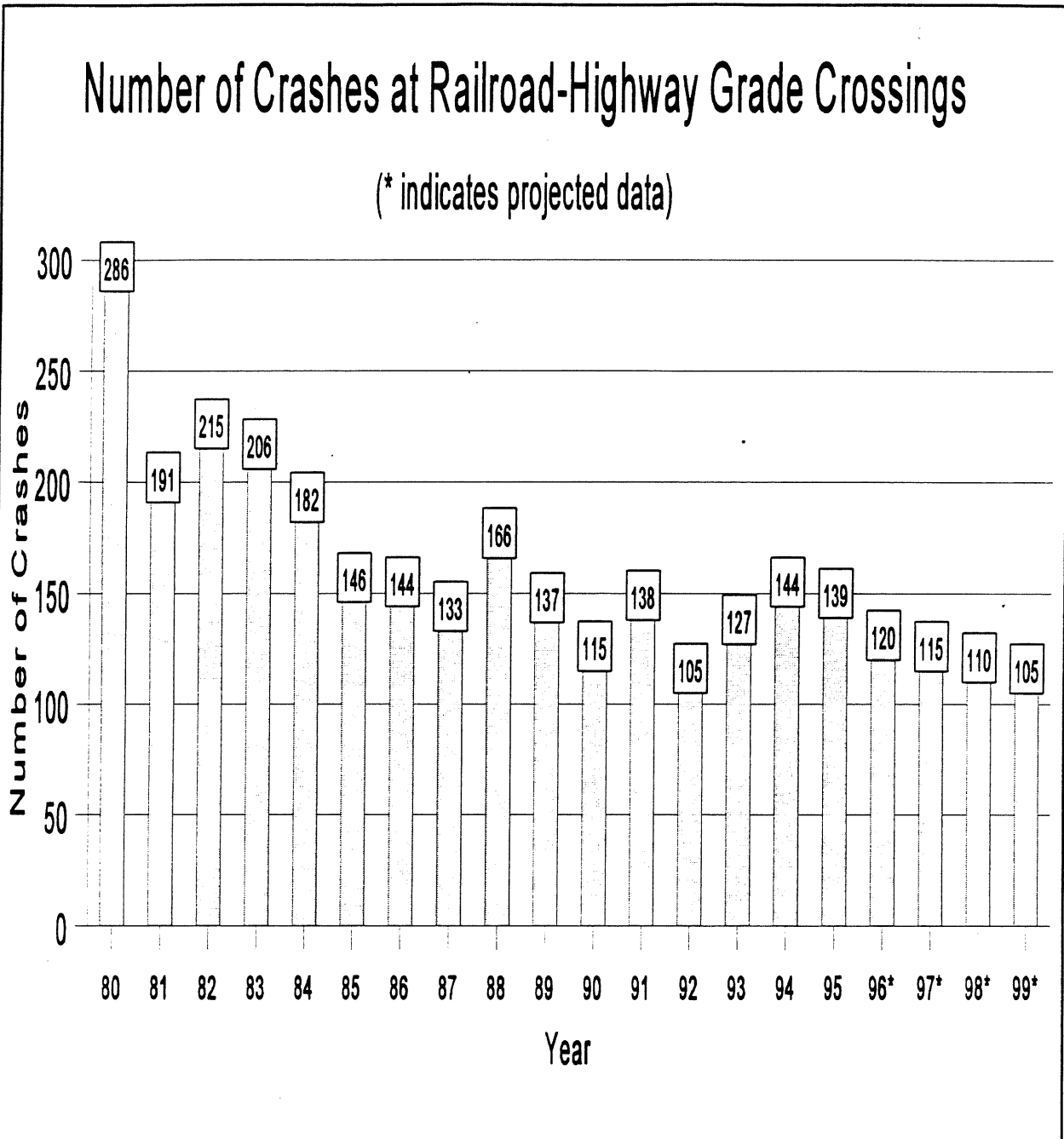
1. To provide for the safe interaction of rail transportation with highway and pedestrian movements through:
 - A. Administration of the federal grade crossing safety improvement program [23 U.S.C. 109 (e)].
 - B. Enforcement of safety and service standards for clearance variances (M.S. 219.47, sub. 2).
 - C. Advocating crossing closures (M.S. 219.073).
2. To use a comprehensive planning process to maintain and improve rail and water transportation (M.S. 222.50, 457A.02).
3. To fund projects for improvement of rail and water shipper/receiver facilities (e.g., regional and shortline railroads, grain elevators) (M.S. 222.50).

Summary

Mn/DOT's efforts to improve safety at railroad - highway grade crossings have been successful. Grade crossing accidents in Minnesota have been reduced from an average of 400 vehicle-train accidents per year and 50 deaths per year in 1972 to 139 vehicle-train accidents and 16 deaths in 1995. This has been accomplished in large measure by the installation of signals at crossings with high vehicular traffic where the exposure to the presence of trains is high.

However, safety at railroad - highway grade crossings, especially at crossings with low vehicular traffic, continues to be a serious problem. Of the 15 fatal grade crossing accidents in Minnesota in 1995, five occurred at signalized crossings and ten occurred at grade crossings with low vehicular traffic volumes. In addition, one out of six personal injury and property damage grade crossing accidents occurs at crossings with low vehicular traffic counts.

Mn/DOT continues efforts to reduce railroad-highway grade crossing crashes by identifying those locations that would most benefit from safety improvements.



RAILROADS AND WATERWAYS: Goal 1 Objective 1 Measure 2



Motor Carrier

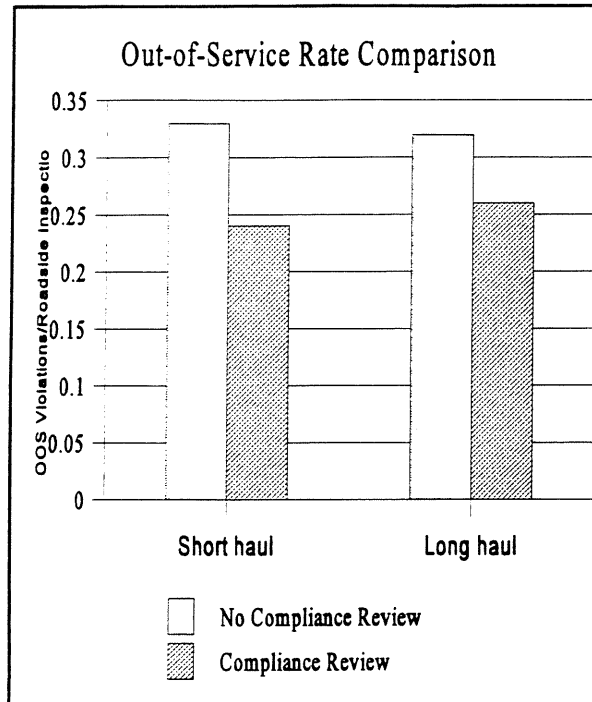
Program Goals

1. To reduce the number of unsafe motor carriers operating on Minnesota highways. (M.S. 174.30, 221.021, 221.031, 221.0314, 221.141, 221.185, 221.291, 221.605, 221.81, 221.84, 221.85)
2. To improve motor carrier compliance with safety and hazardous materials regulations. (M.S. 221.031, 221.0314, 221.033, 221.034, 221.0355, 221.036, 221.037, 221.124, 221.221, 221.605)
3. To improve hazardous materials shipper compliance with regulations. (M.S. 221.033, 221.0355, 221.037, 221.172, 221.221, 221.291)

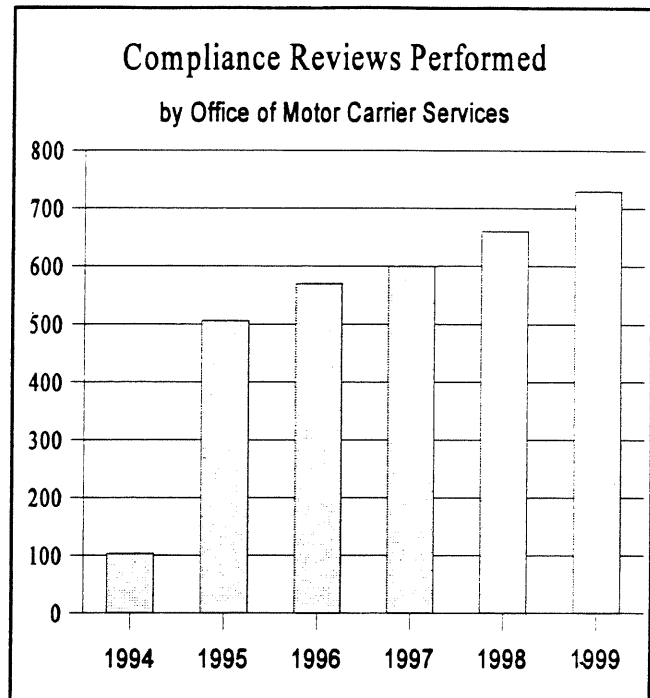
Summary

The overall goal of this program is to promote and improve the safe operation of motor carriers and other transportation providers who use the state's highways. Many variables affect highway safety. They include highway and vehicle design, weather and road conditions, driver behavior, and the amount and type of law enforcement services available. The Office's main role in promoting and improving highway safety involves working with motor carriers and transportation providers to correct deficient safety practices and prevent violations before they occur. It does not engage in on-the-road enforcement activities.

Mn/DOT funded a recent University of Minnesota study, (Cherkassky, 1996). Preliminary findings indicate Minnesota-based interstate freight carriers who receive compliance reviews exhibit lower out-of-service rates in the year following the review when compared to similar carriers never reviewed. This comparison can be applied to approximately 85% of Minnesota-based interstate freight carriers. The left graph on next page shows out-of-service rate for carriers with predominantly long haul operations and carriers with predominantly short haul operations. Whether a carrier is characterized as long haul or short haul, a "positive effect" on the out-of-service rate occurs after a compliance review. Findings from the study show long haul carriers have a 19% reduction in out-of service-rates and short haul carriers have a 27% reduction after receiving a compliance review. The right graph on next page shows the number of compliance reviews performed or planned by the Office of Motor Carrier Services for each fiscal year.



MOTOR CARRIER: Goal 1 Objective 1 Measure 1



MOTOR CARRIER: Goal 2 Objective 1 Measure 1



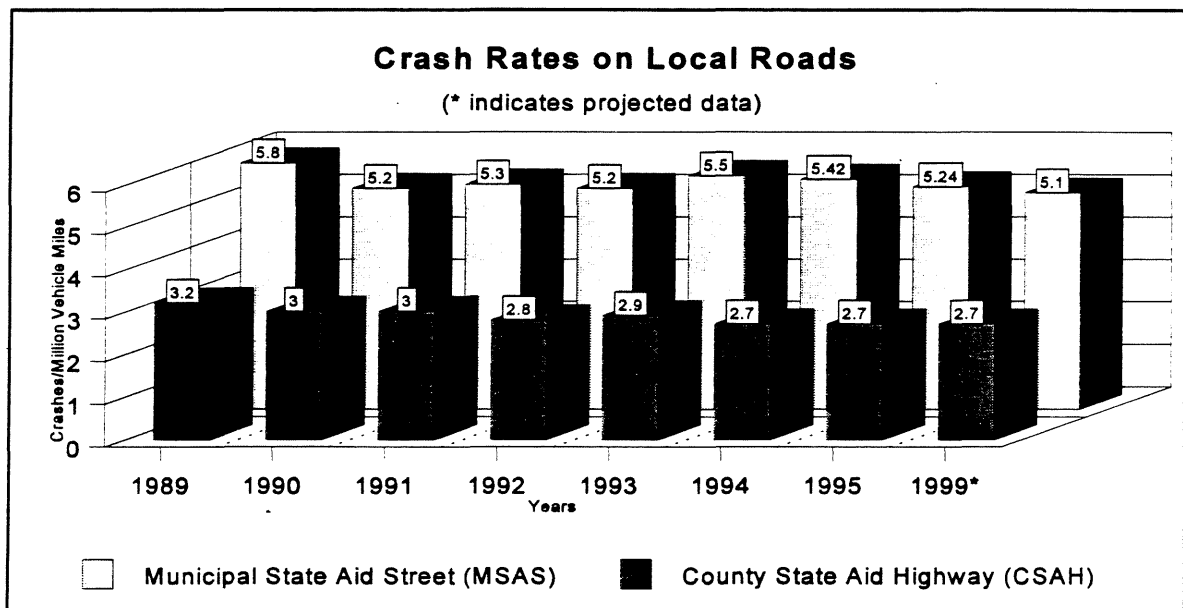
Local Roads

Program Goals

1. Transportation systems are provided that enable efficient movement of people and goods without disruption.
2. Safe trips are provided through sound engineering and maintenance.

Summary

The Division of State Aid for Local Transportation, with the help of the State Aid Rules Committee established in statute, promulgates the rules and standards which govern state aid operations. A major component in the decision of what geometric design standards should be established is the desire for safe roads. Minnesota has consciously chosen to set standards which are higher than the American Association of State Highway and Transportation Officials' minimum recommendations. A review of the accident rates is an indicator of how well we are doing at accomplishing a safe road system. Preserving and maintaining the existing system is a major priority and the funds used for preservation limit those which are available for projects that improve safety.





LOCAL ROADS: Goal 2 Objective 1 Measure 1

State Roads

Program Goals

1. Investments are consistent with guidance found in the State Plan (M.S. 174.01 Subd 2)
2. Transportation systems are provided that enable efficient movement of people and goods without disruption (M.S. 174.01 Subd 2)
3. Safe trips are provided through sound engineering, maintenance, education and information (M.S. 174.01 Subd 2)
4. Quality products and services will be delivered in an effective and efficient manner (M.S. 174.01 Subd 2)
5. Travel information is provided so that travelers can optimize their trips (M.S. 174.01 Subd 2)

Summary

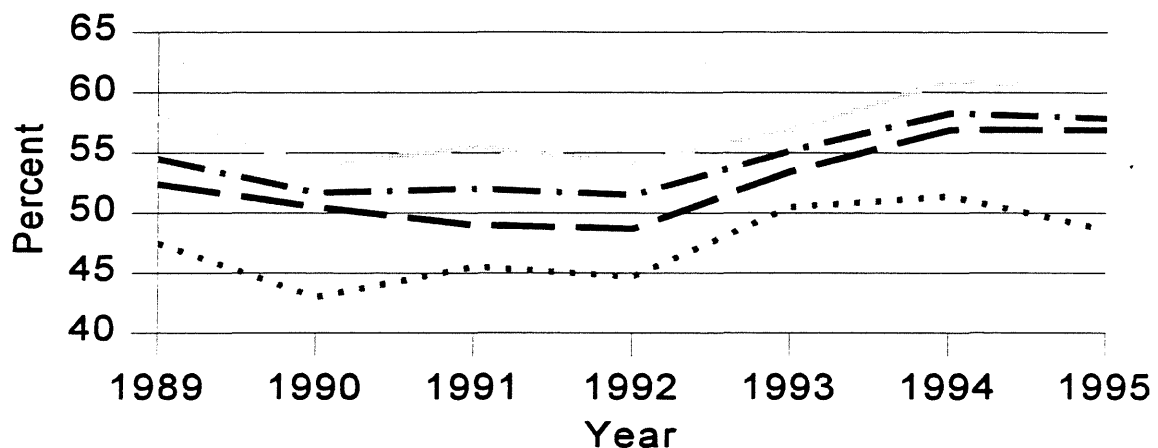
The State Roads program represents the merging of the former State Roads Construction and State Roads Operations programs. These programs have been combined so that the department's overall program structure is better aligned with the organization structure, and to recognize the strong relationship between the investment in state highways and the operations of designing, managing construction, preserving and maintaining safe highways. This program is clearly the largest of Mn/DOT's efforts, and one which has direct impact on our customers - the users of the state highway system.



Pavement Quality Index (PQI) is an indicator of the overall quality of a highway's driving surface. PQI is a composite of the rideability average and structural condition (i.e., cracking, spalling and rutting). It does not measure the adequacy or remaining life of the underlying pavement structure.

The data reflects that the Department is consistently maintaining the higher class roads at a higher level of service. The past two years also reflect the highest percentage of roads in a GOOD or VERY GOOD condition. This illustrates the Department's efforts to maintain the existing road system, at least on a short term, at an acceptable level with their current resources.

Percent of Roadway Miles where PQI is 3.3 or More

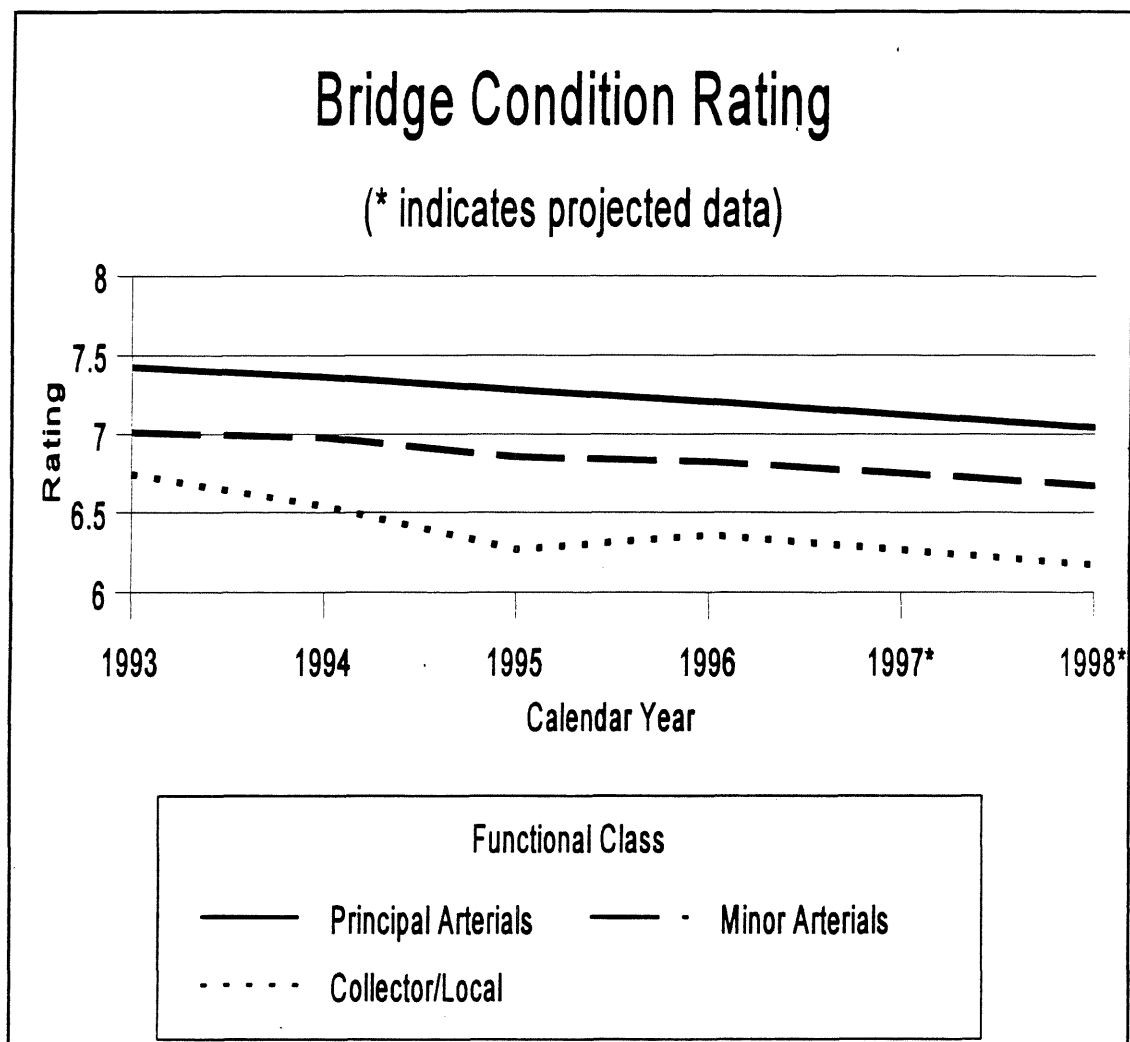


| Functional Class | | | |
|------------------|------------|---------|-----------|
| ———— | Prin Art | —— — | Minor Art |
| | Coll/Local | — . — . | All |

STATE ROADS: Goal 2 Objective 1 Measure 1



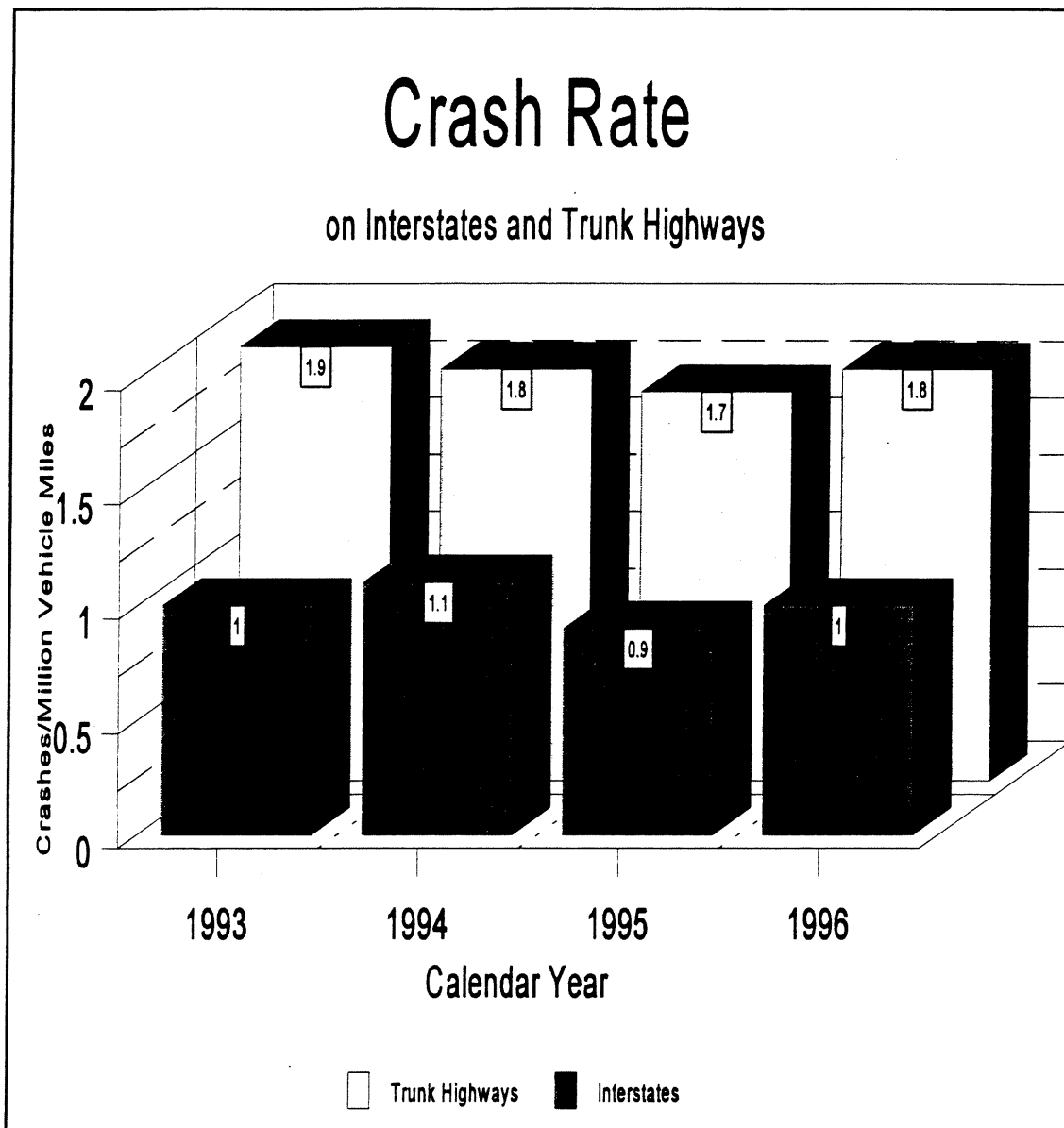
Bridge condition rating by functional class measures the condition of the part of the bridge that directly supports vehicles. Deterioration of superstructure will affect load capacity, rideability, and frequency of repair. The average condition rating of superstructure for all Mn/DOT bridges (except culverts) is determined by bridge safety inspections. Inspectors rate condition on a scale from 0 (non-serviceable condition) to 9 (new condition). The scale is established by the Federal Highway Administration. The Department has tentatively set acceptable levels of average superstructure for Principal Arterials at 7.000; for Minor Arterials at 6.5000; and for Collectors/Locals at 6.000.



STATE ROADS: Goal 2 Objective 3 Measure 1



The largest cause of crashes can be attributed to driver behavior. The only way to change driver behavior is through education. Mn/DOT will analyze all available crash data and target education initiatives toward those areas showing the largest potential for improvement.

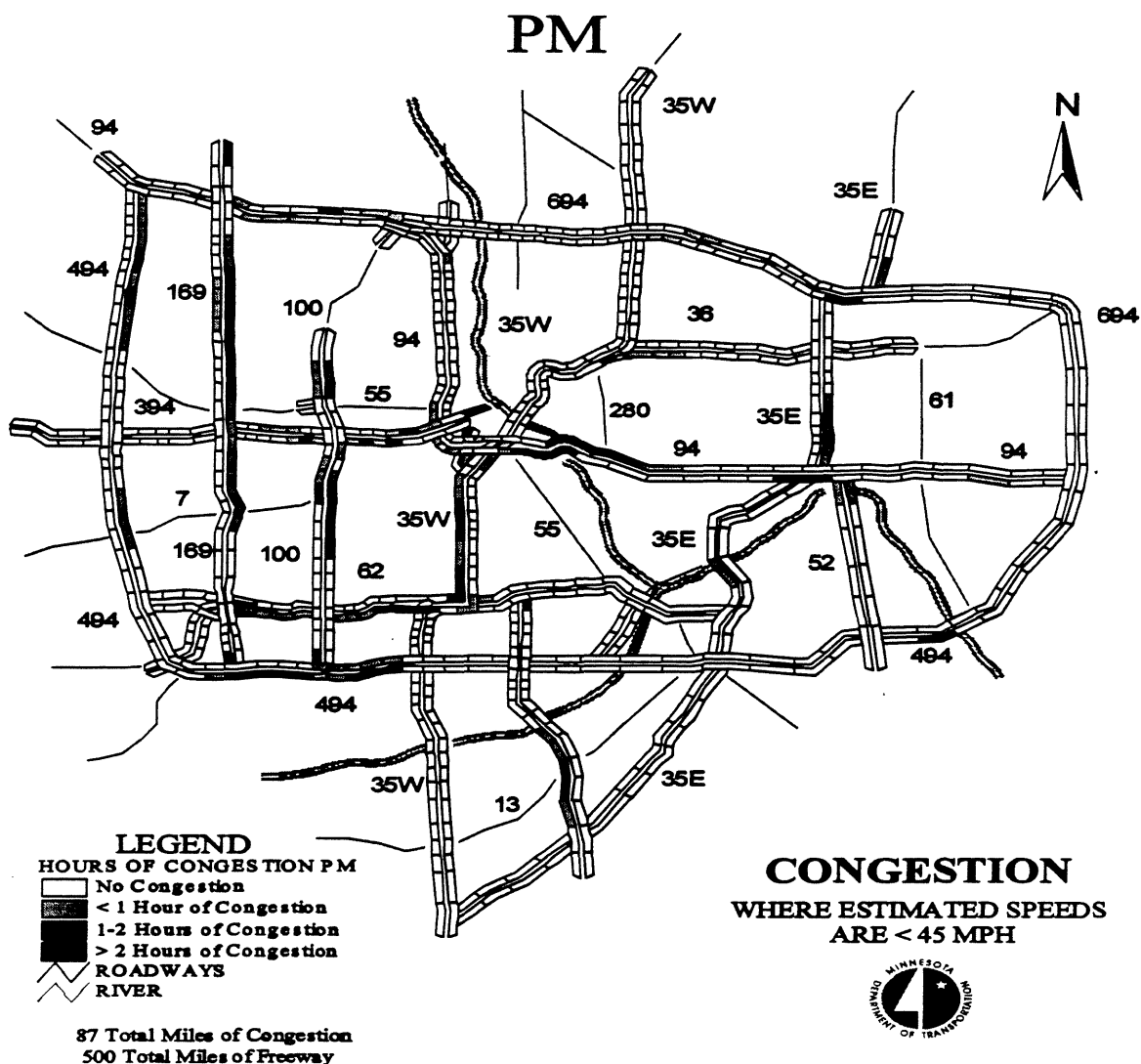


STATE ROADS: Goal 3 Objective 3 Measure 1



Recurrent congestion, traffic that is only constrained by roadway characteristics, is said to occur when speeds regularly fall below 45mph for more than one hour a day because the volume of traffic trying to pass some point on the freeway, exceeds the capacity at that point. Loop detectors are placed in each lane approximately every half mile and the data from these detectors is an average of vehicle speeds for each 5 minute period of time.

1995 Metro Freeway Congestion



STATE ROADS: Goal 2 Objective 4 Measure 1



For more information regarding this document:

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1996 Agency Performance Report - Executive Summary

AGENCY PERFORMANCE REPORT

1996

**TRANSPORTATION
DEPT**

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AGENCY : TRANSPORTATION DEPT**MISSION**

Mn/DOT will manage a transportation system to serve the people of Minnesota by creating quality transportation through people who make a difference.

In its mission to manage a transportation system to serve the people of Minnesota, the Department of Transportation (Mn/DOT) has a mandate in M.S. 174.01, Subd. 1 "... to provide a balanced transportation system, including aeronautics, highways, motor carriers, ports, public transit, railroads and pipelines ..." and serve as the principal state agency for the "development, implementation, administration, consolidation and coordination of state transportation policies, plans and programs."

The department defines a "balanced" transportation system as one which offers its citizens and businesses optimal access to a mode of transportation, or combination of modes (intermodal). Intermodalism may be further defined as an integrated "door-to-door" system of multiple transportation modes providing reduced costs or time for movement of people and products from origination to destination. Although historically the predominant mode of transportation has been highways, there is increasing emphasis on alternative modes such as mass transit, railroads, bicycles and waterways, and the interconnection of modes.

GOALS

- To provide safe transportation for users throughout the state.
- To provide multimodal and intermodal transportation that enhances mobility and economic development and provides access to all persons and businesses in Minnesota while ensuring that there is no undue burden placed on any community.
- To provide a reasonable travel time for commuters.
- To provide for the economical, efficient, and safe movement of goods to and from markets by rail, highway and waterway.
- To encourage tourism by providing appropriate transportation to Minnesota facilities designed to attract tourists.

- To provide transit services throughout the state to meet the needs of transit users.
- To promote productivity through system management and the utilization of technological advancements.
- To maximize the benefits received for each state transportation investment.
- To provide funding for transportation that, at a minimum, preserves the transportation infrastructure.
- To ensure that the planning and implementation of all modes of transportation are consistent with the environmental and energy goals of the state.
- To increase high occupancy vehicle use.
- To provide an air transportation system sufficient to encourage economic growth and allow all regions of the state the ability to participate in the global economy.
- To maintain transit use in the urban areas by giving highest priority to the transportation modes with the greatest people moving capacity.
- To promote and increase bicycling as an energy-efficient, nonpolluting and healthful transportation alternative.
- **FEDERAL:** The Federal Intermodal Surface Transportation Efficiency Act (ISTEA) establishes 23 transportation goals which Mn/DOT is required to accomplish.

Mn/DOT's biennial budget is organized into seven program areas: 1) Aeronautics 2) Transit 3) Railroads and Waterways 4) Motor Carrier Regulation 5) Local Roads 6) State Roads and 7) General Administration.

The General Administration program is not included in this report. The program represents only about two percent of the department's expenditures (six percent of the department's staff) and has only an indirect effect on state transportation services.

In accord with the 1996-1997 biennial budget structure, the equipment program has been incorporated into other programs: State Roads (road equipment and scientific and engineering equipment); with smaller amounts in other Mn/DOT programs.

The 1994 APR separated State Road Construction and State Road Operations. For purposes of performance reporting, the 1996 APR has combined these into State Roads.

WAYS TO IMPROVE PROGRAM OUTCOMES**INCREASE FINANCIAL SUPPORT FOR REGIONAL DEVELOPMENT COMMISSIONS (RDCs) AND METROPOLITAN PLANNING ORGANIZATIONS (MPOs):**

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) created a new focus for transportation: a seamless intermodal system for the movement of people and goods. ISTEA requires the development of a financially constrained Statewide Transportation Improvement Program (STIP) and the opportunity for early and continuous public participation in the process. To address these requirements, Minnesota formed District/Areawide Transportation Partnerships (ATPs) made up of representatives from RDCs, MPOs, Mn/DOT Districts and special interest groups to provide a substate geographic focus. The role of the District/ATPs is to bring together the transportation improvement recommendations of the counties, cities, RDCs, MPOs and Mn/DOT into an integrated list of transportation investments.

Minnesota RDCs and MPOs have experienced a substantial increase in transportation related activities as a direct result of ISTEA and Minnesota's use of District/ATPs. Because of the increase in transportation related activities and the importance of regional planning in the District/ATP process, we should consider increasing the financial support for RDCs and MPOs to assure that their activities continue.

INCREASE LENGTH OF PLANNING CYCLE:

State law (M.S. 174.03) requires preparation and regular update of the State Transportation Plan. The Plan incorporates the goals of the state transportation system (M.S. 174.01) and establishes objectives, policies and strategies for achieving those goals. The specific requirement for updating the Plan every two years should be changed to every four years. Such an extension allows more time for actual program implementation. Adjustments in the planning process can be made based upon actual experience with program delivery.

REMOVE REFERENCE TO PIPELINES:

The reference to "pipelines" in Mn/DOT's statutory charge (M.S. 174.01, Subd. 1) should be removed. Responsibility for pipelines in Minnesota was transferred to the Department of Public Safety (M.S. Ch. 299J) in 1987.

CREATE A MINNESOTA TRANSPORTATION LOAN FUND (TLF):

Minnesota should enact enabling legislation so that the state can create a Minnesota Transportation Loan Fund (TLF). A TLF is an infrastructure investment fund at the state level to make loans and provide assistance to surface transportation projects. The TLFs are designed to provide states with a new financing capability to complement other parts of the U.S. DOT program and other state and local funding sources. As TLF loans are repaid, the TLF's funds will be replenished and the TLF can make new loans or loan guarantees to other transportation projects. By creating a TLF, the state can significantly increase the efficiency of its transportation investments and significantly leverage federal resources available because the TLF allows the state to have greater flexibility and discretion over the management of its federal money. A TLF is desired for Minnesota in order to facilitate and encourage investment in eligible transportation infrastructure projects sponsored by public and/or private industries.

REPEAL CERTAIN ECONOMIC PROVISIONS AND ESTABLISH MINIMUM ENTRY REQUIREMENTS FOR MOTOR CARRIERS:

Regular route common carriers of passengers, charter passenger carriers and household goods movers remain

subject to provisions in M.S. chapter 221 designed to limit the number of authorized transportation providers, restrict the routes or geographical areas they may serve and regulate the rates they charge. Motor carriers of property were exempted from these economic regulations in 1996. The Legislature should consider repealing these provisions and establishing minimum entry requirements designed to protect users of the service, including requiring all carriers to file proof of insurance with Mn/DOT. This would allow the agency to redirect resources now dedicated to enforcing economic regulations to improving the safety compliance of motor carriers by conducting additional safety compliance audits.

REVIEW AND AMMEND M.S. 218 AND M.S. 219 TO ENSURE CONSISTENCY WITH FEDERAL LAWS:

To ensure consistency with federal laws and the current deregulated environment, M.S. 218 and M.S. 219 should be reviewed and amended as appropriate, with respect to railroad regulations and Mn/DOT's responsibility to administer these statutes.

EMPLOYEE PARTICIPATION

Measurement efforts have been underway at Mn/DOT since 1993 with the development of the Mn/DOT Department level Family of Measures. A Family of Measures is a mix and balance of measures created to support different levels of an organization. Families of Measures are currently being developed throughout the agency at the division, office, district and special project levels with guidance from Mn/DOT's Measurement and Evaluation Section. Input from Management Teams and employees in the various divisions, offices, districts and projects has been used to define outcomes or goals, and performance measures. Where appropriate, these outcomes (goals) and measures were incorporated into the Agency Performance Report.

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For the 1996 APR, program managers, along with data experts, collected data and determined targets and objectives with assistance from the Measurement and Evaluation Section. Program managers and their staff wrote their own program summaries and program drivers and definitions, rationales, data sources, discussions of past performances, plans to achieve targets and other factors affecting performance. The Executive Summary was prepared by the Measurement and Evaluation Section utilizing data submitted by program managers and others.

The Mn/DOT Worker Participation Committee was also involved in the preparation of the 1996 APR. This group was first invited to the APR Project Kick-Off Meeting on September 6th, and then received follow-up communications regarding their participation opportunities. All agency designees took part in the preparation or editing of program pieces relevant to their work area. And, several of the most interested union representatives also contributed via reviews of program areas of interest to them.

Date : December 2, 1996

Agency Expenditure Summary

F.Y. 1996

| NAME | (in thousands \$) | % of \$ | FTE | % of FTE |
|-----------------------------------|-------------------|------------|-------|-------------|
| AGENCY: TRANSPORTATION DEPT | \$1,351,142 | 100.0% | 5,096 | 100.0% |
| PROGRAM: AERONAUTICS | \$60,464 | 4.5% | 50 | 1.0% |
| PROGRAM: TRANSIT | \$14,041 | 1.0% | 18 | 0.3% |
| PROGRAM: RAILROADS & WATERWAYS | \$4,072 | 0.3% | 19 | 0.4% |
| PROGRAM: MOTOR CARRIER REGULATION | \$2,770 | 0.2% | 52 | 1.0% |
| PROGRAM: LOCAL ROADS | \$540,356 | 40.0% | 54 | 1.1% |
| PROGRAM: STATE ROADS | \$686,086 | 50.8% | 4,559 | 89.5% |

Agency : TRANSPORTATION DEPT

Program : AERONAUTICS

EXPENDITURES AND STAFFING :

| | <u>(\$ in Thousands)</u> | <u>Percent of Department</u> |
|----------------------------|--------------------------|----------------------------------|
| Total Expenditure | \$60,464 | 4.48% |
| From Federal Funds | \$41,955 | |
| From Special Revenue Funds | \$17,758 | |
| Revolving | \$751 | |
| Number of FTE Staff: | 50 | 0.98% |

GOALS :

- Number of aircraft accidents is reduced. (M.S. 360.011)
- Airport owners, aircraft owners, and pilots are provided information and resources to operate more safely. (M.S. 360.011)
- Air travel accessibility provides opportunity for economic development and supports community vitality. (M.S. 360.011, 360.015)
- Life of capital investments in airports is maximized through effective maintenance programs. (M.S. 360.011, 360.015)
- Reliability is improved and utility of the state aviation system is increased. (M.S. 360.015)
- Awareness of career opportunities in the aviation industry is improved. (M.S. 360.015)
- Understanding and awareness of the role of aviation in Minnesota is enhanced. (M.S. 360.015)

DESCRIPTION OF SERVICES :

The goals of this program are accomplished through a variety of activities. Aviation safety is a top priority for this program and its activities. The agency conducts pilot safety seminars to heighten the awareness of safety, collects and disseminates weather information to improve flight planning and pilot decision-making, and inspects airports so airport owners are aware of deficiencies that may adversely impact safety. Publicly-owned airports are supported through grant-in-aid programs for capital improvements and support of maintenance and operations activities. Improving the reliability and increasing the utility of Minnesota's aviation system is accomplished by

TRANSPORTATION DEPT**1996 Agency Performance Report**

establishing and operating a state system of navigation aids to augment the federal system. The agency fosters aviation through its outreach programs to the general public and students at all levels. The focus of these efforts is increasing the awareness of aviation career opportunities and aviation's contribution to society.

BACKGROUND INFORMATION :**MEASURE TYPES: ACTIVITIES (A), EFFICIENCY (E), OUTPUT (O), OUTCOMES (OC),
OTHER DATA (OD), UNIT COSTS (UC), WORKLOAD (W)****DATA BASED ON: CALENDAR YEAR (CY), FISCAL YEAR (FY), FEDERAL FISCAL YEAR
(FFY), BIENNIUM YEARS (BY)**

| <u>Type</u> | <u>Based</u> | <u>Measure</u> | <u>1994-95</u> | <u>1995-96</u> |
|-------------|--------------|---|----------------|----------------|
| W | FY | Publicly Owned Airports Licensed | 137 | 138 |
| W | FY | Privately Owned, Public Use Airports Licensed | 8 | 8 |
| W | FY | Public Use Seaplane Bases Licensed | 16 | 16 |
| OD | FY | Airports with Scheduled Air Service | 15 | 13 |
| W | FY | Registered Active Aircraft | 5,800 | 5,800 |
| OD | FY | Active FAA Registered Pilots | 15,150 | 15,150 |
| OD | FY | Secondary Educational Institutions with Aviation Programs | 18 | 18 |

PROGRAM DRIVERS :

Value of Time: As an individual's time becomes increasingly valuable, aviation becomes a more valued mode of transportation, especially for longer trips.

Rapid Movement of Goods: Aviation's importance is increasing for the delivery of time-critical goods and materials. Increased demand for perishable foods such as fruits, vegetables and seafood is a prime example.

Transport of Medical Patients: As the management of patient care changes, especially for hospitals in greater Minnesota, aviation is playing an ever-increasing role in transporting patients, particularly by helicopter.

Aviation Safety: The public's expectation that aviation should be accident-free emphasizes the need for effective, ongoing safety programs.

Future Personnel Needs: The aviation industry needs properly trained personnel to remain economically healthy. Youth, especially young women and minorities, need to be made aware of career opportunities and the education they must acquire to prepare for these careers.

Goal 1 : Number of aircraft accidents is reduced.

Objective 1 : Safety programs contribute to the reduction in the number of aircraft accidents.

Measure 1 : Number of aircraft accidents.

| | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> | <u>C.Y.1999</u> |
|----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number of Accidents | | | | | | |
| Actual | 35 | 28 | | | | |
| Target | | | 27 | 26 | 25 | 24 |

DEFINITION :

The number of accidents is an accepted measure of how safely the aviation system is operating. Accidents are those which have been reported to the Federal Aviation Administration (FAA). Any accidents in which there were no injuries and only minor damage to the aircraft are not included.

RATIONALE :

Although the number of accidents measures operating safety, an accident rate such as accidents per number of aircraft operations would be better. However, reliable data on which to base a rate is not available nor is it cost effective to gather. Therefore, developing and reporting a rate is not feasible. Also, because the number of accidents per year is small, and is erratic, there will not be a smooth, predictable trend.

DATA SOURCE :

Information is from accident records kept by the agency in the Office of Aeronautics.

DISCUSSION OF PAST PERFORMANCE :

There are many factors that influence accidents most of which are beyond the control of the agency. The trend in the number of accidents in Minnesota is better than the national trend. Based on that information, one can deduce that the safety programs of the agency are contributing to improving aviation safety in the state. However, because of the multitude of factors beyond the agency's control, it is not reasonable to claim any additional credit for the results.

PLAN TO ACHIEVE TARGETS :

The agency plans to continue providing programs and activities which promote safety with the expectation that this will continue to improve Minnesota's aviation accident record.

OTHER FACTORS AFFECTING PERFORMANCE :

Factors beyond control of the agency that strongly influence aircraft accidents include pilot error, pilot health, landing area conditions, aircraft mechanical conditions, and weather conditions.

Goal 2 : Airport owners, aircraft owners, and pilots are provided information and resources to operate more safely.

Objective 1 : Safety programs and activities contribute to reducing aircraft accidents.

Measure 1 : Average number of airport deficiencies per inspection.

| | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> | <u>F.Y.1999</u> |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Deficiencies per Inspection | | | | | | |
| Actual | | | 0.95 | | | |
| Target | | | | 0.90 | 0.50 | 0.50 |

DEFINITION :

Tracking the average number of safety deficiencies for airport inspections provides a measure of how well airport owners are maintaining the operating environment of their airport. Safety deficiencies are based on established safety criteria.

RATIONALE :

Although direct control of this measure lies with the airport owner, the agency inspects the airports and provides the owner with the results. Owners are encouraged to expeditiously correct any deficiencies reported.

DATA SOURCE :

Information is from inspection records maintained by the agency in the Office of Aeronautics.

DISCUSSION OF PAST PERFORMANCE :

The agency has inspected the public use airports for many years. Although the effectiveness of this effort has not been measured until recently, most airport owners find the feedback they receive from the inspection helpful in improving their facilities.

PLAN TO ACHIEVE TARGETS :

The agency plans to continue inspecting airports since on-site review is the only way to find deficiencies that may negatively impact safety. The agency will also be more aggressive in stressing the need for airport owners to correct safety-related deficiencies.

OTHER FACTORS AFFECTING PERFORMANCE :

The agency has no direct control over the airport owners response to the inspection findings. The owners, however, control the priority placed on correcting deficiencies and are encouraged to expeditiously do so.

Goal 2 : Airport owners, aircraft owners, and pilots are provided information and resources to operate more safely.

Objective 1 : Safety programs and activities contribute to reducing aircraft accidents.

Measure 2 : Total attendance at pilot safety seminars.

| | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> | <u>F.Y.1999</u> |
|----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number of Attendees | | | | | | |
| Actual | 8,500 | 8,900 | 10,000 | | | |
| Target | 7,000 | 8,000 | 10,000 | 11,000 | 11,000 | 11,000 |

DEFINITION :

The number of attendees provides one measure of the safety related information received by pilots.

RATIONALE :

One of many strategies for improving aviation safety is to heighten the awareness of pilots so that they are more safety conscious when they operate aircraft. A method of accomplishing this is offering safety seminars for them.

DATA SOURCE :

Data is from records maintained by the Federal Aviation Administration (FAA) at their Minneapolis office.

DISCUSSION OF PAST PERFORMANCE :

The agency has conducted pilot safety seminars for a number of years. In recent years, this effort has been in partnership with the FAA's safety program thereby allowing both agencies to reach more pilots with the resources available. Since 1993, both agencies have been increasingly aggressive in promoting these events.

PLAN TO ACHIEVE TARGETS :

The agency plans to continue offering seminars focusing on topics that are pertinent and interesting to pilots and at convenient locations. Partnership efforts with the FAA are expected to continue.

OTHER FACTORS AFFECTING PERFORMANCE :

Attendance is voluntary so it is important to advertise the seminars well, present topics of interest, and hold them in convenient locations.

Goal 2 : Airport owners, aircraft owners, and pilots are provided information and resources to operate more safely.

Objective 1 : Safety programs and activities contribute to reducing aircraft accidents.

Measure 3 : Number of weather products requested by pilots on computer weather terminals.

| | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> | <u>F.Y.1999</u> |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number of Products (Millions) | | | | | | |
| Actual | 3.8 | 4.1 | 4.4 | | | |
| Target | 4.6 | 5.0 | 5.6 | 4.7 | 5.0 | 5.2 |

DEFINITION :

Weather products are types of current or forecasted weather information, and other related information that pilots use for flight planning. Products are available by using the agency's computer weather terminal program.

RATIONALE :

Accurate weather information is necessary for pilots to do proper flight planning, make sound decisions, and fly more safely.

DATA SOURCE :

Data is maintained by Kavouras, Inc., Burnsville, MN, the vendor that provides the services for the agency.

DISCUSSION OF PAST PERFORMANCE :

This service has continued to grow in popularity as more people become familiar and comfortable with computers. In turn, pilots acquire and utilize better information for their decision making. Targets for 1994-1996 proved to be too optimistic. Consequently, targets for 1997-1999 were revised downward.

PLAN TO ACHIEVE TARGETS :

The agency intends to continue to provide this service, enhancing it as new technology and resources permit.

OTHER FACTORS AFFECTING PERFORMANCE :

Similar services are available through subscription services. However, due to the cost, these services are used primarily by flight departments rather than by individual pilots. The number of pilots who have personal computers is expected to increase the usage somewhat, but there is no way to predict how much.

Goal 3 : Air travel accessibility provides opportunity for economic development and supports community vitality.

Objective 1 : Provide grants to communities that own airports to support the project needs identified in the agency's Airport Capital Improvement Plan.

Measure 1 : Percent of projects receiving capital improvement funding.

| | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> | <u>F.Y.1999</u> |
|----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Percent of Projects | | | | | | |
| Actual | | | 49% | | | |
| Target | | | | 40% | 30% | 30% |

DEFINITION :

Percent of projects receiving funding indicates how fully local airport needs are being met by this program.

RATIONALE :

The Airport Capital Improvement Plan is a compilation of the airport improvement needs identified by the individual communities that own and operate airports. This plan, which is updated annually, contains the estimated cost of each improvement as well as the anticipated implementation schedule for the improvement. Measuring the percentage of projects receiving funding provides an indicator of the responsiveness of this program to local needs.

DATA SOURCE :

Information is from the agency's record of grant expenditures and the annual Capital Improvement Plans.

DISCUSSION OF PAST PERFORMANCE :

The agency has had an Airport Construction Grant program for many years. However, there have never been any measures to determine how effectively the program responded to local needs. Since the program requires a local matching share, the community's ability to provide their local share has usually been the controlling factor in implementing the projects.

PLAN TO ACHIEVE TARGETS :

Current levels of funding for State Construction Grants will not adequately respond to all needs identified in the Capital Improvement Plan. If funding is not increased, the agency may require a larger matching share from the communities. This will keep the potential for funding the projects open, but will cause the airport owner to scrutinize the priority for proposed projects relative to other community needs.

OTHER FACTORS AFFECTING PERFORMANCE :

Reduction in federal Airport Improvement Program (AIP) funds for smaller airports due to changing federal priorities is placing greater pressure on the State Construction Grant program. Since little or no increase in federal funds is anticipated, this pressure is expected to continue.

Goal 4 : Life of capital investments in airports is maximized through effective maintenance programs.

Objective 1 : Airport pavement condition ratings remain at or above target levels.

Measure 1 : Airport pavement condition ratings.

| | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> | <u>C.Y.1999</u> |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Condition Rating | | | | | | |
| Actual | 69.8 | 70.3 | 69.7 | | | |
| Target | 60 | 60 | 60 | 60 | 60 | 60 |

DEFINITION :

Pavement condition ratings measure the level of deterioration of the pavement. A new pavement has a rating of 100. The type and amount of deterioration is measured to produce a current condition rating for the pavement.

RATIONALE :

The rate of deterioration of a pavement can be lessened by effective maintenance of the pavement. Measuring the deterioration through a rating system provides a measure of the effectiveness of the maintenance activities.

DATA SOURCE :

Data is from records of pavement condition ratings maintained in the Office of Aeronautics.

DISCUSSION OF PAST PERFORMANCE :

The agency began rating airport pavements in 1988. Because field evaluations are not done every year, the agency has not developed a high level of experience using this technique on airport pavements.

PLAN TO ACHIEVE TARGETS :

The agency shares the results of the field evaluations with the airport owner. The owner is encouraged to use effective maintenance techniques which will keep their ratings from falling below targeted threshold levels, thereby avoiding or delaying need for more costly reconstruction.

OTHER FACTORS AFFECTING PERFORMANCE :

Control over the types and levels of maintenance provided to airport pavements belongs to airport owners who determine the resources they are willing to commit to this effort.

Goal 4 : Life of capital investments in airports is maximized through effective maintenance programs.

Objective 2 : Ratings of airport lighting systems remain at or above target levels.

Measure 1 : Airport lighting system ratings.

| | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> | <u>C.Y.1999</u> |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Lighting System Rating | | | | | | |
| Actual | 99.3 | 98.4 | 98.4 | | | |
| Target | 99 | 99 | 99 | 99 | 99 | 99 |

DEFINITION :

Airport lighting system ratings measure the number of lighting fixtures that were not functioning at the time of the inspection. A system with all lights functioning receives a score of 100.

RATIONALE :

Using a scoring system based on the relative importance of the particular type of fixture and counting the number of lighting fixtures that are not functioning provides a means of measuring the level of maintenance provided to each airport lighting system.

DATA SOURCE :

Data is from the annual lighting inspections conducted by the agency. Records are kept by the agency in the Office of Aeronautics.

DISCUSSION OF PAST PERFORMANCE :

The agency has done an annual lighting inspection at each publicly-owned airport since 1984. Results are published in a report which is provided to the local officials responsible for the airport. Peer pressure from comparing their rating with other airports in the state is effective in motivating airport officials to maintain their lighting systems. Results have improved significantly since inception of the program.

PLAN TO ACHIEVE TARGETS :

The agency has no direct control over maintenance of the lighting systems, but plans to continue annual inspections and report the results to the local airport officials.

OTHER FACTORS AFFECTING PERFORMANCE :

Local airport officials have the responsibility for maintaining their airport lighting systems. Consequently, the results are a measure of the level of maintenance they provide to their lighting system.

Goal 5 : Reliability is improved and utility of the state aviation system is increased.

Objective 1 : Electronic navigation aids function at a high level of reliability.

Measure 1 : Percent of time navigation aids are operational.

| | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> | <u>F.Y.1999</u> |
|------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Percent of Time | | | | | | |
| Actual | 98.5% | 98.0% | 97.0% | | | |
| Target | 98% | 98% | 98% | 98% | 98% | 98% |

DEFINITION :

Electronic navigation aids are radio systems used by pilots for navigating enroute as well as in the vicinity of an airport. Percent of time navigation aids are operational indicates the amount of time the systems are available to serve pilot needs.

RATIONALE :

This measure is a direct indication of the performance of the systems.

DATA SOURCE :

Data is from information collected by the agency through use of a remote monitoring system and maintained in the Office of Aeronautics.

DISCUSSION OF PAST PERFORMANCE :

The agency started collecting data on some systems in 1989 with a remote monitoring system. Additional systems were gradually added until all systems are now monitored. Results in 1996 dropped somewhat because of difficulties encountered with the addition of the last systems.

PLAN TO ACHIEVE TARGETS :

The agency intends to continue to maintain the navigation aids to a high level of reliability.

OTHER FACTORS AFFECTING PERFORMANCE :

None.

Goal 5 : Reliability is improved and utility of the state aviation system is increased.

Objective 2 : Precision landing systems are available to support scheduled air service operations.

Measure 1 : Percent of airports with scheduled air service that have a precision landing system.

| | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> | <u>F.Y.1999</u> |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Percent of Air Carrier | | | | | | |
| Airports | | | | | | |
| Actual | 93.3% | 100% | 100% | | | |
| Target | 95% | 100% | 100% | 100% | 100% | 100% |

DEFINITION :

Precision landing systems provide the pilot with horizontal and vertical guidance information when landing an aircraft. The measure is a ratio of the air carrier airports with precision landing systems to the total number of airports with scheduled air service.

RATIONALE :

Precision landing systems increase the utility of an airport in less than ideal weather conditions. Having this capability available on air carrier airports minimizes the number of flights that are delayed or cancelled due to weather.

DATA SOURCE :

Data is from the agency's records in the Office of Aeronautics.

DISCUSSION OF PAST PERFORMANCE :

The agency has aggressively supported efforts of airports with scheduled air service to secure a precision landing system. In most cases, the systems were installed by the FAA. Mn/DOT installed and operates precision landing systems to support scheduled air service operations at four locations. These are in addition to the systems the FAA operates at nine airports that have scheduled air service.

PLAN TO ACHIEVE TARGETS :

The agency plans to ensure that existing systems continue operating and supporting aircraft landings. Should scheduled air service be started at an airport without a precision approach, the agency will explore providing a system contingent on available resources.

OTHER FACTORS AFFECTING PERFORMANCE :

Two factors, both outside the control of the agency, impact this measure. First, is the FAA's role in installing and operating precision landing systems. Second, is airline company decisions regarding which markets they will serve.

Goal 6 : Awareness of career opportunities in the aviation industry is improved.

Objective 1 : Students become aware of opportunities for a career in aviation.

Measure 1 : Number of students participating in aviation education activities.

| | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> | <u>F.Y.1999</u> |
|---------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number of Students | | | | | | |
| Actual | 1,387 | 2,170 | 1,550 | | | |
| Target | 800 | 1,000 | 1,400 | 1,500 | 1,500 | 1,500 |

DEFINITION :

Numbers shown are the total number of students that participated in the agency's aviation education activities such as: Aviation Career Education Academies, Career Awareness Days at airports, Career Fairs at high schools, and the State Fair.

RATIONALE :

The purpose of the agency's aviation education activities is to enhance the awareness level of students. Measuring the number of student contacts is an indicator of the interest students have in aviation.

DATA SOURCE :

Data is from the information the agency's Office of Aeronautics gathers for each aviation education event. For some events, the numbers are best estimates.

DISCUSSION OF PAST PERFORMANCE :

The agency's educational outreach efforts to students are in response to concerns of members of the aviation industry. The concern is that there is a pool of future employees with the necessary skills to ensure the industry remains viable and economically healthy. Activities focus on encouraging students to pursue aviation careers and also encouraging them to take the proper preparatory courses while in high school.

PLAN TO ACHIEVE TARGETS :

The agency plans to continue its efforts to reach the maximum number of students with interesting and challenging activities and programs in a cost effective manner.

OTHER FACTORS AFFECTING PERFORMANCE :

Attendance is voluntary at most of the activities sponsored by the agency and activities compete for the student's time, interest and attention.

Goal 7 : Understanding and awareness of the role of aviation in Minnesota is enhanced.

Objective 1 : The general public understands the contribution aviation makes to meeting societal needs.

Measure 1 : Number of general public contacts that receive promotional information.

| | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> | <u>F.Y.1999</u> |
|---------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number of Contacts | | | | | | |
| Actual | 14,000 | 23,000 | 27,000 | | | |
| Target | 8,000 | 15,000 | 25,000 | 28,000 | 28,000 | 28,000 |

DEFINITION :

Numbers shown are the number of persons that receive pieces of aviation promotional information .

RATIONALE :

Measuring the effectiveness of this activity is both difficult and costly. Accessing information is the first step in an education process. Measuring the number of persons who receive information is an indication of the level of effort committed to reaching the public.

DATA SOURCE :

Data is from records kept by the agency's Office of Aeronautics. Data is obtained by estimating the number of persons contacted at individual events, some of which are best estimates, as well as monitoring the amount of materials distributed.

DISCUSSION OF PAST PERFORMANCE :

For a number of years the agency has distributed materials for the purpose of promoting aviation. However, no effort was made to measure the effectiveness of this effort. Unfortunately, there is no easy way to determine what difference this effort makes.

OTHER FACTORS AFFECTING PERFORMANCE :

Individuals voluntarily take the materials distributed. To be effective, the materials must be appealing and interesting so that people take them and read them. The agency has no means of ensuring that materials are read and have an impact.

Agency : TRANSPORTATION DEPT

Program : TRANSIT

EXPENDITURES AND STAFFING :

| | <u>(\$ in Thousands)</u> | <u>Percent of Department</u> |
|----------------------|--------------------------|----------------------------------|
| Total Expenditure | \$14,041 | 1.04% |
| From Federal Funds | \$3,911 | |
| From Agency Funds | \$25 | |
| Trunk Highway Funds | \$157 | |
| General | \$9,948 | |
| Number of FTE Staff: | 18 | 0.34% |

GOALS :

- To provide access to transit for persons who have no available alternative mode of transportation. (M.S. 174.21)
- To provide transit services throughout the state to meet the needs of transit users. (M.S. 174.01)
- To maintain a state commitment to public transportation. (M.S. 174.21)
- To increase the efficiency and productivity of public transit systems. (M.S. 174.21)

DESCRIPTION OF SERVICES :

In 1995, sixty-nine Greater Minnesota public transit systems provided over 8,258,000 trips for people going to work, accessing medical services, traveling to retail outlets, enjoying local recreational functions, getting to a variety of appointments, and reaching congregate meal sites. Providing transit service in Minnesota has been achieved through a long standing partnership among federal, state, and local governments. The people who benefit most from this joint effort, especially in rural areas, are typically older, disabled, or economically disadvantaged.

The Greater Minnesota Transit Program:

Administers state and federal transit assistance funds through the Minnesota Public Transit Assistance Program for the 80 county geographic area located outside the seven-county Twin Cities Metropolitan Area. The Metropolitan Council is responsible for planning and funding transit services in the seven-county metropolitan area (Minn. Stat. 654, Art. 3, Subd. 115).

Produces and maintains the Greater Minnesota Transit Plan which targets research efforts, outlines funding

TRANSPORTATION DEPT**1996 Agency Performance Report**

needs, establishes goals, sets operation standards and provides an overall framework for local transit planning activities.

Identifies transit service level needs (in cooperation with affected communities); designs services; and assists in establishing new transit systems as funding permits.

Provides leadership in research and technical education for public and private transportation providers, e.g. Mn/DOT is a partner with the State Patrol and two transit systems in a demonstration project (ARCTIC) to share communication and vehicle location technologies.

Monitors and evaluates Greater Minnesota transit system costs and service performance, and manages a fleet replacement capital investment strategy through the Public Transit Facility and Equipment Management System (PTMS).

Works closely with the Metropolitan Council in planning, coordinating, and providing technical assistance for transit projects having a statewide scope.

Manages a Greater Minnesota rideshare activity designed to supplement traditional transit systems with rideshare alternatives.

BACKGROUND INFORMATION :

MEASURE TYPES: ACTIVITIES (A), EFFICIENCY (E), OUTPUT (O), OUTCOMES (OC), OTHER DATA (OD), UNIT COSTS (UC), WORKLOAD (W)

DATA BASED ON: CALENDAR YEAR (CY), FISCAL YEAR (FY), FEDERAL FISCAL YEAR (FFY), BIENNIUM YEARS (BY)

| <u>Type</u> | <u>Based</u> | <u>Measure</u> | <u>1994-95</u> | <u>1995-96</u> |
|--------------------|---------------------|--|-----------------------|-----------------------|
| A | CY | Number of Public Transit Systems in Greater Minnesota. | 63 | 69 |
| OD | CY | Number of Regional Centers in Greater Minnesota. | 39 | 39 |
| UC | CY | Total Operating Cost for Public Transit Systems in Greater Minnesota (000's). | \$21,043 | \$22,344 |
| A | CY | Total Vehicle Miles Operated by Public Transit Systems in Greater Minnesota (000's). | 11,350 | 12,334 |

PROGRAM DRIVERS :

ISTEA: Transit funding authorized by ISTEA is managed in several different ways. Some transit funding is earmarked by Congress, part is distributed by formula and some non-operating flexible funds may be transferred from the Federal Highway Administration (FHWA) to the Federal Transit Administration (FTA). Minnesota's federal funding for urbanized transit capital and operating (Section 5307) is provided directly to urban area transit

agencies by FTA. There are limited FTA funds available to cover administrative costs for the federal programs.

Access to Transit Services: In F.Y. 1997, the Transit program received a supplemental state appropriation (\$1 million) for Greater Minnesota Transit Assistance to provide capital and operating assistance for implementing new transit service in Greater Minnesota. New service is established in unserved areas as funding permits.

Increases in Transit Service Costs: Costs associated with the delivery of transit services, such as driver's wages, fuel and maintenance, continue to rise.

Aging Population: The number and percentage of population aged 65 or older is rapidly increasing creating a greater need for transportation for nursing homes, home care, and other services which are heavily utilized by the elderly.

Funding: Fixed local share and federal eligibility rules must be considered when developing Greater Minnesota transit programs. Public transit systems in Greater Minnesota receive state assistance through a fixed-share funding formula (Minn. Stat. 174.24). This formula sets a maximum local share of the total operating cost.

Federal Funds: Mn/DOT serves as recipient and administrator of federal transit assistance funds for small urban and rural systems, and planning and technical assistance funds in urbanized and statewide projects. Federal revenue sources administered through Mn/DOT include Section 5309, Section 5303, Section 5310, Section 5311, and Section 5313. Mn/DOT also submits applications to FTA, administers contracts with local providers, and monitors their compliance with federal regulations.

Local Commitment: The fixed share funding formula (M.S. 174.24) illustrates the critical need for commitment to use local funds to support transit services. Successful transit systems require involvement of community decision makers and commitment of resources.

Health Care: Changes in the way health care is delivered necessitate more trip-making to regional centers where services are concentrated.

Goal 1 : To provide access to transit for persons who have no available alternative mode of transportation.

Objective 1 : During each year of the biennium, maintain existing public transit service within regional centers and counties in Greater Minnesota.

Measure 1 : Number and percentage of regional centers served by public transit in Greater Minnesota.

| | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> | <u>C.Y.1999</u> |
|-------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number served by transit | | | | | | |
| Actual | 33 | 34 | 34e | | | |
| Target | | | | 35 | 35 | 35 |
| Percentage served by transit | | | | | | |
| Actual | 85% | 87% | 87e% | | | |
| Target | | | | 90% | 90% | 90% |

DEFINITION :

Regional centers are those places that meet the CURA (Center for Urban and Regional Affairs) definitions for primary regional, secondary regional, and complete shopping centers.

Public transit is passenger transportation service, usually local in scope, that is available to any person who pays a prescribed fare. Routes and schedules of this service may be predetermined by the operator or may be determined through a cooperative arrangement. Subcategories include fixed route, route deviation, and demand responsive services that are available to the general public.

Greater Minnesota includes the 80-county geographic area of Minnesota located outside the seven-county Minneapolis-St. Paul Metropolitan Area.

RATIONALE :

More and more people and economic activities are locating in regional centers. People are looking for more diverse employment, shopping, health care, educational, service, and recreational opportunities. In addition, health care, government services, and educational facilities are becoming more concentrated in regional centers. As a result, travel is increasing rapidly in corridors that connect these areas.

Currently, 34 of the 39 regional centers in Greater Minnesota are served by public transit systems.

DATA SOURCE :

Annual transit reports prepared by the Office of Transit summarize transit activities within the state. Primary regional centers, secondary regional centers, and complete shopping centers are defined in "Trade Centers of the Upper Midwest: Changes from 1960 to 1989" Anding, Adams, Casey, de Montille and Goldfein, University of Minnesota, CURA, 1990.

DISCUSSION OF PAST PERFORMANCE :

Providing transit service in Minnesota has been achieved through a long-standing partnership among federal, state and local governments. The people who benefit from this joint effort, especially in rural areas, are typically older, disabled, or economically disadvantaged.

With the completion of the Greater Minnesota Transit Plan, Mn/DOT established the groundwork for providing transit service within every Minnesota county. The Plan broadly identified transit service gaps and deficiencies. During the 1994-1995 Biennium, the State Legislature approved a \$1.6 million supplemental appropriation for Transit. These additional funds allowed implementation of new public transit service in 14 counties including the city of Buffalo, a regional center located in Wright County.

The 1995 Legislature appropriated \$23,113,000 for Greater Minnesota transit assistance: \$11.557 million in FY 96 and \$11.556 million in FY97. In 1997, an additional \$1 million was appropriated. These funds are sufficient to maintain the current levels of service for existing public transit systems; fund detailed transit needs assessments and preliminary service design work; and, permit the implementation of new transit systems. It is anticipated that the \$1 million supplemental appropriation will fund new public transit service in seven counties including at least one unserved regional center.

PLAN TO ACHIEVE TARGETS :

The Greater Minnesota Transit Plan focuses on a strategy that acknowledges the diversity of service options available to meet transit needs throughout Greater Minnesota. Currently Transit program staff are working closely with local communities and agencies in seven counties to implement new transit service by June 30, 1997. Before service can be implemented, local transportation needs must be assessed and effective service options must be developed so that transit service is tailored to meet the needs of the community.

OTHER FACTORS AFFECTING PERFORMANCE :

Transit service depends upon local commitment to providing transit service, consumer demand for services, and availability of funds to provide transit services. Implementing new transit service in Greater Minnesota requires extensive cooperation between public/private organizations and individuals with a strong commitment to providing transit service focused at a local level.

Transit service also depends on the willingness of all public and private providers to work together with government officials to provide transit services that are appropriate to meet passenger needs and are consistent with the use of public transportation funding.

Goal 1 : To provide access to transit for persons who have no available alternative mode of transportation.

Objective 1 : During each year of the biennium, maintain existing public transit service within regional centers and counties in Greater Minnesota.

Measure 2 : Number of counties in Greater Minnesota with county-wide public transit service.

| | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> | <u>C.Y.1999</u> |
|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Counties with transit | | | | | | |
| Actual | 39 | 51 | 53e | | | |
| Target | | | | 59 | 59 | 59 |

DEFINITION :

Greater Minnesota counties are defined as the 80 Minnesota counties located outside the 7 county metropolitan area.

Public transit is passenger transportation service, usually local in scope, that is available to any person who pays a prescribed fare. Routes and schedules of this service may be predetermined by the operator or may be determined through a cooperative arrangement. Subcategories include fixed route, route deviation, and demand responsive services that are available to the general public.

RATIONALE :

State law designates that funds received under the public transit participation program be distributed to eligible recipients for transit service activities outside the metropolitan area.

Currently, 53 of the 80 counties in Greater Minnesota are served by county-wide public transit systems.

DATA SOURCE :

Annual transit reports prepared by the Office of Transit summarize transit activities within the state.

DISCUSSION OF PAST PERFORMANCE :

Providing transit service in Minnesota has been achieved through a long-standing partnership among federal, state and local governments. The people who benefit from this joint effort, especially in rural areas, are typically older, disabled, or economically disadvantaged.

With the completion of the Greater Minnesota Transit Plan, Mn/DOT established the groundwork for providing transit service within every Minnesota county. The Plan broadly identified transit service gaps and deficiencies. During the 1994-1995 Biennium, the State Legislature approved a \$1.6 million supplemental appropriation for Transit. These additional funds allowed implementation of new public transit service in 14 counties including the city of Buffalo, a regional center located in Wright County.

The 1995 Legislature appropriated \$23,113,000 for Greater Minnesota transit assistance: \$11.557 million in FY 96 and \$11.556 million in FY97. In 1997, an additional \$1 million was appropriated. These funds are sufficient to maintain the current levels of service for existing public transit systems; fund detailed transit needs assessments and preliminary service design work; and, permit the implementation of new transit systems. It is anticipated that the \$1 million supplemental appropriation will fund new public transit service in seven counties including at least one unserved regional center.

PLAN TO ACHIEVE TARGETS :

The Greater Minnesota Transit Plan focuses on a strategy that acknowledges the diversity of service options available to meet transit needs throughout Greater Minnesota. Currently Transit program staff are working closely with local communities and agencies in seven counties to implement new transit service by June 30, 1997. Before service can be implemented, local transportation needs must be assessed and effective service options must be developed so that transit service is tailored to meet the needs of the community.

OTHER FACTORS AFFECTING PERFORMANCE :

Transit service depends upon local commitment to providing transit service, consumer demand for services, and availability of funds to provide transit services. Implementing new transit service in Greater Minnesota requires extensive cooperation between public/private organizations and individuals with a strong commitment to providing transit service focused at a local level.

Transit service also depends on the willingness of all public and private providers to work together with government officials to provide transit services that are appropriate to meet passenger needs and are consistent with the use of public transportation funding.

- Goal 2** : To provide transit services throughout the state to meet the needs of transit users.
- Objective 1** : During the first year of the biennium, establish a baseline for measuring the public's satisfaction with the availability of public transit service in Greater Minnesota.

Measure 1 : Percentage of targeted audiences in Greater Minnesota with satisfactory transit options.

| | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> | <u>C.Y.1999</u> |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Percentage with options | | | | | | |
| Actual | N/A% | N/A% | N/Ae% | | | |
| Target | | | | N/A% | N/A% | N/A% |

DEFINITION :

Target audiences will be identified through the "1996 Statewide Omnibus Survey on Public Attitudes and Opinions about Transportation in Minnesota" which randomly surveys a statistically valid sample of households in Minnesota.

Public transit is passenger transportation service, usually local in scope, that is available to any person who pays a prescribed fare. Routes and schedules of this service may be predetermined by the operator or may be determined through a cooperative arrangement. Subcategories include fixed route, route deviation, and demand responsive services that are available to the general public.

RATIONALE :

A goal included in Minnesota Milestones is that "Government in Minnesota will be cost-efficient and services will be designed to meet the needs of the people who use them." A survey will assist in identifying customer satisfaction and determining how to meet expectations as we approach the next century.

DATA SOURCE :

Annual Statewide Omnibus Survey on Public Attitudes and Opinions about Transportation. The 1996 Minnesota State Survey will be the thirteenth annual omnibus survey of adults, age 18 and over, who reside in Minnesota. Mn/DOT participates in the study by asking questions which will assist in determining areas where more detailed information needs might be required.

DISCUSSION OF PAST PERFORMANCE :

No baseline data is available for this performance measure.

PLAN TO ACHIEVE TARGETS :

Targets cannot be set until after initial survey work is completed. A question regarding satisfaction with the availability of public transit in the community will be included in the 1996 Statewide Omnibus Survey on Public Attitudes and Opinions about Transportation in Minnesota.

OTHER FACTORS AFFECTING PERFORMANCE :

Transit service depends upon local commitment to providing transit service, consumer demand for services, and availability of funds to provide transit services. Implementing new transit service in Greater Minnesota requires extensive cooperation between public/private organizations and individuals with a strong commitment to providing transit services focused at a local level.

Transit service also depends on the willingness of all public and private providers to work together with government officials to provide transit services that are appropriate to meet passenger needs and are consistent with the use of public transportation funding.

Goal 3 : To maintain a state commitment to public transportation.

Objective 1 : During each year of the biennium, utilize limited resources for preservation of transit service in Greater Minnesota.

Measure 1 : Operating cost per vehicle mile for public transit systems in Greater Minnesota.

| | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> | <u>C.Y.1999</u> |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Urbanized | | | | | | |
| Actual | \$3.07 | \$3.12 | \$3.21e | | | |
| Target | | | | \$3.33 | \$3.45 | \$3.50 |
| Small Urban | | | | | | |
| Actual | \$1.82 | \$1.90 | \$1.96e | | | |
| Target | | | | \$2.03 | \$2.10 | \$2.13 |
| Rural | | | | | | |
| Actual | \$0.92 | \$0.94 | \$1.02e | | | |
| Target | | | | \$1.11 | \$1.15 | \$1.16 |
| Elderly/Disabled | | | | | | |
| Actual | \$1.90 | \$1.91 | \$1.89e | | | |
| Target | | | | \$2.05 | \$2.12 | \$2.15 |
| Total/Average | | | | | | |
| Actual | \$1.85 | \$1.81 | \$1.87e | | | |
| Target | | | | \$1.95 | \$2.02 | \$2.05 |

DEFINITION :

Operating cost is the sum of all recurring costs (e.g. labor, fuel) that can be associated with the operation and maintenance of the system during the period under consideration.

Vehicle mile is the movement of one vehicle over a distance of one mile.

Preservation is maintenance of existing systems at a level that will provide for the safe movement of people. Focus is on activities that retain or restore the existing condition without necessarily extending the service life or adding capacity.

Public transit is passenger transportation service, usually local in scope, that is available to any person who pays a prescribed fare. Routes and schedules of this service may be predetermined by the operator or may be determined through a cooperative arrangement. Subcategories include fixed route, route deviation, and demand responsive services that are available to the general public.

Urbanized area service means a transportation service operating in an urban area of more than 50,000 persons but does not include elderly and disabled service [M.S. 174.22 Subd. 10].

Small urban area service means a transportation service operating in an area with a population between 2,500 and 50,000 [M.S. Subd 11].

Rural area service means a transportation service primarily operated in an area having population centers of less than 2,500 persons [M.S. 174.22 Subd. 12].

Elderly and disabled service means transportation service provided on a regular basis in urbanized or large urbanized areas and designed exclusively or primarily to serve individuals who are elderly or disabled and unable to use regular means of public transportation [M.S. 174.22 Subd. 13].

RATIONALE :

The transportation investment process is driven by a declaration of statewide goals and objectives and those transportation strategies/directions described in national and state legislation. The statewide investment goals are drawn from statewide planning and policy studies and are to be used as an aid in determining priorities. Basic Mn/DOT principles for making transportation investment priorities emphasize preservation and management of existing systems.

DATA SOURCE :

Cost and mileage information is obtained from "Monthly Reports" submitted by individual transit systems participating in the public transit assistance program. Data from these reports is maintained in the Office of Transit's computerized data base.

DISCUSSION OF PAST PERFORMANCE :

Costs are subject to inflationary increases. Costs also increase as services are expended into new areas. As systems mature, operating miles are established based upon system demands.

PLAN TO ACHIEVE TARGETS :

The transit program requires recipients of public transit assistance funds to examine transportation services offered by other providers within their service areas and to coordinate these services to achieve more cost-effective service delivery, increase capacity to serve unmet needs, improve quality of service, and/or provide services which are more easily understood and accessed by riders. In addition to providing technical and management assistance to recipients of these funds, transit program staff monitor and evaluate transit system costs and service delivery performance. Improved vehicle specifications for small buses may also result in reduced vehicle maintenance costs.

OTHER FACTORS AFFECTING PERFORMANCE :

Costs are sensitive to such fluctuating operating elements as labor contract settlements, fuel prices and insurance rates. Additional unfunded federal mandates (e.g. ADA, drug and alcohol testing, and clean air act) could add to the cost of operating transit service.

- Goal 4** : To increase the efficiency and productivity of public transit systems.
- Objective 1** : During each year of the biennium, provide cost-effective public transit service in Greater Minnesota by minimizing the impact of service reductions on ridership.

Measure 1 : Ridership on existing public transit systems in Greater Minnesota.

| | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> | <u>C.Y.1999</u> |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Urbanized | | | | | | |
| Actual | 5,986,899 | 5,904,950 | 5,894,665e | | | |
| Target | | | | 5,894,665 | 5,688,352 | 5,603,026 |
| Small Urban | | | | | | |
| Actual | 1,280,221 | 1,254,388 | 1,260,660e | | | |
| Target | | | | 1,266,963 | 1,222,620 | 1,204,280 |
| Rural | | | | | | |
| Actual | 832,942 | 944,428 | 1,056,032e | | | |
| Target | | | | 1,113,813 | 1,074,829 | 1,058,707 |
| Elderly/Disabled | | | | | | |
| Actual | 145,797 | 155,098 | 157,133e | | | |
| Target | | | | 157,919 | 152,392 | 150,106 |
| TOTAL | | | | | | |
| Actual | 8,245,859 | 8,258,864 | 8,368,490e | | | |
| Target | | | | 8,433,359 | 8,138,191 | 8,016,119 |

DEFINITION :

Ridership is defined as the number of one-way trips made on a public transportation system in a given time period.

Urbanized area service means a transportation service operating in an urban area of more than 50,000 persons but does not include elderly and disabled service [M.S. 174.22 Subd. 10].

Small urban area service means a transportation service operating in an area with a population between 2,500 and 50,000 [M.S. Subd 11].

Rural area service means a transportation service primarily operated in an area having population centers of less than 2,500 persons [M.S. 174.22 Subd. 12].

Elderly and disabled service means transportation service provided on a regular basis in urbanized or large urbanized areas and designed exclusively or primarily to serve individuals who are elderly or disabled and unable to use regular means of public transportation [M.S. 174.22 Subd. 13].

RATIONALE :

Ridership directly represents usage of the transit system by the public.

DATA SOURCE :

Ridership information is obtained from "Monthly Reports" submitted by individual transit systems participating in the public transit assistance program. Data from these reports is maintained in the Office of Transit's computerized data base.

DISCUSSION OF PAST PERFORMANCE :

Ridership trends are examined when the Transit program staff meet with local representatives to negotiate contracts, conduct program review, review the budget, and review service design and performance. Programs targeted at increasing public knowledge of transit service, such as the "Heartland Express" project, have been accomplished using federal planning funds.

PLAN TO ACHIEVE TARGETS :

Transit program staff will provide technical assistance to public transit systems to assure service reductions, if required, are targeted at times and locations which have the least impact on the community. Annual marketing efforts of individual transit systems and limited funds identified for specific targeted marketing efforts by designated transit systems, are expected to help minimize ridership loss. Current biennial funding will permit a limited number of new rural transit systems to be implemented. For this reason, rural ridership is expected to increase through 1997.

OTHER FACTORS AFFECTING PERFORMANCE :

Ridership has a direct relationship with service availability. Funding reductions can result in reduced service available to the public. Implementation of new transit service will result in an increase in ridership. Needs assessments and service reviews are used to focus service where needs have been established.

Ridership depends upon transit service availability, consumer demand for services, and the willingness to use some form of transit rather than continuing to use single occupant vehicle to move from origin to destination. Ridership is also impacted by significant events within a community (e.g. health related crises, spring floods, county fairs, special events, etc.).

- Goal 4** : To increase the efficiency and productivity of public transit systems.
- Objective 1** : During each year of the biennium, provide cost-effective public transit service in Greater Minnesota by minimizing the impact of service reductions on ridership.

Measure 2 : Cost per passenger trip on public transit systems in Greater Minnesota.

| | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> | <u>C.Y.1999</u> |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Urbanized | | | | | | |
| Actual | \$2.02 | \$2.05 | \$2.12e | | | |
| Target | | | | \$2.19 | \$2.27 | \$2.30 |
| Small Urban | | | | | | |
| Actual | \$2.58 | \$2.77 | \$2.85e | | | |
| Target | | | | \$2.92 | \$3.03 | \$3.08 |
| Rural | | | | | | |
| Actual | \$5.63 | \$6.06 | \$6.20e | | | |
| Target | | | | \$6.50 | \$6.74 | \$6.84 |
| Elderly/Disabled | | | | | | |
| Actual | \$6.47 | \$6.73 | \$6.78e | | | |
| Target | | | | \$7.58 | \$7.85 | \$7.97 |
| TOTAL/AVERAGE | | | | | | |
| Actual | \$2.55 | \$2.71 | \$2.83e | | | |
| Target | | | | \$2.97 | \$3.08 | \$3.12 |

DEFINITION :

Operating cost is defined as the sum of all recurring costs (e.g. labor, fuel) that can be associated with the operation and maintenance of the system during the period under consideration.

Passenger trip is defined as one passenger making a one-way trip from origin to destination.

Urbanized area service means a transportation service operating in an urban area of more than 50,000 persons but does not include elderly and disabled service [M.S. 174.22 Subd. 10].

Small urban area service means a transportation service operating in an area with a population between 2,500 and 50,000 [M.S. Subd 11].

Rural area service means a transportation service primarily operated in an area having population centers of less than 2,500 persons [M.S. 174.22 Subd. 12].

Elderly and disabled service means transportation service provided on a regular basis in urbanized or large urbanized areas and designed exclusively or primarily to serve individuals who are elderly or disabled and unable to use regular means of public transportation [M.S. 174.22 Subd. 13].

RATIONALE :

This cost-efficiency measure indicates the average total operating cost of providing a transit trip to a passenger.

DATA SOURCE :

Cost and ridership information is obtained from "Monthly Reports" submitted by individual transit systems participating in the public transit assistance program. Data from these reports is maintained in the Office of Transit's computerized data base.

DISCUSSION OF PAST PERFORMANCE :

Costs are subject to inflationary increases. Costs also increase as transit services are expanded into new areas. As systems mature, ridership bases are established.

PLAN TO ACHIEVE TARGETS :

The transit program requires recipients of public transit assistance funds to examine transportation services offered by other providers within their service areas and to coordinate these services to achieve more cost-effective service delivery, increase capacity to serve unmet needs, improve quality of service, and/or provide services which are more easily understood and accessed by riders. In addition to providing technical and management assistance to recipients of these funds, transit program staff monitor and evaluate transit system costs and service delivery performance. Improved vehicle specifications for small buses may also result in reduced vehicle maintenance costs.

OTHER FACTORS AFFECTING PERFORMANCE :

Costs are sensitive to such fluctuating operating elements as labor contract settlements, fuel prices and insurance rates. Additional unfunded federal mandates (e.g. ADA, drug and alcohol testing, and clean air act) could add to the cost of operating transit service. Costs may increase as more rural service is added. Ridership depends upon transit service availability, consumer demand for services, and the willingness to use some form of transit rather than continuing to use single occupant vehicles to move from origin to destination.

Agency : TRANSPORTATION DEPT

Program : RAILROADS & WATERWAYS

EXPENDITURES AND STAFFING :

| | <u>(\$ in Thousands)</u> | <u>Percent of Department</u> |
|----------------------------|--------------------------|----------------------------------|
| Total Expenditure | \$4,072 | 0.30% |
| From Federal Funds | \$583 | |
| From Special Revenue Funds | \$2,446 | |
| Trunk Highway Funds | \$839 | |
| General | \$204 | |
| Number of FTE Staff: | 19 | 0.37% |

GOALS :

- To provide for the safe interaction of rail transportation with highway and pedestrian movement through: A) Administration of the federal grade crossing safety improvement program; B) Enforcement of safety and service standards for clearance variances; and C) Advocating crossing closures. (23 U.S.C. 109 (E); M.S. 219.47, sub.2; M.S. 219.073.)
- To use a comprehensive planning process to maintain and improve rail and water transportation. (M.S. 222.50; M.S. 457A.02.)
- To fund projects for improvement of rail and water shipper/receiver facilities (e.g., regional and shortline railroads, grain elevators). (M.S. 222.50; M.S. 457A.02.)

DESCRIPTION OF SERVICES :

The Railroads and Waterways program:

Fosters and develops the safest, most effective rail and waterway transportation system possible.

Provides customer service to railroads, shipper associations, regional railroad authorities, road authorities, industry associations, other state agencies, other state transportation agencies, state and national associations, and local units of government.

Receives and administers the federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) grade crossing safety improvement funds and the Minnesota Rail Service Improvement Account.

TRANSPORTATION DEPT**1996 Agency Performance Report**

Recognizes the importance of freight transportation on the commercial navigation channels of Minnesota's lake and river systems and its linkages to national and international markets. The waterway activity within MnDOT represents less than one-tenth of one percent of the department's overall budget. MnDOT's role is primarily that of a liaison between different levels of government, waterway carriers and shippers in matters affecting the movement of goods by the water mode. In 1996, the Minnesota Legislature made \$3 million in General Obligation Bonds available for port development assistance. These funds will be administered by MnDOT for public terminal rehabilitation and improvement.

BACKGROUND INFORMATION :

MEASURE TYPES: ACTIVITIES (A), EFFICIENCY (E), OUTPUT (O), OUTCOMES (OC), OTHER DATA (OD), UNIT COSTS (UC), WORKLOAD (W)

DATA BASED ON: CALENDAR YEAR (CY), FISCAL YEAR (FY), FEDERAL FISCAL YEAR (FFY), BIENNIUM YEARS (BY)

| <u>Type</u> | <u>Based</u> | <u>Measure</u> | <u>1994-95</u> | <u>1995-96</u> |
|-------------|--------------|---|----------------|----------------|
| OD | FY | Number of Class I railroads operating in Minnesota | 4 | 4 |
| OD | FY | Number of Class II railroads operating in Minnesota | 6 | 6 |
| OD | FY | Number of Class III railroads operating in Minnesota | 12 | 12 |
| OD | FY | Miles of active rail lines | 4747 | 4747 |
| | CY | Number of rail carloads shipped in Minnesota (millions) | N/A | 2 |
| OD | FY | Number of public grade crossings | 5093 | 5002 |
| OD | FY | Number of private grade crossings | 3149 | 3126 |
| A | FY | Number of public crossings signed with crossbucks or stop sign | 3850 | 3760 |
| A | FY | Number of public crossings with flashing lights, gates or cantilevers | 1243 | 1242 |
| OD | FY | Number of public port authorities | 5 | 5 |
| OD | FY | Number of river terminals in Minnesota | 53 | 53 |
| OD | FY | Number of lake terminals in Minnesota | 35 | 37 |
| OD | FY | Miles of navigable (river) waterways in Minnesota | 230 | 230 |
| OD | FY | Annual lake tonnage (millions of tons) | 66 | 66 |
| OD | FY | Annual river tonnage (millions of tons) | 14.5 | 15 |
| OD | FY | Percent of Minnesota grain exports shipped by river | N/A | 60 |

PROGRAM DRIVERS :**Intermodal:**

Intermodal traffic on the railroads is growing substantially and technologies are changing rapidly. By some estimates, intermodal traffic may grow by as much as five to seven percent a year for the next 10 years. Where intermodal traffic may have accounted for less than five percent of traffic for the major carriers in 1980.

intermodal traffic has grown to an estimated 15-20 percent of rail traffic today. In Minnesota, intermodal revenue units shipped increased fourfold amongst the railroads in the last decade. The railroad industry has experienced comparable growth nationwide from about three million units shipped in 1982 to approximately 8.0 million units shipped by 1995 (Association of American Railroads). Although MnDOT has not played a major role in creation or facilitation of intermodal traffic in the past, the new policy direction that ISTEA provides suggests a substantial shift for the department in the future.

Grade Crossing Safety:

Increased and higher speed rail traffic and increased vehicle traffic on the public road system increases exposure to incidents at highway railroad grade crossings. MnDOT will continue to work with railroads and area transportation partnerships to prioritize crossings for safety improvements, educate the public of the dangers at railroad-highway grade crossings, and encourage a program to close crossings.

Abandonments:

Abandonments are expected to level off to around 50 miles per year over the next ten years. A careful analysis of these lines is required to determine their value as operating rail lines or as transportation corridors for some future use. Most rail lines abandoned during the early 1980's were not profitable or efficient, and/or had duplicated service. Lines subject to abandonment today require much closer scrutiny as they are much more critical to shippers and may be marginally profitable under the right circumstances.

Mergers & Consolidations:

The merger and consolidation applications of major railroads throughout the country may have a significant impact on rail service in Minnesota. While long haul interstate service is very likely to benefit from these actions it is also possible that local rail service will be adversely affected, either by abandonment of marginal lines or the sale of some lines to create shortline or regional rail operations. Demand on the Minnesota Rail Service Improvement program could be greatly affected by these types of transactions.

Diminished Federal Role:

The federal government decision to discontinue funding for the Local Rail Freight Assistance (LRFA) program places increased importance on the Minnesota Rail Service Improvement (MRSI) program and its ability to respond financially to program goals and objectives.

Goal 1 : To provide for the safe interaction of rail transportation with highway and pedestrian movement through: A) Administration of the federal grade crossing safety improvement program; B) Enforcement of safety and service standards for clearance variances; and C) Advocating crossing closures.

Objective 1 : To increase by 10% the number of railroad grade crossings protected to a desired standard by the end of FY 1999.

Measure 1 : Number of projects that improve railroad grade crossings to desired standards.

| | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> | <u>F.Y.1999</u> |
|---------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number of Projects | | | | | | |
| Actual | 577 | 947 | 455 | | | |
| Target | | | | 40 | 45 | 50 |

DEFINITION :

"Projects" are defined as safety improvements of railroad grade crossings to desired standards. Examples of safety improvement projects include: various types of signals and signal upgrades; signs and pavement markings; crossing surface improvements; crossing closures and roadway relocations; and improved crossing alignments, visibility and/or grades. Projects must be approved for funding by area transportation partnerships (ATPs).

"Desired standards" means that the crossing conforms to the guidelines contained in the "Minnesota Manual on Uniform Traffic Control Devices" (MMUTCD) and "A Policy on Geometric Design of Highways and Streets," published by the American Association of State Highway and Transportation Officials.

RATIONALE :

This measure is a direct indicator that the safety of the traveling public is increased as a result of crossing improvements. A national study conducted by the Federal Railroad Administration and Federal Highway Administration has shown that safety at railroad grade crossings is increased (measured in reduction of accidents) as follows:

- Going from passive signing to flashing lights reduces accidents by 70 percent.
- Going from passive signing to signals with gates reduces accidents by 83 percent.
- Going from flashing lights to signals with gates reduces accidents by 69 percent.

In addition, a study conducted by the Transportation Research Board, "Transportation In An Aging Society - Improving Mobility and Safety for Older Persons" determined that safety for elderly persons is greatly improved with the use of more visible (increased reflectiveness and larger) signing. The signing and pavement marking initiative included in this performance measure is the department's response to increasing the public awareness when approaching railroad grade crossings.

DATA SOURCE :

Data concerning projects to improve railroad grade crossings is obtained from Minnesota State Transportation Improvement Programs (STIP).

DISCUSSION OF PAST PERFORMANCE :

Over the last 20 years, MnDOT has been improving warning systems and surfaces at grade crossings throughout the state. Active warning devices have been installed at 1000 crossings and 250 grade crossing surfaces have been improved.

Actual performance for the period F.Y. 92 to F.Y. 96 includes signing and pavement marking projects. Average cost for these projects was \$2500 to \$5000.

PLAN TO ACHIEVE TARGETS :

MnDOT will receive and administer federal ISTEA grade crossing safety improvement funds and continue making improvements to reduce the public's exposure to crossing hazards.

OTHER FACTORS AFFECTING PERFORMANCE :

Several factors, beyond agency control, may affect performance including the availability of state and federal funds for safety improvement projects. In addition, the local decision making process developed to satisfy requirements of ISTEA will affect the number of safety projects receiving high priority for funding when compared to other projects in a given area of the state.

Goal 1 : To provide for the safe interaction of rail transportation with highway and pedestrian movement through: A) Administration of the federal grade crossing safety improvement program; B) Enforcement of safety and service standards for clearance variances; and C) Advocating crossing closures.

Objective 1 : To increase by 10% the number of railroad grade crossings protected to a desired standard by the end of FY 1999.

Measure 2 : Number of crashes at railroad grade crossings.

| | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> | <u>C.Y.1999</u> |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number of Crashes | | | | | | |
| Actual | 144 | 139 | | | | |
| Target | | | 120 | 115 | 110 | 105 |

DEFINITION :

Number of motor vehicle-train crashes at public railroad-highway grade crossings

RATIONALE :

The purpose of the grade crossing safety improvement program is to help prevent crashes at railroad - highway grade crossings. Therefore, the number of crashes is one of the measures used to measure the performance of the program.

DATA SOURCE :

Data concerning vehicle - train crashes are obtained from police reports and from railroad company reports.

DISCUSSION OF PAST PERFORMANCE :

MnDOT's efforts to improve safety at railroad - highway grade crossings have been successful. Grade crossing accidents in Minnesota have been reduced from an average of 400 vehicle-train accidents per year and 50 deaths per year in 1972 to 139 vehicle-train accidents and 16 deaths in 1995. This has been accomplished in large measure by the installation of signals at crossings with high vehicular traffic where the exposure to the presence of trains is high.

However, safety at railroad - highway grade crossings, especially at crossings with low vehicular traffic, continues to be a serious problem. Of the 15 fatal grade crossing accidents in Minnesota in 1995, five occurred at signalized crossings and ten occurred at grade crossings with low vehicular traffic volumes. In addition, one out of six personal injury and property damage grade crossing accidents occurs at crossings with low vehicular traffic counts.

PLAN TO ACHIEVE TARGETS :

MnDOT will receive and administer federal ISTEA grade crossing safety improvement funds and continue making improvements to reduce the public's exposure to crossing hazards.

OTHER FACTORS AFFECTING PERFORMANCE :

Several factors, beyond agency control, may affect performance including weather conditions, persons driving under the influence of alcohol or controlled substance(s), and the consistency with which laws governing the crossing of railroad grades are enforced.

Goal 2 : To use a comprehensive planning process to maintain and improve rail and water transportation.

Objective 1 : To improve or maintain transportation alternatives to shippers.

Measure 1 : Number of carloads shipped/received on project lines.

| | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> | <u>C.Y.1999</u> |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number of Carloads Shipped/Received | | | | | | |
| Actual | 75900e | 93900e | | | | |
| Target | 78000 | 88000 | 97500 | 100000 | 103000 | 105000 |

DEFINITION :

Number of carloads shipped/received is a direct indicator that the rail line acquired and improved is being used by the primary client of this program, the shippers.

RATIONALE :

Each of these project lines would have been abandoned and railroad service lost were this program not in place. The usage of these lines as demonstrated by the car loadings indicates that rail shipping offers an attractive transportation alternative for shippers. Without rail service, trucking becomes the only viable transportation service.

DATA SOURCE :

Annual car loading figures are tracked by each of the project rail lines and provided to the Department on request.

DISCUSSION OF PAST PERFORMANCE :

MnDOT has preserved access to rail service so that shippers have another viable transportation option by providing financial assistance for the acquisition, preservation, and rehabilitation of rail lines threatened by abandonment.

PLAN TO ACHIEVE TARGETS :

MnDOT will continue to analyze rail abandonment applications and railroad line sales and mergers to identify opportunities for public investment that will preserve rail as a viable transportation alternative for shippers.

OTHER FACTORS AFFECTING PERFORMANCE :

The most significant factor affecting performance is the weather. Most of the project lines are dependent on agriculture traffic. The volume of grain available for shipping is largely determined by the quality of the growing season.

Goal 3 : To fund projects for improvement of rail and water shipper/receiver facilities (e.g., regional and shortline railroads, grain elevators).

Objective 1 : To maintain or increase as needed the number of projects funded to improve rail and water freight service.

Measure 1 : Number of projects that improve or maintain rail or water freight service.

| | <u>F.Y.1993</u> | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> |
|---------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number of Projects | | | | | | |
| Actual | 7 | 8 | 6 | 13 | | |
| Target | | | | | 22 | 30 |

DEFINITION :

Number of rail or water shipper/receiver facility improvement projects completed indicates the number of businesses receiving benefit from the program. Measures for FY 1998 and 1999 include port improvement projects, and for FY 1999 assumes funding of the program will be supplemented for current levels.

Three million dollars in port improvements was authorized for spending during FY 1996 and 1997. These projects will be complete in FY 1998 and have been included in the Target for Number of Projects completed. No funds have been authorized beyond 1997.

RATIONALE :

Improvement of rail and water shipper/receiver facilities through assistance from these state programs provide for the increased use and/or efficiencies of shippers by rail or water thus preserving transportation options.

DATA SOURCE :

Improvement projects are tracked by the project manager in the Office of Freight, Railroads, and Waterways.

DISCUSSION OF PAST PERFORMANCE :

In 1976 the Minnesota Legislature established the Minnesota Rail Service Improvement Program to improve the use of rail service by providing state funds for rail rehabilitation and other rail service improvements. Since 1976 the Office of Freight, Railroads and Waterways has completed 21 rail rehabilitation projects, 68 capital improvement projects and 7 emergency flood relief projects. Each of these projects fulfilled program goals to improve and/or maintain rail service.

PLAN TO ACHIEVE TARGETS :

MnDOT will analyze shipper/receiver facility improvement projects to identify opportunities for public investment that will encourage safe, efficient, and reliable freight movement in Minnesota.

OTHER FACTORS AFFECTING PERFORMANCE :

Potential factors affecting the number of projects completed during a fiscal year include: shipper/receiver interest, contractor availability, size of the proposed project, and dollars available for projects.

Agency : TRANSPORTATION DEPT

Program : MOTOR CARRIER REGULATION

EXPENDITURES AND STAFFING :

| | <u>(\$ in Thousands)</u> | <u>Percent of Department</u> |
|----------------------|--------------------------|----------------------------------|
| Total Expenditure | \$2,770 | 0.21% |
| From Federal Funds | \$561 | |
| Trunk Highway Funds | \$2,140 | |
| General | \$69 | |
| Number of FTE Staff: | 52 | 1.03% |

GOALS :

- To reduce the number of unsafe motor carriers operating on Minnesota highways. (M.S. 174.30, 221.021, 221.031, 221.0314, 221.141, 221.185, 221.291, 221.605, 221.81, 221.84, 221.85.)
- To improve motor carrier compliance with safety and hazardous materials regulations. (M.S. 221.031, 221.0314, 221.033, 221.034, 221.0355, 221.036, 221.037, 221.124, 221.221, 221.605.)
- To improve hazardous materials shipper compliance with regulations. (M.S. 221.033, 221.0355, 221.037, 221.172, 221.221, 221.291.)

DESCRIPTION OF SERVICES :

Minnesota Statutes, Chapters 174A and 221 govern motor carriers and other transportation providers. The Office of Motor Carrier Services is assigned the responsibility for administering the program.

A motor carrier is a person or entity whose primary business is transporting people or property over Minnesota's highways. There are about 8,000 interstate motor carriers and 2,500 intrastate motor carriers based in Minnesota. Of these, more than 800 are registered to transport hazardous materials or hazardous waste. In addition, about 35,000 interstate motor carriers based in other states travel through Minnesota. This program also regulates 170 special transportation services for elderly or disabled persons, 171 limousine services, 69 building movers, and nearly 200 shippers of hazardous materials or hazardous waste. Due to federal and state deregulation of motor carriers of property, the number of property carriers is expected to increase. Minnesota continues to impose business entry restrictions on intrastate motor carriers of passengers and household goods movers so the number of these carriers should increase only slightly.

The overall goal of this program is to promote and improve the safe operation of motor carriers and other

TRANSPORTATION DEPT**1996 Agency Performance Report**

transportation providers who use the state's highways. Many variables affect highway safety. They include highway and vehicle design, weather and road conditions, driver behavior, and the amount and type of law enforcement services available. The Office's main role in promoting and improving highway safety involves working with motor carriers and transportation providers to correct deficient safety practices and prevent violations before they occur. It does not engage in on-the-road enforcement activities.

The Office provides a variety of services to carriers and shippers which include: (1) making sure that carriers meet applicable legal standards and liability insurance requirements before they are issued a permit or license; (2) conducting record audits at carrier terminals to determine the extent to which a carrier's safety practices comply with applicable safety and hazardous materials regulations; (3) performing follow up audits on drivers and vehicles placed out-of-service by the State Patrol to detect violations; (4) conducting audits on carrier loading docks to discover shipper violations of hazardous materials regulations; (5) conducting shipper reviews to correct unsafe practices relating to hazardous materials shipments; (6) inspecting vehicles operated by carriers and other transportation providers at carrier terminals so that violations are corrected before the vehicles are used; and (7) making it easier for carriers and shippers to understand and comply with complex federal and state regulations by providing training sessions, a plain-language truck regulations handbook, "Facts" sheets and other publications, and answering questions or giving guidance throughout the day over the telephone.

The Office works in cooperation with other state and federal agencies including the Minnesota Department of Public Safety (DPS), the Minnesota Pollution Control Agency (PCA), the United States Department of Transportation (USDOT), and the Federal Highway Administration (FHWA), to establish and maintain a comprehensive safety program.

BACKGROUND INFORMATION :**MEASURE TYPES: ACTIVITIES (A), EFFICIENCY (E), OUTPUT (O), OUTCOMES (OC),
OTHER DATA (OD), UNIT COSTS (UC), WORKLOAD (W)****DATA BASED ON: CALENDAR YEAR (CY), FISCAL YEAR (FY), FEDERAL FISCAL YEAR
(FFY), BIENNIAL YEARS (BY)**

| Type | Based | Measure | 1994-95 | 1995-96 |
|-------------|--------------|---|----------------|----------------|
| W | FY | Hazardous Materials Dock Audits | 38 | 31 |
| W | FY | Interstate Carrier Safety Reviews (CRs) | 506 | 570 |
| W | FY | Hazardous Materials Shipper Reviews | 37 | 40 |
| W | FY | Special Transportation Services-Audits | 139 | 187 |
| W | FY | Special Transportation Services-Vehicle Inspections | N/A | 1376 |
| W | FY | Limousine Service Operator-Audits | 148 | 136 |
| W | FY | Limousine Service Operator-Vehicle Inspections | N/A | 473 |
| W | FY | Certificates of Insurance Filed | 5179 | 5366 |

PROGRAM DRIVERS :

Changes in entry and economic regulations at the state and federal level have affected the motor carrier regulation program greatly in recent years. In 1992, by enacting the Motor Carrier Modernization Act, the state determined that for-hire transportation in Minnesota should continue to be subject to a competitive entry process but changed the regulatory focus from the type of transportation provided to the type of terminal operated. Effective January 1, 1995, the federal government preempted a state's ability to regulate the price, routes, or service of intrastate motor carriers of property, other than household goods movers. In 1996, the state officially eliminated entry restrictions for motor carriers of property but retained rate, route, and service restrictions for motor carriers of passengers and household goods movers. The resources needed to enforce entry and economic regulations necessarily limits the amount available for investment in the safety program.

Federal safety and hazardous materials regulations, incorporated by Minnesota, also change frequently. These changes result in an increasing customer demand for training and informational materials. Since the Office places a high priority on obtaining compliance through training, education and cooperation, it has responded to the demand by creating an Information Services Section and assigning transportation specialists to work full-time in the section on a rotating basis.

In 1992 the Commissioners of the Departments of Transportation (Mn/DOT) and Public Safety (DPS) entered an agreement to better focus the motor carrier regulatory responsibilities of the two departments. The agreement was designed to avoid duplication of effort and to promote interagency cooperation and the sharing of data resources. As a result of the agreement, the two departments have developed and implemented a comprehensive safety program governing the safety of motor carrier operations in Minnesota. Mn/DOT has directed its resources toward preventing unsafe drivers and vehicles by conducting audits at carrier terminals and providing needed training and information to carrier management officials and their employees. The State Patrol has continued to direct its resources toward detecting driver and vehicle violations on the road through vehicle inspections and roadside enforcement. It removes unsafe drivers and vehicles from service, when they are found, and issues citations for violations.

The two departments also are engaged in "Commercial Vehicle Operation Regulatory Process Reengineering" (CVO), a cooperative effort to improve the safety, efficiency, and productivity of commercial vehicle operations in Minnesota through the application of new technologies to commercial vehicle operations and to the state's regulatory, administration and enforcement procedures. This effort involves Mn/DOT's Office of Motor Carrier Services and the Overweight/Overdimension Permits Office and DPS's Prorate Section and the State Patrol. Over the next biennium, the two departments will implement projects to: (1) reengineer the business process of the four offices to coordinate credential (e.g., licenses, permits) processing, share data, and coordinate carrier audits; (2) coordinate information dissemination across agencies; (3) upgrade and link computer systems and, whenever possible, provide for electronic transactions to eliminate manual paperwork, cash payments, paper credentials, and the need for in-person transactions; and (4) implement an automated roadside screening program for targeting high-risk carriers by providing real-time compliance status and safety information to DPS inspectors at fixed and mobile scale sites. The CVO projects are designed to reduce the burden of compliance on carriers while achieving efficiencies in the use of state resources.

Goal 1 : To reduce the number of unsafe motor carriers operating on Minnesota highways.
Objective 1 : To reduce driver and vehicle out-of-service violations committed by Minnesota-based motor carriers.

Measure 1 : Percentage of driver and vehicle out-of-service violations experienced by Minnesota-based motor carriers after compliance reviews and the percentage of violations experienced by those who did not have compliance reviews.

| | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> | <u>F.Y.1999</u> |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Percent interstate carriers who had CRs | | | | | | |
| Percent intrastate carriers who had MCRs | | | | | | |
| Percent interstate carriers who did not have CRs | | | | | | |
| Percent intrastate carriers who did not have MCRs | | | | | | |

DEFINITION :

There is no data because this measure is under development.

The Office of Motor Carrier Services conducts compliance reviews (CRs) under the Motor Carrier Safety Assistance Program (MCSAP), a grant program administered by the Federal Highway Administration. A compliance review is an in-depth audit of an interstate motor carrier's records to determine compliance with applicable federal safety and hazardous materials regulations. It is designed to ensure that a carrier has the safety management practices in place needed to ensure that the commercial vehicle operations it conducts over the public highways are safe. The Office is adapting the federal CR program for use during the 1998/1999 biennium in auditing intrastate carriers as well. Reviews conducted under the state program will be called Minnesota Carrier Reviews (MCRs).

The North American Uniform Driver, Vehicle, and Hazardous Materials Out-Of-Service Criteria were developed by the Commercial Vehicle Safety Alliance. Minnesota incorporated the criteria in Minnesota Statutes, section 221.031, subdivision 9. Federal and state law enforcement personnel throughout the United States use this document to determine if a commercial vehicle or its driver should be placed out-of-service. A vehicle is placed out-of-service when, because of its mechanical condition or loading, it is determined to be so imminently hazardous that it is likely to cause a loss of control of the vehicle, an accident, or a breakdown. A driver is placed out-of-service when the driver's physical condition or failure to comply with safety regulations would likewise lead to a high safety risk.

A motor carrier's out-of-service rate is determined by dividing the carrier's number of out-of-service violations by the number of roadside inspections conducted on its drivers and vehicles each year.

RATIONALE :

The out-of-service rate is an accurate measure of a carrier's safety fitness because it takes both frequency of inspections and frequency of violations into account. A carrier with a low out-of-service rate is less likely to have imminently hazardous drivers or vehicles on the road.

The preliminary results of a study being conducted by the University of Minnesota (Cherkassky, 1996) show that Minnesota-based interstate freight carriers who receive compliance reviews exhibit lower out-of-service rates than similar, nonaudited carriers in the year following the review.

Over 500 compliance reviews on Minnesota-based carriers are conducted each year. Under this measure, out-of-service rates of those carriers who receive compliance reviews (CRs and MCRs) will be tracked to verify the initial results of the study and to establish baseline data for future measures. The data will be useful for making investment decisions about the relative costs and benefits of compliance reviews conducted by the Office.

DATA SOURCE :

Out-of-service violation and inspection data on interstate carriers is gathered by federal and state enforcement personnel and is maintained in the FHWA's SafetyNet database which is updated continually. The Office maintains the same data on intrastate carriers in its Motor Carrier Information System (MCIS) database.

DISCUSSION OF PAST PERFORMANCE :

This performance measure will be used for the first time during the 1998/1999 biennium. In the past, the Office has used "output" measures, one of which measured the number of compliance reviews conducted (Goal 2, Objective 1, Measure 1). The adoption of this measure is intended to analyze the effectiveness of those activities in promoting motor carrier safety.

PLAN TO ACHIEVE TARGETS :

A baseline for this measurement will be established by using compliance review and out-of-service data gathered during 1995 and 1996. Computer software incorporating a program developed during the Cherkassky Study will be used to analyze data in the SafetyNet and MCIS databases to determine whether interstate carriers receiving CRs and MCRs show improved safety performance through a reduction in out-of-service rates. Baseline comparison data, once established, will be used to propose changes to the compliance review program if warranted.

OTHER FACTORS AFFECTING PERFORMANCE :

Not all carrier fleets are subjected equally to roadside inspections. Adequate vehicle inspection data may not be available for some carriers who receive compliance reviews.

- Goal 1** : To reduce the number of unsafe motor carriers operating on Minnesota highways.
- Objective 2** : To reduce the average safety noncompliance score of Minnesota-based Special Transportation Service (STS) providers and limousine operators by 5% annually.

Measure 1 : Average safety noncompliance score.

| | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> | <u>F.Y.1999</u> |
|---------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Average Score for STS Providers | | | | | | |
| Average Score for Limousine Operators | | | | | | |

DEFINITION :

There is no data because this measure is under development.

Special Transportation Service (STS) is motor vehicle transportation designed exclusively or primarily to serve individuals who are elderly or disabled and who are unable to use regular means of transportation. It is regulated by Mn/DOT under Minnesota Statutes, section 174.30 and Minnesota Rules, parts 8840.5100 to 8840.6300. Limousine service is prearranged motor vehicle transportation provided in an unmarked luxury passenger automobile. It is regulated by Mn/DOT under Minnesota Statutes, section 221.84 and Minnesota Rules, chapter 8880.

Before providing special transportation service or limousine service, a transportation provider must obtain a credential (a certificate or permit) from the Office of Motor Carrier Services. There are currently 170 certified special transportation service providers operating 1376 vehicles and 171 limousine operators with permits operating 473 vehicles.

By law, the Office of Motor Carrier Services is required to conduct an annual audit of each provider's records and inspect each vehicle used to provide service. The audit consists of a review of driver qualification and training records and vehicle equipment and maintenance files. Drivers who are unqualified or not properly trained must be placed out-of-service until they meet the standards set by law or rule. Vehicles that do not meet the standards set in the North American Uniform Vehicle Out-Of-Service Criteria also must be placed out-of-service until they meet standards.

The Office has recently developed a scoring system for assessing the noncompliance of special transportation and limousine service providers. It is designed to objectively evaluate the overall safety fitness of each provider regulated under the law. The evaluation is based on data obtained during the annual audits and inspections. The safety noncompliance score is derived from the number and type of driver qualification and training, vehicle equipment, and record keeping violations discovered with special emphasis placed on driver and vehicle out-of-service violations. Once a safety noncompliance score is assigned to a provider, changes in that score will be tracked from year to year. In addition, the Office will chart changes in the industry average noncompliance score.

RATIONALE :

Annual audits of special transportation and limousine service providers are mandated by the Minnesota Legislature. Data obtained during the audits is currently used as a basis for determining whether a provider is entitled to renew its credential each year and may be used as a basis for assessing a monetary penalty. The Office developed the safety noncompliance score as a means of using the collected data to assess the overall safety compliance of providers, individually and as a group.

Providers who use trained and qualified drivers and properly maintained equipment are less likely to pose a safety risk than those who do not comply with safety standards set by the law. A reduction in the average safety noncompliance score is indicative of a reduction in the number of unsafe transportation providers.

DATA SOURCE :

Data obtained during annual audits is entered in the Office's Motor Carrier Information System (MCIS). Data gathered during 1995 and 1996 will be used to establish a baseline score for each provider and for the industry. The data in MCIS is updated as audits are completed.

DISCUSSION OF PAST PERFORMANCE :

This is a new measure. In a 1994 output measure relating to the special transportation service program, the Office projected that it would conduct 140 annual audits and inspect 1100 vehicles in F.Y.s 1996 and 1997. It exceeded those goals by conducting about 170 audits and over 1300 inspections in 1996. These audits and inspections represent the actual number of providers certified and vehicles used during the fiscal year. By the end of F.Y. 1997, the Office projects a slight increase in those outputs. It has also met its goal of auditing every limousine provider with a permit and inspecting every limousine used to provide service. In the past, providers who were discovered to have untrained or unqualified drivers or equipment not meeting the legal standards were denied recertification until the violations were corrected but no means of evaluating overall provider or industry performance existed. The development of this measure will meet that need.

PLAN TO ACHIEVE TARGETS :

The Office plans to achieve a reduction in the average safety noncompliance score by targeting high risk providers for additional attention. A higher-than-average score will result in one or more follow-up audits to monitor and improve compliance. In addition, when a need is indicated, providers will be given individualized training. Those who continue to exhibit chronic compliance problems will receive monetary penalties.

OTHER FACTORS AFFECTING PERFORMANCE :

None.

Goal 2 : To improve motor carrier compliance with safety and hazardous materials regulations.
Objective 1 : To increase the number of reviews conducted on Minnesota-based motor carriers by 10% annually.

Measure 1 : Number of compliance reviews (CRs) and Minnesota carrier reviews (MCRs) conducted.

| | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> | <u>F.Y.1999</u> |
|---------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number of CR's/MCR's conducted | | | | | | |
| Actual | 103 | 506 | 570 | | | |
| Target | | 500 | 600 | 600 | 660 | 730 |

DEFINITION :

The Office of Motor Carrier Services conducts compliance reviews (CRs) under the Motor Carrier Safety Assistance Program (MCSAP) and will begin conducting Minnesota Carrier Reviews (MCRs) before the end of F.Y. 1997 (Goal 1, Objective 1, Measure 1).

There are about 8,000 interstate motor carriers and 2,500 intrastate motor carriers based in Minnesota. From this total population, the Office uses a priority system for selecting carriers to review in order to focus its efforts on carriers who exhibit characteristics of presenting a higher safety risk than the rest of the carrier population. The system considers the following factors: (1) recent accidents (2) number and frequency of safety complaints received (3) the carrier's performance-based safety score generated by the FHWA (4) the need for enforcement follow-up audits (5) carrier requests for reviews (6) passenger carriers who have not received a federal safety rating and (7) carriers who are high on the federal Selective Compliance Enforcement (SCE) list. CR and MCRs are assigned from the priority list.

RATIONALE :

The Federal Highway Administration promulgates the Federal Motor Carrier Safety Regulations governing the safe operation of commercial motor vehicles in interstate commerce. The Research and Special Programs Administration promulgates the Hazardous Materials Regulations governing the safe transportation of hazardous materials. Minnesota has incorporated both sets of regulations by statute so they apply uniformly to interstate and intrastate carriers operating in the State.

CRs and MCRs are designed to determine if a carrier is complying with applicable regulations. They may be used as a basis for assessing administrative or criminal penalties. Since carriers who comply are more likely to conduct safe operations than carriers who do not comply, an increase in the number of reviews conducted will lead to an improvement in carrier compliance.

The number of CRs and MCRs conducted as compared to the previous year is a useful measure in determining whether or not the Office is meeting its objective. However, the Office is also establishing an indexing system based on the number of drivers and vehicles included in each review for the purpose of developing an additional measure. The number of reviews conducted is important but, because the size of carrier operations varies, it is also important to know how many drivers and vehicles are actually affected by the review. For example, 500 reviews of relatively small carriers might have less overall impact than 400 reviews of relatively large carriers since larger carriers have more drivers and vehicles.

The Office conducts over 500 compliance reviews on Minnesota-based interstate carriers each year. The Office's immediate objective is to increase that number by 10% annually. In future bienniums, the Office also will seek to measure the increase of actual number of drivers and vehicles reviewed during CRs and MCRs to the extent consistent with its priority system.

DATA SOURCE :

Data from compliance reviews (CRs) conducted on Minnesota-based interstate carriers is maintained in the FHWA's SafetyNet database. The Office maintains the same data on intrastate carriers in its Motor Carrier Information System (MCIS).

DISCUSSION OF PAST PERFORMANCE :

In 1994, the Office projected that it would conduct 300 CRs and 300 MCRs in F.Y. 1996. It actually conducted 570 CRs. Changes in the federal program led to delays in adapting the program for intrastate use so the Office chose to focus its efforts on interstate carriers by conducting CRs only. The Office will begin conducting MCRs by January 1, 1997. It is essentially on target for meeting its goals set in 1994, the slight deviation being due to a greater number of large carriers receiving audits.

PLAN TO ACHIEVE TARGETS :

The Office plans to accomplish its objective by: (1) increasing the proficiency of auditors through training and on-the-job coaching; (2) decreasing the amount of time necessary for work product review and approval that will allow team leaders to conduct more reviews; (3) instituting a team-approach to scheduling work to increase efficiency and decrease travel time; and (4) applying technology to eliminate paperwork and speed data gathering and analysis.

OTHER FACTORS AFFECTING PERFORMANCE :

The size of the carriers reviewed, as determined by the number of drivers employed and the number of vehicles operated, has a direct impact on the number of carrier reviews actually conducted. The objective of increasing the number of reviews conducted by 10% is based on the Office's experience in having conducted reviews in the past. The Office's ability to meet its objective will be affected if the priority system for selecting carriers generates a higher-than-average number of large carriers.

Goal 2 : To improve motor carrier compliance with safety and hazardous materials regulations.

Objective 2 : To increase the amount of training motor carriers and drivers receive by 10% annually.

Measure 1 : Number of training hours received by drivers and carrier officials.

| | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> | <u>F.Y.1999</u> |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number of Student Hours | | | | | | |

DEFINITION :

There is no data because this measure is under development.

The Office of Motor Carrier Services invests significant resources in providing information to carriers and drivers on how to comply with the Federal Motor Carrier Safety Regulations and the Hazardous Materials Regulations. As part of a recent office restructuring, an Information Services Section was formed. It is staffed with transportation program specialists who assist commercial vehicle operators and others in complying with applicable regulations. The Information Services Section responds to telephone questions, writes and publishes plain-language educational materials, and provides technical training. Among the courses offered are:

- * "Initial Motor Carrier Contact Program." designed for individuals and firms that have just begun to operate commercial vehicles in Minnesota
- * "Introduction to the Federal Motor Carrier Safety Regulations" (FMCSR), designed for the novice and provides a quick overview of the federal safety regulations.
- * "FMCSR Part 391," (Driver Qualifications), covers the essentials of what a driver and carrier need to know regarding driver qualifications.
- * "FMCSR Part 395," (Hours of Service of Drivers), covers the application of the regulations, limits on driving time, and record keeping requirements.
- * "FMCSR Part 396" (Inspection, Repair, and Maintenance), includes a review of vehicle maintenance record keeping requirements, the driver's daily vehicle inspection, annual vehicle inspection requirements, and inspector qualifications.
- * "US DOT Safety Audits," reviews the federal safety rating process, which records are reviewed, how to set up proper files, how to prepare, and what to expect during an audit.
- * "Transporting Hazardous Materials (Basic)," designed for those with limited experience with the federal hazardous materials regulations and for those who need a "refresher."
- * "Transporting Hazardous Materials (Train-the-Trainer)." The hazardous materials regulations require employers to train or to provide training to employees. This course is designed to train an employee so that he or she can train other employees.
- * "Uniform Hazardous Material Registration Program, covers the details of who must register, how to apply, calculating apportioned fees, and other aspects of the program.
- * "Special Transportation Service" reviews the application procedure, vehicle equipment, construction, and inspection standards, driver and attendant training requirements, annual audits, and other aspects of the program.
- * "Limousine Service," details the requirements a limousine operator must follow such as driver qualification, vehicle inspection, vehicle safety accessories, vehicle maintenance records, and trip records.

The Office also provides training courses specifically designed to meet unique needs presented by certain

customers. This measure is designed to chart the Office's effectiveness in providing training to greater numbers of carriers and drivers.

RATIONALE :

Educating and training motor carriers in complying with rapidly changing federal regulations promotes safe commercial vehicle operations. Since carriers who are familiar with and understand the regulations are more likely to comply with them, an increase in the amount of training provided will lead to an improvement in carrier compliance. Providing training that helps to prevent violations is more efficient and cost-effective than addressing violations through enforcement action after they occur. The Office intends to assess its effectiveness by measuring the number of hours of training provided (whether drivers or carrier officials) in a given year and comparing it with the number provided in the previous year. The Office is seeking to increase the number of hours provided by 10% annually.

DATA SOURCE :

Data on classes provided will be stored in the Office's Motor Carrier Information System database. The data will include the date the training was provided, location of training, title of the course, course length, number of students, and the name of the person providing the training.

DISCUSSION OF PAST PERFORMANCE :

This is a new measure. Before forming the Information Services Section, the Office provided training to carriers and groups on request. It mainly used its enforcement staff to provide training as they were available. In addition, it occasionally provided seminars or classes throughout the state when major changes in regulations occurred. But, the Office did not track the number of training hours it provided to carriers and drivers. The formation of the new section represents a significant commitment to assist carriers with safety compliance over the telephone, through written materials and by providing training. Enforcement personnel are assigned to work in the section for a year or more to gain efficiencies inherent in specialization. This measure is needed to assess the Office's effectiveness in meeting the training needs of its customers.

PLAN TO ACHIEVE TARGETS :

The Office has begun gathering the baseline data for F.Y. 1997 needed to compare its performance during the biennium. It plans to accomplish its objective by (1) increasing the number of individuals who receive training by focusing efforts on larger groups instead of providing one-on-one, or small group training (2) partnering with industry groups and associations to make training more readily available to larger groups (3) improving access to training by providing courses throughout the state on predetermined and published schedules and (4) decreasing course preparation time by standardizing training modules in order to increase the amount of time actually spent in providing training.

OTHER FACTORS AFFECTING PERFORMANCE :

None.

Goal 3 : To improve hazardous materials shipper compliance with regulations.

Objective 1 : To increase the number of dock audits conducted by 10% annually.

Measure 1 : Number of dock audits conducted.

| | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> | <u>F.Y.1999</u> |
|------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number of Dock Audits | | | | | | |
| Actual | | 38 | 31 | | | |
| Target | | | | 50 | 55 | 60 |

DEFINITION :

Shippers of hazardous materials are required to comply with parts of the Federal Hazardous Materials Regulations designed to protect the public from injury, death, or property damage caused by the inadvertent release of hazardous materials or hazardous waste during transportation. Under the regulations, shippers of hazardous materials have the responsibility of properly packaging and identifying hazardous materials they transport.

The Office of Motor Carrier Services conducts audits at motor carrier loading docks to identify shipments of hazardous materials, inspect packages and containers before they are loaded on trucks, and identify shippers who have shipments that do not comply with the regulations. Shippers found to have hazardous material shipping violations receive a ranking that depends on the number and type of violations discovered. The ranking is used to identify shippers for a follow-up Hazardous Material Shipper Review.

The Office concentrates on outbound shipments during dock audits in order to identify the shippers that are based in Minnesota. When the Office identifies that a non-Minnesota shipper is in violation, a copy of the inspection report is sent to the shipper and the Federal Highway Administration is notified so that it can determine if follow-up action is necessary.

RATIONALE :

The main objective of the dock audit program is to identify shippers and shipments that do not comply with the regulations. Gaining increasing compliance with the hazardous material regulations depends, in large part, on identifying new and existing shippers of hazardous materials and hazardous waste. Hazardous material carrier dock audits provide needed data about shippers and shipping practices. Increasing the number of dock audits conducted will increase the number of noncomplying shippers and shipments identified. This will provide additional data that the Office uses in deciding which shippers should receive shipper reviews.

DATA SOURCE :

Information from dock audits is maintained in the Office's Motor Carrier Information System (MCIS).

DISCUSSION OF PAST PERFORMANCE :

The Office planned to do 40 dock audits in F.Y. 1995 and 50 in F.Y.s 1996 and 1997. Although it essentially achieved its target in 1995 and is on track toward achieving its 1997 plans, it failed to reach its 1996 target by conducting only 31 dock audits in that year. This failure was due largely to the Office's decentralized approach in providing hazardous materials training. Responding to customer training needs resulted in less time available to conduct dock audits.

PLAN TO ACHIEVE TARGETS :

The Office plans to accomplish its objective by (1) increasing the proficiency of those conducting dock audits through training and on-the-job coaching, (2) decreasing the amount of time necessary for work product review and approval that will allow team leaders to conduct more reviews, (3) instituting a team-approach to scheduling work to increase efficiency and decrease travel time, (4) reducing the amount of time spent on training or enforcement activities involving single vehicles, carriers or shippers, and (5) substantially reducing the amount of time spent by hazardous materials specialists in providing training courses due to the Office's recent creation of an Information Services Section.

OTHER FACTORS AFFECTING PERFORMANCE :

The Office's hazardous materials specialists provide emergency response services, as needed, when a transportation-related hazardous material or hazardous waste accident, incident, or spill occurs. The amount of on-call and response time spent on this important activity varies and is not subject to the Office's control. An above-average need for emergency response services could have some impact the Office's attainment of this objective.

Goal 3 : To improve hazardous materials shipper compliance with regulations.
Objective 2 : To increase the number of shipper reviews conducted by 10% annually.

Measure 1 : Number of shipper reviews conducted.

| | <u>F.Y.1993</u> | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> |
|----------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Number of Shipper Reviews | | | | | | |
| Actual | | 33 | 37 | 40 | | |
| Target | | | | | 50 | 55 |

DEFINITION :

The Office of Motor Carrier services conducts the Hazardous Material Shipper Review program as a follow-up activity to its Hazardous Materials Carrier Dock Audit program. During a shipper review, the shipper's hazardous material operations are examined for compliance with current regulations. A shipper is given information and assistance needed to improve its hazardous material operations, and depending on the number and severity of the violations discovered during a review, may be assessed penalties for noncompliance.

RATIONALE :

The main objective of the shipper review program is to improve shipper compliance with the hazardous materials regulations by addressing shipping problems before they occur so that improperly packaged or labeled shipments do not enter the transportation system. Increasing the number of shipper reviews conducted will increase compliance with applicable regulations.

DATA SOURCE :

The Hazardous Material Shipper Census database contains records for known hazardous material shippers in Minnesota. This database is updated using several sources including the Hazardous Material Information System, reports filed with the National Response Center, the federal SafetyNet database, information gathered by the Office during hazardous material carrier dock audits and compliance reviews, and roadside inspection reports. Each hazardous materials shipper in this database is ranked for contact priority. Shippers with a high ranking receive a hazardous material shipper review.

DISCUSSION OF PAST PERFORMANCE :

The Office substantially met its target of conducting 40 shipper reviews in F.Y. 1995 and will meet its goal of conducting 50 in 1997. However, it conducted only 40 in F.Y. 1996. This was due to the amount of time needed to respond to customer requests for hazardous materials training. Since the Office reorganization, one hazardous materials specialist has been dedicated to the Information Services Section and the remaining personnel are able to focus their efforts on accomplishing the field activities necessary to achieving Office targets.

PLAN TO ACHIEVE TARGETS :

The Office plans to accomplish its objective by (1) increasing the proficiency of those conducting dock audits through training and on-the-job coaching, (2) decreasing the amount of time necessary for work product review and approval which will allow team leaders to conduct more reviews, (3) instituting a team-approach to scheduling work to increase efficiency and decrease travel time, (4) reducing the amount of time spent on training or enforcement activities involving single vehicles, carriers or shippers, and (5) substantially reducing the amount of time spent by hazardous materials specialists in providing training courses due to the Office's recent creation of an Information Services Section.

OTHER FACTORS AFFECTING PERFORMANCE :

The Office's hazardous materials specialists provide emergency response services, as needed, when a transportation-related hazardous material or hazardous waste accident, incident, or spill occurs. The amount of on-call and response time spent on this important activity varies and is not subject to the Office's control. An above-average need for emergency response services could have some impact on the Office's attainment of this objective.

Agency : TRANSPORTATION DEPT

Program : LOCAL ROADS

EXPENDITURES AND STAFFING :

| | <u>(\$ in Thousands)</u> | <u>Percent of Department</u> |
|----------------------------|--------------------------|----------------------------------|
| Total Expenditure | \$540,356 | 39.99% |
| From Federal Funds | \$74,533 | |
| From Special Revenue Funds | \$465,823 | |
| Number of FTE Staff: | 54 | 1.05% |

GOALS :

In M.S. 162.02 and 162.09, the Commissioner of Transportation is charged with promulgating the rules under which the state aid systems will be operated. Since the Commissioner is responsible for overseeing the program, which is implemented by the cities and counties, it is appropriate that some of the goals for the state transportation system identified in M.S. 174.01 and Mn/DOT Strategic Directions be reflected in the goals of the Local Roads program.

Strategic Directions:

- Access for all to goods and services;
- Transportation alternatives which balance personal, social, economic and environmental values.

Statute Goals (M.S. 174.01):

- Safe statewide transportation;
- Maximum benefit for investment; and
- Funding to preserve the infrastructure.

Performance Goals:

- Transportation systems are provided that enable efficient movement of people and goods without disruption. (No Statutes Cited)
- Safe trips are provided through sound engineering and maintenance. (No Statutes Cited)

The Commissioner, through the State Aid for Local Transportation Division, administers the program, but the actual operation and implementation of the program is done by the local road authorities.

DESCRIPTION OF SERVICES :

The purpose of the Local Roads program is to provide technical assistance and leadership in the development and maintenance of the County State Aid Highway (CSAH) system and the Municipal State Aid Street (MSAS) system to provide an integrated and coordinated network of roads and bridges for the movement of people and goods particularly in rural areas and small cities. The program also provides some assistance to the township road and bridge system.

The State Aid for Local Transportation Division works with the local agencies in providing this network by:

- Administering the allocation and distribution of funds from the Highway User Tax Distribution Fund to the 120 municipalities (whose population is 5000 or more), and the 87 counties and the townships of Minnesota as required by M.S. Chapters 161 and 162;
- Acting as agent for the local authority in the administration of federal construction contracts;
- Managing and granting funds to the local road authorities from the Minnesota State Transportation Fund for replacement of deficient bridges; and
- Providing technical assistance to local authorities that utilize state or federal monies to insure compliance with state and federal requirements.

BACKGROUND INFORMATION :

MEASURE TYPES: ACTIVITIES (A), EFFICIENCY (E), OUTPUT (O), OUTCOMES (OC), OTHER DATA (OD), UNIT COSTS (UC), WORKLOAD (W)

DATA BASED ON: CALENDAR YEAR (CY), FISCAL YEAR (FY), FEDERAL FISCAL YEAR (FFY), BIENNIUM YEARS (BY)

| Type | Based | Measure | 1994-95 | 1995-96 |
|-------------|--------------|--|----------------|----------------|
| OD | CY | Number of miles in CSAH system. (87 counties). | 30,133 | 30,202 |
| OD | CY | Number of miles in MSAS system (120 cities) | N/A | 2,608 |
| OD | CY | Number of bridges in state | N/A | 19,726 |
| OD | CY | Number of bridges on the local road system | N/A | 15,129 |
| OD | CY | Billion vehicle miles traveled - CSAH system | N/A | 10.1 |
| OD | CY | Billion vehicle miles traveled - MSAS system | N/A | 3.5 |

PROGRAM DRIVERS :

Infrastructure: The state aid system includes many miles of roads that have never been engineered and graded to an appropriate standard. Because of this, roads must be totally reconstructed, sometimes on new alignment, rather than simply being treated with spot preservation projects.

Heavier and Longer Trucks: The trend toward larger trucks throughout the nation has an impact on the structural

ability of the state aid routes to carry the loads to markets. These large trucks also require geometric design changes like larger corner radii or flatter curves.

Multi-modal Goals: Because much of the basic system needs to be brought up to a reasonable and safe standard, there is a limited ability of the local agencies to concentrate on larger multi-modal goals.

Increasing Complexity: The amount of time it takes and the costs involved to simply bring a project to contract letting have multiplied. Requirements for public involvement, environmental and historical documentation and environmental and historical mitigation are slowing the ability of the local agencies to build the system.

Accident Analysis: The inability to provide meaningful accident statistics on anything but a large regional basis limits the ability to use statistics for project identification or improvement selection, except in large, urban areas. Because the volumes on these individual routes are low, a single, completely random accident or accident caused by factors unrelated to highway design can skew the statistics.

Goal 1 : Transportation systems are provided that enable efficient movement of people and goods without disruption.

Objective 1 : By 1999, 22 percent of the outstate district CSAH systems, and 59 percent of the Metro Division CSAH system, will carry legal loads year round.

Measure 1 : Percent of the CSAH system carrying unrestricted loads year round.

| | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1999</u> |
|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Percent Outstate | | | | | | |
| Actual | 17.8% | 18.4e% | 19% | 21% | | |
| Target | | | | | 21% | 22% |
| Percent Metro | | | | | | |
| Actual | 54% | 54.3e% | 54.6% | 58% | | |
| Target | | | | | 58% | 59% |

DEFINITION :

This measure is a percentage of the number of miles of hard surfaced County State Aid Highways(CSAH) that have no springtime load restrictions placed on them by the total number of CSAH miles. A springtime load restriction is placed on a road that breaks up during the spring thaw if heavy loads are carried on it. A legal load on an unrestricted road is called 9 Ton, which means that a vehicle can be carrying 9 Tons for each axle and can legally travel on the roadway.

RATIONALE :

The State Aid for Local Transportation Division has a CSAH Needs Unit that determines each county's share of the Highway User Tax Distribution Fund for each calendar year. Fifty percent of the allocation, according to M.S. 162, is based on the annual amount of money it would take to bring the individual county's entire system up to current standards over a period of 25 years. A major component of this measure is the ability to carry legal loads all year long. This objective directly measures if any progress is made toward the program purpose of providing a network of roads that allows for the movement of goods in an unrestricted manner.

DATA SOURCE :

The CSAH Needs Unit of the State Aid for Local Transportation Division maintains a database including these statistics among many others. The data is updated on a yearly basis by the counties reporting any changes to Mn/DOT. Previous years' data are deleted so the unit cannot look back prior to 1993. The unit will track the progress over time, saving the past years as the new data becomes available.

DISCUSSION OF PAST PERFORMANCE :

Because the past years are deleted from the database, it is difficult to verify past performances. A single printout from 1981 indicates that 6.8 percent of the outstate district CSAH systems and 37.3 percent of the Metro Division CSAH system carried legal loads. This data indicates that progress has been made over the past fourteen years, but it does not indicate the rate at which it has occurred.

PLAN TO ACHIEVE TARGETS :

The State Aid for Local Transportation Division is encouraging the local agencies to bring state aid routes up to 9 Ton or greater strength by including that requirement in the design standards for all routes reconstructed that carry 150 vehicles per day or more.

OTHER FACTORS AFFECTING PERFORMANCE :

Each county board prioritizes the projects on which they will spend the state aid dollars available to its county. There may be safety, economic or political factors that impact the decision. Not every dollar is spent on projects that improve the structural capacity of the roadway as measured by State Aid. An example of a worthwhile safety improvement that uses state aid funds, but does not necessarily improve the structural capacity, is a traffic signal with left and right turn lanes.

Goal 1 : Transportation systems are provided that enable efficient movement of people and goods without disruption.

Objective 2 : By 1999, less than 18% of the bridges on the local roads system will be deficient.

Measure 1 : Percent of the bridges considered deficient by federal rating criteria.

| | <u>C.Y.1990</u> | <u>C.Y.1994</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> | <u>C.Y.1999</u> |
|---------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Percent Deficient | | | | | | |
| Actual | 27% | 21% | 19% | | | |
| Target | | | | 19% | 19% | 18% |
| Percent Functionally Obsolete | | | | | | |
| Actual | | 23% | 28% | | | |
| Target | | | | 28% | 29% | 30% |
| Percent Structurally Deficient | | | | | | |
| Actual | | 77% | 72% | | | |
| Target | | | | 72% | 71% | 70% |

DEFINITION :

A bridge is considered deficient if the structural condition does not meet certain minimum federal criteria. A bridge is also considered deficient if the geometrics or hydraulic capacity does not meet federal criteria. Such a bridge is considered deficient because it is functionally obsolete. It may be open to traffic but, most likely, is restricted to trucks carrying heavy loads or is so narrow that vehicles should not meet on the structure. The sum of the Functionally Obsolete and Structurally Deficient equals 100% of the deficient bridges.

By statute, any structure that is 10 feet or longer, measured along the centerline of the roadway, is considered a bridge.

RATIONALE :

Bridges are critical links in the transportation network, and the replacement of bridges on the local roads system is a measure of how well state aid is providing for the network. The State Aid for Local Transportation Division allocates state bridge replacement funds to the highest priority non-trunk highway bridges throughout the state on the county, city and township road systems. The federal funds are allocated through the Area Transportation Partnership process.

If a bridge is closed due to unsafe conditions, the roads it connects cannot serve the function of moving people and goods.

DATA SOURCE :

The Bridge Data Section of the Mn/DOT Office of Bridges and Structures maintains an inventory of all the bridges in the state that carry or cross over a public roadway. This data is updated when each local agency submits the information with a complete update occurring each spring for submittal to the Federal Highway Administration.

DISCUSSION OF PAST PERFORMANCE :

In 1976, the State Legislature provided the first separate state funding for the replacement of local bridges. At that time there were about 4800 deficient bridges on the county, city and township road systems. The Division of State Aid for Local Transportation has continued to request funding for the program. In 1988, the number of deficient structures dropped to about 4000 and, in 1996, it is 2900.

The 1994 Performance Report included data for deficient bridges that were 20 feet in length or greater. Because the statutes define any structure 10 feet or greater as a bridge, the data was revised to reflect the state, rather than federal definition.

PLAN TO ACHIEVE TARGETS :

While the program has made progress toward eliminating the deficient bridge problem in Minnesota, it has not progressed as quickly as desired. The division will continue to request funding and encourage the local agencies to submit plans for approval and funding.

OTHER FACTORS AFFECTING PERFORMANCE :

Bridge replacement funds are allocated by the State Legislature and Congress. The level of funding that these bodies are willing to commit determines the progress made toward replacing deficient structures.

Bridges have an average service life of 60 years. There are currently about 800 bridges that will reach this 60 year age between now and the year 2000. Most of these bridges are deteriorating and they will reach the point of deficiency, significantly increasing the number of deficient bridges. If real progress can be made toward decreasing the percent of deficient structures when so many more are added to the list, the division will need to increase the amount of funds targeted toward this effort.

Goal 2 : Safe trips are provided through sound engineering and maintenance.

Objective 1 : By 1999, the accident rate on the MSAS system statewide will be maintained at 5.1 and the accident rate on the CSAH system statewide will be maintained at 2.7.

Measure 1 : Crashes per million vehicle miles traveled.

| | <u>C.Y.1991</u> | <u>C.Y.1992</u> | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1999</u> |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Total Accidents/Million Vehicle Miles - MSAS | | | | | | |
| Actual | 5.3 | 5.2 | 5.5 | 5.42 | 5.24 | |
| Target | | | | | | 5.1 |
| Total Accidents/Million Vehicle Miles - CSAH | | | | | | |
| Actual | 3.0 | 2.8 | 2.9 | 2.7 | 2.7 | |
| Target | | | | | | 2.7 |

DEFINITION :

This measure represents the total number of crashes which were reported on the total system in a year divided by the total number of vehicle miles which were traveled on those same roads.

RATIONALE :

The Division of State Aid for Local Transportation, with the help of the State Aid Rules Committee established in statute, promulgates the rules and standards that govern state aid operations. A major component in the decision of what geometric design standards should be established is the desire for safe roads. Minnesota has consciously chosen to set standards that are higher than the American Association of State Highway and Transportation Officials' minimum recommendations. A review of the crash rates is an indicator of how well these appropriate design standards contribute to a safe road system.

DATA SOURCE :

Mn/DOT's Office of Traffic Engineering tracks crash statistics on all Minnesota roads. It receives the data from the Department of Public Safety, which collects it from all the Peace Officers in the state on a continuous basis. The Office of Traffic Engineering also monitors national trends.

DISCUSSION OF PAST PERFORMANCE :

The state aid system was established in 1957. At that time, the geometric design standards were minimal compared with those in effect today. Through time, the standards have been revised to reflect the growing concern for safety of the motorists, cost effectiveness, and the concern for the environment.

PLAN TO ACHIEVE TARGETS :

The Division of State Aid for Local Transportation will continue to support cost effective standards that support safety.

OTHER FACTORS AFFECTING PERFORMANCE :

The limited amount of state aid funds that are available to each city and county are not adequate to bring all of their roads up to the desired geometric standards. Many roads have known deficiencies that simply cannot be corrected because of the limited amount of funds. In addition, most counties supplement their state aid funds with local property tax dollars. When they use local dollars on a state aid route, they are not held to the same geometric standards and may choose to reconstruct to another standard that may not have the same impact on the crash rate.

Agency : TRANSPORTATION DEPT

Program : STATE ROADS

EXPENDITURES AND STAFFING :

| | <u>(\$ in Thousands)</u> | <u>Percent of Department</u> |
|----------------------------|--------------------------|----------------------------------|
| Total Expenditure | \$686,086 | 50.78% |
| From Federal Funds | \$1,221 | |
| From Special Revenue Funds | \$6,507 | |
| From Agency Funds | \$100 | |
| Trunk Highway Funds | \$678,253 | |
| General | \$5 | |
| Number of FTE Staff: | 4559 | 89.47% |

GOALS :

The State Roads program represents the merging of the former State Roads Construction and State Roads Operations programs. One major reason these programs were combined is so that Mn/DOT's overall program structure is better aligned with its organizational structure. Another was to recognize the strong relationship between: designing; scheduling; investing in, and monitoring of construction projects; and preserving, maintaining and operating safe state highways. This program is clearly the largest of Mn/DOT's efforts, and one that has direct impact on our customers--the users of the state highway system. For this reason, an attempt was made to build customer satisfaction measures into each of the program outcomes/goals. The State Roads program has adopted the following five goals based on Minnesota Statute:

- Investments are consistent with guidance found in the State Plan. (M.S. 174.01 Subd. 2)
- Transportation systems are provided that enable efficient movement of people and goods without disruption. (M.S. 174.01 Subd. 2)
- Safe trips are provided through sound engineering, maintenance, education and information. (M.S. 174.01 Subd. 2)
- Quality products and services will be delivered in an effective and efficient manner. (M.S. 174.01 Subd. 2)
- Travel information is provided so that travelers can optimize their trips. (M.S. 174.01 Subd. 2)

DESCRIPTION OF SERVICES :

TRANSPORTATION DEPT

1996 Agency Performance Report

Services are provided to Minnesota citizens (highway users) by investing trunk highway funds allocated for State Road Construction in these areas:

- safety improvements to roadways
- rail crossing improvements
- preservation and improvement of roads and bridges

The transportation investment process is driven by a declaration of statewide goals and objectives and those transportation strategies/directions described in national and state legislation. The statewide investment goals are drawn from statewide planning and policy studies for use in determining priorities. Basic Mn/DOT principles for making transportation investment priorities emphasize preservation and management of existing systems over capital improvements. Safety is key to these priorities. Specific priority goals are as follow:

| | | Years | 95 | 96 | 97 | 98 | 99 |
|------------|--|-------|-----|-----|-----|-----|-----|
| Priority 1 | Preservation Goal: 30% to 40% of investment | | 24% | 31% | 22% | 29% | 26% |
| Priority 2 | Management and Operations Goal: 5% to 15% of investment | | 29% | 30% | 31% | 24% | 28% |
| Priority 3 | Replacement Goal: 25% to 35% of investment | | 28% | 19% | 24% | 15% | 23% |
| Priority 4 | Expansion Goal: 15% to 25% of investment | | 19% | 20% | 23% | 32% | 23% |

Optimizing the investment strategy involves developing and updating the Statewide Transportation Plan and State Transportation Improvement Plan. These efforts include holding public forums and meeting the needs of regional or local communities. The program explores innovative financing techniques and encourages public/private partnerships. Benefit/cost analysis of transportation projects is conducted to ensure an economically efficient investment. Transportation research is conducted so that Mn/DOT can build technological and/or engineering improvements into the investment strategy.

Implementing the investment strategy outlined above includes designing highway system improvements, securing necessary resources to manage construction, providing engineering expertise necessary to ensure that federal and state highway construction standards are met, managing the actual highway construction (including preservation or improvement) process, and providing for constituent services, such as road information bulletins and public forums to discuss pending highway projects.

Preserving and maintaining Minnesota's investment in the state highway systems includes:

- performing roadway surface repairs including patching pot holes
- removal of snow & ice as well as other obstructions on the highway surface
- maintaining a system of traffic signals, signs and markings
- maintenance and improvement of roadsides
- providing for regional or district facilities and equipment necessary to accomplish these road operations

To facilitate the efficient delivery of these services, this program also provides for the design and maintenance of a communications network. This activity includes the design and maintenance of statewide radio towers, mobile/portable radios, computer and other electronic systems.

The overall focus of the State Roads program is customer needs, particularly with regard to access and safety.

BACKGROUND INFORMATION :

MEASURE TYPES: ACTIVITIES (A), EFFICIENCY (E), OUTPUT (O), OUTCOMES (OC), OTHER DATA (OD), UNIT COSTS (UC), WORKLOAD (W)

DATA BASED ON: CALENDAR YEAR (CY), FISCAL YEAR (FY), FEDERAL FISCAL YEAR (FFY), BIENNIUM YEARS (BY)

| <u>Type</u> | <u>Based</u> | <u>Measure</u> | <u>1994-95</u> | <u>1995-96</u> |
|-------------|--------------|--|----------------|----------------|
| OD | CY | Number of Lane Miles on Trunk Highway System | N/A | 28,836.98 |
| OD | CY | Billion Vehicle Miles Traveled on Trunk Highway System - Statewide | N/A | 26.731 |
| OD | CY | Billion Vehicle Miles Traveled on Trunk Highway System - Twin Cities Metropolitan Area | N/A | 12.527 |
| OD | CY | Billion Vehicle Miles Traveled on Trunk Highway System in Greater Minnesota | N/A | 14.204 |
| OD | CY | Number of Bridges (10 ft. and over) | N/A | 19,726 |

PROGRAM DRIVERS :

A key contributing factor to the success of the program has been the dollars from the Federal Highway Administration. Approximately 200 million dollars within the Trunk Highway Funds comes from the Federal Highway Administration.

Key to the success of the program goal related to investments, depends on any shift or change in the level of funding. A decrease in this funding would result in delaying the completion of highway projects contained in the Statewide Transportation Improvement Program (STIP).

Other key factors are the occurrences of significant delays in the design and/or construction processes. For example, discovery of historically significant artifacts on a project site would require delaying further activity until the necessary recovery efforts are completed. Another example is the occurrence of a statewide or nationwide shortage of construction materials. This happened in 1996 with cement being in short supply.

Key factors influencing (at least temporarily) the success of efficiently moving people and goods without disruption include severe snow and/or ice storms which require roadways to be cleared, and any natural disaster that hinders or blocks access to roadways.

Goal 1 : Investments are consistent with guidance found in the State Plan.

Objective 1 : 100 percent of major transportation investments will complete benefit/cost analysis by 2004 to assume the highest economic return on investment.

Measure 1 : Percent of major investment projects with completed analysis of economic benefits and life-cycle costs.

| | <u>F.Y.1999</u> | <u>F.Y.2000</u> | <u>F.Y.2001</u> | <u>F.Y.2002</u> | <u>F.Y.2003</u> | <u>F.Y.2004</u> |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Benefit life/Cycle Costs | | | | | | |
| Target | | 10% | 20% | 50% | 75% | 100% |

DEFINITION :

Major investments are defined as projects categorized as the bridge replacement, major construction and reconstruction program-types in ARTEMIS, MnDOT's project management and scheduling system.

Bridge Replacement is the elimination or correction of bridges that are identified as inadequate and/or hazardous because of horizontal or vertical clearance, load restriction or deck deterioration.

Major Construction is an improvement that increases the operational characteristics of a facility, such as decreased congestion, increased operating speed and/or reduced crashes by adding lanes, building a new roadway, etc.

Reconstruction is an activity that brings sections of a facility that are most inadequate with respect to grades (inadequate horizontal and/or vertical sight distances) and cross sections (steep slopes and narrow shoulders) to an acceptable standard. The project may also provide for the upgrading of sections with load capacity restrictions.

Benefit/cost analysis is the estimation of the monetary value of user benefits and life-cycle costs associated with transportation project investments. Standard techniques for benefit/cost analysis were established by the American Association of State Highway and Transportation Officials (AASHTO) in "A Manual on User Benefit Analysis of Highway and Bus Transit Improvements."

RATIONALE :

The Minnesota Statewide Transportation Plan established benefit/cost analysis as a key decision criteria for expansion of the transportation system in its "Guidelines to Enhance Economic Activity". The guidelines are based, in part, on the National Cooperative Highway Research Program (NCHRP) report, " Objectives and Decision Criteria for Infrastructure Investment" (Research Results Digest Number 200). Both the State Plan policy guidelines and the NCHRP report conclude that transportation investments can only be assured to strengthen the economy and stimulate long-term economic vitality when the benefits of lowered transportation costs to society exceed the life-cycle cost of the investment.

DATA SOURCE :

While the State Plan guidelines are not fully implemented, it is anticipated that benefit/cost activity will be reported as part of the project planning work in the Project Management Scheduling System.

DISCUSSION OF PAST PERFORMANCE :

The Economic Analysis Unit of the Office of Investment Management was established in 1995 to introduce investment-based decision analysis, using benefit/cost analysis in the Mn/DOT's decision making processes. Since that time, the unit has worked with the districts to introduce benefit/cost analysis techniques and tools. To-date, the unit has conducted benefit/cost analysis in Major Investment Studies and a number of projects on a demonstration basis.

In addition, the unit performed benefit/cost analysis on safety projects funded through the federal Hazard Elimination Program. Benefit/cost analysis has also helped with strategic transportation investment policy, such as low volume road geometric design standards. These and other applications of benefit/cost analysis will continue in the future.

PLAN TO ACHIEVE TARGETS :

Major transportation investments require six to ten years to analyze and develop. Benefit/cost analysis is best conducted early in the planning stage of a project. As a result, benefit/cost results will not be a regular part of project information for an estimated six years. However, benefit/cost analysis is currently being conducted on a number of projects on a demonstration basis. As reported above, it is anticipated that benefit/cost results ultimately will be conducted and reported as part of the project planning work in the Project Management Scheduling System.

OTHER FACTORS AFFECTING PERFORMANCE :

The Statewide Transportation Improvement Program (STIP) is developed through a decentralized decision-making process. Area Transportation Partnerships (ATPs) develop a prioritized list of transportation projects, which is the Area Transportation Improvement Program (ATIP) for each transportation District. The ATIPs are combined into the STIP, respecting the priorities established by each Area Transportation Partnership. The full implementation of the guidelines and supporting tools and techniques will take several years. Ideally this method will become part of the initial project scoping process that identifies and evaluates all potential alternatives

Goal 2 : Transportation systems are provided that enable efficient movement of people and goods without disruption.

Objective 1 : To maintain or improve the structure and rideability of Trunk Highways.

Measure 1 : Percent of Trunk Highway miles where Pavement Quality Index is 3.3 or greater

| | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> |
|--------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Percent - Principal Arterials | | | | | | |
| Actual | 57 | 61 | 60.3 | | | |
| Target | | | | 60 | 60 | 60 |
| Percent - Minor Arterials | | | | | | |
| Actual | 53.5 | 56.9 | 56.9 | | | |
| Target | | | | 56 | 56 | 56 |
| Percent - Collector/Local | | | | | | |
| Actual | 50.5 | 51.4 | 48.6 | | | |
| Target | | | | 48 | 48 | 48 |
| Percent - All | | | | | | |
| Actual | 55.2 | 58.3 | 57.9 | | | |
| Target | | | | 57 | 57 | 57 |

DEFINITION :

Pavement Quality Index (PQI) is an indicator of the overall quality of a highway's driving surface. PQI is a composite of the rideability average and structural condition (i.e., cracking, spalling and rutting). The PQI values range from 0 for the worst possible to 4.5 for the best -- "The higher the number the better the pavement." Ratings of 3.3-3.6 are considered good and ratings greater than 3.7 are considered excellent.

Functional classification is a system in which streets and highways are grouped into classes or systems according to the character of service they are intended to provide. The functional system, as it applies to rural highways, may be summarized as follows:

- Principal Arterials - A connected network of continuous routes that serve corridor movements indicative of substantial statewide or interstate travel; serve virtually all urban areas of 25,000 population and over and a large majority of those with population 5,000 and over; and provide an integrated network without stub connections.
- Minor Arterials - In conjunction with the principal arterials, these routes should link cities, larger towns and other traffic generators capable of attracting traffic over long distances, provide interstate and intercounty service, and have designs expected to provide relatively high overall travel speeds with minimum interference to through movements.
- Rural Collectors - Generally these roads serve travel of primarily intercounty rather than statewide importance. These roads have shorter than average travel length and moderate speeds.
- Local Roads - These roads provide access to adjacent land and service to travel over relatively short distances. They constitute the rural mileage not included in the other classifications.

RATIONALE :

The indicator shows preservation of the overall quality of the roadway driving surface of the State's highway system through investment strategies.

DATA SOURCE :

Each road segment of the State Highway System is rated for PQI once every two years. Data is stored in the Condition Rating file of the Transportation Information System database. The data is available for various types of roads on the Trunk Highway system with the percentage of vehicle miles traveled on each system.

DISCUSSION OF PAST PERFORMANCE :

The data indicates that the department is consistently maintaining higher class roads at a higher level of service. The past two years also reflect the highest percentage of roads in a GOOD or VERY GOOD condition. This illustrates the department's efforts to maintain the existing road system, at least on a short term, an acceptable level with current resources. The PQI does not adequately measure the construction and reconstruction needs, which are based more on geometric and capacity deficiencies than on pavement condition.

PLAN TO ACHIEVE TARGETS :

The investment in a variety of construction and preventive maintenance solutions for similar problems permits a broad base of improvements to the system. The ability to preserve the entire system, rather than making large investments in small portions of the system, is necessary to provide service to diverse geographic areas of the state, its people and businesses.

OTHER FACTORS AFFECTING PERFORMANCE :

Innovations in pavement design and developments in preventive maintenance will provide more durable facilities with longer expected service life. Storms and natural disasters are factors that cannot be quantified or predicted. Construction and operations funding limitations are always factors in maintaining a stable rating for our highways.

Goal 2 : Transportation systems are provided that enable efficient movement of people and goods without disruption.

Objective 2 : To reduce the number of miles of highway restricted to heavy trucks during the spring season resulting in greater access for goods.

Measure 1 : Spring road restrictions

| | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Miles of restricted roads-Principal arterials | | | | | | |
| Actual | 97 | 82 | 59 | 45 | | |
| Target | | | | | 35 | 25 |
| Miles of restricted roads-Minor arterials | | | | | | |
| Actual | 1,408 | 1,405 | 1,307 | 1,216 | | |
| Target | | | | | 1,100 | 1,100 |
| Miles of restricted roads-Collector/Local | | | | | | |
| Actual | 610 | 541 | 519 | 482 | | |
| Target | | | | | 450 | 430 |

DEFINITION :

The year-round load limit for trucks is 80,000 pounds, not to exceed 20,000 pounds or ten tons per axle. To prevent damage from heavy loads, weight restrictions are posted on weak sections of roadways. Road restrictions constrain access and result in costly detours to transporters. Therefore, the consumer is directly affected.

Functional classification is a system in which streets and highways are grouped into classes or systems according to the character of service they are intended to provide. The functional system, as it applies to rural highways, may be summarized as follows:

- Principal Arterials - A connected network of continuous routes that serve corridor movements indicative of substantial statewide or interstate travel; serve virtually all urban areas of 25,000 population and over and a large majority of those with population 5,000 and over; and provide an integrated network without stub connections.
- Minor Arterials - In conjunction with the principal arterials, these routes should link cities, larger towns and other traffic generators capable of attracting traffic over long distances, provide interstate and intercounty service, and have designs expected to provide relatively high overall travel speeds with minimum interference to through movements.
- Rural Collectors - Generally these roads serve travel of primarily intercounty rather than statewide importance. These roads have shorter than average travel length and moderate speeds.
- Local Roads - These roads provide access to adjacent land and provide service to travel over relatively short distances. They constitute the rural mileage not included in the other classifications.

RATIONALE :

Springtime road restrictions are placed on weak sections of roadways in order to prevent premature failure of the road and defer expensive repairs or reconstruction caused by heavy loads. The rehabilitation or reconstruction of weak sections of roads allows the passage of legal load limits and improves access by decreasing the number of restricted miles.

DATA SOURCE :

A listing of roads to be restricted is updated annually by district maintenance and operations engineers.

DISCUSSION OF PAST PERFORMANCE :

Spring load restricted mileage has decreased from 2,900 miles in 1989 to 1,743 miles in 1996. The reduction is attributed to two actions: 1) an increased program of system preservation and 2) the adoption of a policy of "Risk Management" that allows trucks on weak sections of Market Artery or Commercial Access routes with the acknowledgement that resources need to be reallocated from the construction program or from maintenance operations to repair any sections may fail.

PLAN TO ACHIEVE TARGETS :

The department expects to reduce restrictions on an average of 100 miles per year for the next four years with a stabilization after the year 2000 due to limited priorities on the remaining routes. This will be an extension of the system preservation program and a policy of "Risk Management."

OTHER FACTORS AFFECTING PERFORMANCE :

Pavement design, preventative maintenance, weather and construction funding affect performance. Innovations in pavement design and developments in preventive maintenance will aid this effort. Weather, storms, or natural disasters could force us to redirect our resources. Funding available from current sources will determine the ultimate performance within this and other objectives.

DEFINITION :

Bridges are inspected at a minimum of once every two years by trained bridge safety inspectors. The various parts of the bridge are each given a "condition rating" based on the inspection findings. The condition ratings listed in the table are the average condition ratings of the bridge superstructure components. These components include items such as the bridge roadway surface that motorists ride upon and the beams that support the span.

Inspectors rate condition on a scale from 0 through 9, with 9 being new or excellent conditions and zero a condition so poor that it is not useable. These rating scales are established by the Federal Highway Administration and used by all states. For this objective, acceptable levels of the average superstructure condition are tentatively set at : Principal Arterial - 7.200, Minor Arterial - 6.800, and Collector - 6.300. Principal Arterials are our most heavily used roadways while collectors represent a low traffic volume route.

Functional classification is a system in which streets and highways are grouped into classes or systems according to the character of service they are intended to provide. The functional system, as it applies to rural highways, may be summarized as follows:

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- Local Roads - These roads provide access to adjacent land and provide service to travel over relatively short distances. They constitute the rural mileage not included in the other classifications.

RATIONALE :

The condition rating measures the condition of the parts of a bridge that directly support vehicles used by the traveling public. Deterioration of these components can lead to load postings (restricted use by trucks), poor rideability, and frequent repairs that require traffic interruptions. The measure reflects the necessary level of bridge maintenance or bridge replacement activities and the condition of our investment in these structures.

DATA SOURCE :

The Mn/DOT Bridge Management System maintained by the Office of Bridges and Structures.

DISCUSSION OF PAST PERFORMANCE :

This is a new measure. It is a composite of multiple condition ratings. The individual condition ratings are available for previous years and are shown in the table for the past three years. The measure will be used in the future to monitor performance and the health of trunk highway bridges.

The condition ratings have shown a gradual decline from 1993 to 1996. This can be attributed to a reduced investment in bridge replacement and preservation projects. The condition of the bridges is directly related to the amount of replacement and preservation projects Mn/DOT undertakes.

PLAN TO ACHIEVE TARGETS :

The targets can be achieved by the continued efforts of Mn/DOT bridge maintenance crews and continued construction contracts for repair, reconstruction and replacement at funding levels above the past four years. The recently developed Performance Based Bridge Management process will provide a system where Districts will utilize the Bridge Management System to forecast bridge improvement needs. Discussions will occur between Districts and the Office of Bridges and Structures if gaps exist in the proposed bridge replacement/preservation programs and the estimated annual investment required.

OTHER FACTORS AFFECTING PERFORMANCE :

We are facing a growing problem as the large number of bridges built after the 1940s reach replacement age. In recent years we have primarily been replacing bridges from the pre-World War II era. After 1950, the number of bridges built per decade increased dramatically as our transportation system was significantly expanded. Additionally, the bridges built since 1950 are on average four times the size of their predecessors. The cost of a bridge is directly related to its size. As these bridges age and require replacement or renovation, an increased investment over current spending will be necessary to maintain these structures in service. At the same time, bridges will be competing with other segments of the infrastructure that are also deteriorating.

- Goal 2** : Transportation systems are provided that enable efficient movement of people and goods without disruption.
- Objective 3** : To ensure that Mn/DOT bridges are maintained in acceptable condition for the use of motorists and the trucking industry with a minimum number of deficient structures.

Measure 2 : Percent of bridges considered deficient by federal rating criteria

| | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Percent Deficient | | | | | | |
| Actual | 13.6 | 14.0 | 13.1 | 14.1 | | |
| Target | | | | | 13.5 | 13.0 |

DEFINITION :

A bridge is considered deficient if it does not meet criteria established by the Federal Highway Administration. These criteria consider the structural condition, geometrics and hydraulic capacity of the bridge. A deficient bridge is one which is generally structurally inadequate or obsolete due to narrow width or inadequate clearance. Deficient bridges often have weight or clearance restrictions placed on them.

RATIONALE :

This measure utilizes the deficient rating criteria and system used by all states. It is a recognized standard measure by those familiar with bridge issues.

DATA SOURCE :

The Mn/DOT Bridge Management System maintained by the Office of Bridges and Structures.

DISCUSSION OF PAST PERFORMANCE :

This measure has been used nationwide by transportation agencies since the 1970s and information is available for previous years. Although there is no clear trend from the 1993-1996 numbers, the percentage of deficient bridges has increased from 11.8% in 1990. Similar to Measure 1, this increase can be attributed to an investment in bridge replacements and preservation less than the annual need.

PLAN TO ACHIEVE TARGETS :

The targets can be achieved by the continued efforts of Mn/DOT bridge maintenance crews and continued construction contracts for repair, reconstruction and replacement at funding levels above the past four years. The recently developed Performance Based Bridge Management process will provide a system where Districts will utilize the Bridge Management System to forecast bridge improvement needs. Discussions will occur between Districts and the Office of Bridges and Structures if gaps exist in the proposed bridge replacement/preservation programs and the estimated annual investment required.

OTHER FACTORS AFFECTING PERFORMANCE :

We are facing a growing problem as the large number of bridges built after the 1940s reach replacement age. In recent years we have primarily been replacing bridges from the pre-World War II era. After 1950, the number of bridges built per decade increased dramatically as our transportation system was significantly expanded. Additionally, the bridges built since 1950 are on average four times the size of their predecessors. The cost of a bridge is directly related to its size. As these bridges age and require replacement or renovation, an increased investment over current spending will be necessary to maintain these structures in service. At the same time, bridges will be competing with other segments of the infrastructure that are also deteriorating.

- Goal 2** : Transportation systems are provided that enable efficient movement of people and goods without disruption.
- Objective 4** : The system is managed so that the percentage of freeway miles congested in the A.M. and P.M. peak periods are maintained at the current levels.
- Measure 1** : Percentage of metro freeway miles congested in A.M. and P.M. peaks

| | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Combined % of freeways congested in A.M. & P.M. peak periods | | | | | | |
| Actual | 31% | 32% | 29% | | | |
| Target | | | | 32% | 32% | 32% |

DEFINITION :

Congestion is when speeds fall below 45mph because the volume of traffic trying to use the freeway is greater than what the road can handle. There are 500 directional miles of Twin Cities metropolitan freeway.

A road's capacity to handle traffic is determined by a number of different factors. Basic, of course, is the width of the road; how many lanes it has. The presence of curves or hills in a road also affect the amount of traffic it can handle. Areas which have a lot of lane changing or people entering and leaving the roadway, can't handle as many cars as similar areas that don't. Finally, roadway capacity can be affected by bad weather and accidents.

RATIONALE :

There is a direct connection between the number of people being delayed and the length of roadway experiencing congestion. However it should be noted that congestion is experienced not where the problem actually is, but on the part of the roadway leading to that point. A half mile bottleneck can create ten miles of cars backed up in front of it. So, measuring the length of roadway experiencing congestion does not necessarily show the effort required to fix a problem, only the importance of doing so.

DATA SOURCE :

Congestion assessments for parts of the system not covered by the metering program are based on periodic readings of hourly volumes from automatic traffic recording stations.

As the Traffic Management Center's ramp metering program has been deployed over more of the Metro freeway system in the last 10 years, the data for assessing recurrent congestion has increasingly come from the metering program's loop detectors. These detectors are placed in each lane approximately every half mile and return data for each 5 minute period of time and allow the average speed of traffic, in each lane, to be calculated.

Improvements in data processing have also occurred through time. This year, for example, it was possible to assess the presence of congestion based upon the median of the speeds calculated for each loop detector every 5 minutes over a period of nine days. In previous years, only one day's loop detector data (from a day thought to be typical) was used.

DISCUSSION OF PAST PERFORMANCE :

There is less congestion on the Metro freeway system today than expected back in 1986. This is due to a number of things.

Aside from expanding or rebuilding a road, ramp metering can be used to manage traffic so as to, in effect, increase a roadway's capacity. This happens because ramp metering lessens the effect of bottlenecks and reduces the number of accidents. A decade ago, the rapid deployment of the ramp metering program that started in the late '80s was not foreseen. This rapid deployment allowed the benefits of reduced congestion from ramp metering to be realized much sooner than originally hoped.

The Highway Helper Program has expanded, which means that stalls and other incidents don't remain on the roadway as long and traffic gets moving again sooner. The Motorist Information Program is reaching more and more people. This means more people are aware of problems on the road and are able to avoid them. This is good in two ways: fewer people are getting stuck in traffic jams and fewer people getting stuck means the jams themselves do not get as big.

But unfortunately, the biggest gains in congestion reduction from the ramp metering program are probably behind us. Much of the freeway system is already covered and although the program is in a process of continual quality improvement, the biggest gains from ramp metering in reducing congestion came when the program was first brought on line. The ramp metering program can only manage bottlenecks, not eliminate them. Also, many parts of the system that are not covered now by the ramp metering program, suffer from problems that current practices of ramp metering won't be able to help.

PLAN TO ACHIEVE TARGETS :

In order to maintain satisfaction levels, Mn/DOT will continue utilizing traffic management techniques on the system such as ramp metering, traveler advisories via radio, television, changeable message signs, etc. The Highway Helper program will continue to be employed in order to minimize congestion by quickly removing stalled vehicles and occupants from driving lanes. To continually improve service to high occupancy vehicle and transit facilities, Mn/DOT participates in an interagency cooperative effort, "Team Transit," which plans and implements infrastructure changes that promote transit use and ridesharing. Public education efforts will be continued to raise travelers' awareness of system operations, factors impacting travel delays, and possible alternatives to reduce congestion and travel times.

OTHER FACTORS AFFECTING PERFORMANCE :

Travel times will be affected by:

- the increasing emphasis on preservation of existing systems over expanding the physical capacity of the system;
- increasing rates of vehicle miles traveled, i.e. the public is driving more and increasing the usage of the system;
- the increase in population, urban growth and suburban sprawl;
- travelers' lack of awareness of capacity limitations, lack of growth of the system and impacts to their travel times;
- impacts of societal changes such as telecommuting, teleconferencing, flexible work schedules and other emerging technological advancements which may have positive effects on travel times;
- increase in single occupancy vehicle usage and the rate of occupants per vehicle decreasing; and
- decreasing transit ridership.

Goal 2 : Transportation systems are provided that enable efficient movement of people and goods without disruption.

Objective 5 : To provide a winter road surface that meets driver expectations, and affords safe travel and access for people and goods movement.

Measure 1 : Bare pavement ratio

| | <u>F.Y.1993</u> | <u>F.Y.1994</u> | <u>F.Y.1995</u> | <u>F.Y.1996</u> | <u>F.Y.1997</u> | <u>F.Y.1998</u> |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Bare Pavement ratio-Super Commuter Actual | | | | .76 | | |
| Bare Pavement ratio-Urban Commuter Actual | | | | .91 | | |
| Bare Pavement ratio-Rural Commuter Actual | | | | 1.46 | | |
| Bare Pavement ratio-Primary Actual | | | | 2.03 | | |
| Bare Pavement ratio-Secondary | | | | | | |

DEFINITION :

This is a new measure.

Lost bare pavement is when friction is lost on 5 percent or more of the roadway.

The bare pavement ratio indicator measures the winter road maintenance level of service (LOS) through ratios of time of lost bare pavement to total event time. The indicator formula divides the time of bare pavement lost by the event time. Sample segments are identified and defined in a database.

Roads are classified as Super Commuter, Urban Commuter, Rural Commuter, Primary and Secondary based on vehicle traffic volumes. Each classification will have its own service level target based on customer expectations and available resources.

Super Commuter - roads with an average annual daily traffic greater than 30,000

Urban Commuter - roads with an average annual daily traffic 10,000 - 30,000

Rural Commuter - roads with an average annual daily traffic 2,000 - 10,000

Primary - roads with an average annual daily traffic 800 - 2,000

Secondary - roads with an average annual daily traffic less than 800

RATIONALE :

Customers expect and demand passable and safe roads at all times. Our economy demands that we move goods and people at all times, and in all kinds of weather, in and out of the state. Therefore, the removal of snow and ice is the single most important function performed by maintenance forces. Sufficient data is not available for secondary roads.

DATA SOURCE :

Operational data is collected in the field and stored in the indicator section of the Operations Management System (OMS) database currently being developed. The data sources include market research (customer surveys) to aid in determining appropriate targets.

DISCUSSION OF PAST PERFORMANCE :

In the past, there was no method to capture this data. The department is developing the bare pavement ratio indicator to measure performance during winter snow and ice events.

PLAN TO ACHIEVE TARGETS :

The department has identified and defined sample segments in a database. Analysis tools are being developed to allow us to evaluate the effectiveness of data collection and level of service during the 1996-97 season. Bare pavement will be regained more quickly through better information (Road/Weather Information System implementation) and innovative procedures (preventive anti-icing, pre-wetting, chemicals and equipment). Because analysis tools are being developed, we cannot set targets at this time.

OTHER FACTORS AFFECTING PERFORMANCE :

Each winter event is unique in its characteristics and requirements. The amount and rate of snowfall, wind, and temperature control the deployment of workers, equipment and materials. Therefore, availability of resources, geographic conditions, roadway characteristics, operational procedures and varying meteorological events all affect performance.

Goal 2 : Transportation systems are provided that enable efficient movement of people and goods without disruption.

Objective 6 : To provide a road surface that is clear of obstructions that results in safe and uneventful travel.

Measure 1 : Roadways clear of obstructions indicator

| | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Metro average response time(in minutes)per event | | | | | | |
| Actual | | | 35 | | | |

DEFINITION :

This is a new measure.

The obstructions indicator measures the level of service (LOS) by capturing the response time related to each road obstruction call. Obstructions such as stalls, spilled loads, and wind falls, are forms of obstacles that impede traffic in the traffic lane. The obstructions indicator information currently is collected in the Twin Cities Metropolitan Area only.

The obstructions indicator measures the LOS by determining if the obstruction is in the roadway or on a shoulder and then records the response time. The response time is recorded from the time of report to Mn/DOT to the time the obstruction is removed. The 1995 data reflects the average response time for the month of June.

RATIONALE :

Since obstructions slow traffic and result in time lost to users, this objective is intended to facilitate the flow of traffic by eliminating anything that impedes or blocks that flow in as short a time as possible.

DATA SOURCE :

The maintenance dispatch collects and stores the operational data in the Indicator section of the Operations Management System (OMS) database that is currently being developed.

DISCUSSION OF PAST PERFORMANCE :

The obstructions indicator is currently being developed to measure performance. Since this is a new measure, there is no past performance record.

PLAN TO ACHIEVE TARGETS :

The collection process was defined and the OMS database is being developed. Analysis tools are also being developed to allow evaluation of the data collection process, the level of service in 1996-97, and to determine what needs to be done to provide the optimum level of service. There are no projected targets because this is a new measure and we are not sure how the targets will be set.

OTHER FACTORS AFFECTING PERFORMANCE :

Each incident is unique in its characteristics and requirements. These incidents are often related to normal facilities management but are also the result of weather, storms or natural disasters. In addition to spills, stalls and road kill, weather, storms and natural disasters result in windfalls, slides and washouts. As in the case of many objectives, the availability of resources, geographic conditions, road characteristics, operational procedures and varying meteorological events are all contributing factors in the removal of obstructions.

- Goal 2** : Transportation systems are provided that enable efficient movement of people and goods without disruption.
- Objective 7** : Systems are maintained so that percentage of travelers satisfied with their travel times remains within a 2-3% range of 1995 levels.
- Measure 1** : Percentage of Minnesotans satisfied with the time it takes them to travel to the places they want to go.

| | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1999</u> |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Percent of MN drivers very or somewhat satisfied | | | | | | |
| Actual | | | 88% | | | |
| Target | | | | | 89% | 89% |
| Percent of Twin Cities Metro very or somewhat satisfied | | | | | | |
| Actual | | | 84% | | | |
| Target | | | | | 85% | 85% |
| Percent of Greater Minnesota very or somewhat satisfied | | | | | | |
| Actual | | | 92% | | | |
| Target | | | | | 93% | 93% |

DEFINITION :

Drivers' satisfaction with travel time includes drivers or passengers, for all types of vehicles and road conditions. The figures were derived from market research telephone interviews (800 randomly sampled Minnesota citizens) which asked, "How satisfied are you with the time it takes you to travel to the places you want to go?"

RATIONALE :

Mn/DOT utilizes traffic management techniques such as ramp metering, and traveler advisories via radio, television, changeable message signs, etc. The Highway Helper program is employed in order to minimize congestion by quickly removing stalled vehicles and occupants from driving lanes. To improve service to High Occupancy Vehicle (HOV) and transit facilities, Mn/DOT participates in "Team Transit," an interagency cooperative effort which plans and implements infrastructure changes that promote operational efficiencies.

The performance indicator tracks the public's acceptance of travel time that is directly correlated to the level of service provided. Dissatisfaction scores are tracked for areas of potential improvements. Respondents who noted that they weren't satisfied with the time it takes to travel to the places they want to go were asked "why." The most frequent reason given was heavy traffic or congestion. Other reasons included the condition of the roads (including maintenance), poor transit, the need for additional roads, and living far outside of the Metro area.

DATA SOURCE :

Data is derived from public telephone surveys conducted by the University of Minnesota, Center for Survey Research in annual Omnibus Surveys of adults, age 18 and over, who reside in Minnesota. Questions will be repeated every other year.

DISCUSSION OF PAST PERFORMANCE :

It is anticipated that level of satisfaction will decrease over an extended period time as the rate of congestion increases. System preservation, which does not increase capacity, was a primary focus in recent years. This, in turn, increases congestion and lowers drivers' satisfaction levels.

PLAN TO ACHIEVE TARGETS :

To maintain satisfaction levels, Mn/DOT will continue utilizing traffic management techniques on the system, such as ramp metering, and traveler advisories via radio, television, and changeable message signs. The Highway Helper program will continue to be employed in order to minimize congestion by quickly removing stalled vehicles and occupants from driving lanes. To continually improve service to high occupancy vehicle and transit facilities, Mn/DOT participates in an interagency cooperative effort, "Team Transit," which plans and implements infrastructure changes that promote operational efficiencies.

OTHER FACTORS AFFECTING PERFORMANCE :

These factors influence travel times:

- the increasing emphasis on preservation of existing systems over expanding the physical capacity of the system;
- increasing rates of vehicle miles traveled, i.e. the public is driving more and increasing the usage of the system;
- the increase in population, urban growth and suburban sprawl;
- travelers' lack of awareness of capacity limitations, lack of growth of the system and impacts to their travel times;
- impacts of societal changes such as telecommuting, teleconferencing, flexible work schedules and other emerging technological advancements may have positive effects on travel times;
- increase in single occupancy vehicle usage and the rate of occupants per vehicle decreasing; and
- decreasing transit ridership.

- Goal 3** : Safe trips are provided through sound engineering, maintenance, education and information.
- Objective 1** : To improve the highway users' level of confidence to 85% by providing a safe work zone environment through the use of the latest standards and specifications, proper traffic control devices, education and tools.
- Measure 1** : Percentage of Minnesotans feeling safe while driving or riding through highway work zones.

| | <u>C.Y.1989</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> |
|---------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Percentage feeling safe in work zones | | | | | | |
| Actual | 63% | | | | | |
| Target | | | | | 85% | 85% |

DEFINITION :

The percentage of Minnesotans who indicate they feel "very or somewhat safe" while driving or riding through a highway work zone. The figures were derived from market research telephone interviews (800 randomly sampled Minnesota citizens).

RATIONALE :

This measure indicates the customer's comfort level in the safety of highway work zones. Dissatisfaction scores are tracked for areas of potential improvements. Respondents who noted that they felt unsafe while passing through highway work zones were asked "why?" The most significant factors were other drivers' behavior and speed, followed by narrow driving lanes.

DATA SOURCE :

"Public Attitudes and Opinions about Transportation in Minnesota - Report of 1989-1990 Statewide Omnibus Survey and the Twin Cities Survey" (March 1990), reports the results of public telephone surveys conducted by the University of Minnesota, Center for Survey Research in annual Omnibus Surveys of adults, age 18 and over, who reside in Minnesota. Questions will be repeated every other year.

DISCUSSION OF PAST PERFORMANCE :

Other than the 1989 data, little is known about the public's perception of safety in highway work zones.

One of Mn/DOT's primary focus areas is safety and specific attention is given to work zone safety. Mn/DOT has a very active Work Zone Safety Committee that deals with all facets of the subject -- traffic control strategies and devices, new products, worker education, public education, etc.

PLAN TO ACHIEVE TARGETS :

Mn/DOT will continue to evaluate new products, tools and strategies to make work zones safer.

The target goal is to raise the public's level of confidence to 85%. This value has its roots in speed zoning theory where reasonable and safe speed limits are set near the 85th percentile figure (e.g., 85% are at or under the speed limit and 15% are over the limit). This theory recognizes that there are differences among individual drivers and not all have the same perception of a safe speed. In the speed zoning example, 15% are determined to drive faster than what is considered to be the reasonable and safe speed. Translating this concept to the perception of safety in work zones, it is believed to be unlikely to achieve a 100% rating. Rather, a target of 85% of the sample who perceive a safe work zone environment would be considered excellent.

OTHER FACTORS AFFECTING PERFORMANCE :

Driver behavior is the greatest factor in the cause of crashes. Even a safe work zone environment may not prevent unsafe driver behavior.

- Goal 3** : Safe trips are provided through sound engineering, maintenance, education and information.
- Objective 2** : To raise and maintain the public's perception of overall safety on Minnesota's roadways to 90% by ensuring that all opportunities to improve roadway safety are identified, considered, and implemented as appropriate and by selecting and implementing effective highway safety strategies, programs and projects.

Measure 1 : Percentage of Minnesotans satisfied with the safety of Minnesota's roadways.

| | <u>C.Y.1989</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Percentage of Minnesotans satisfied with MN roadways | | | | | | |
| Actual | 87% | | | | | |
| Target | | | | 90% | 90% | 90% |

DEFINITION :

The figures were derived from market research telephone interviews (800 randomly sampled Minnesota citizens) that asked, "how satisfied are you with the safety of Minnesota's roadways?"

RATIONALE :

This measure indicates the customers' (highway users') level of satisfaction with highway safety which is one of the most important factors of a highway system.

DATA SOURCE :

"Public Attitudes and Opinions about Transportation in Minnesota - Report of 1989-1990 Statewide Omnibus Survey and the Twin Cities Survey," (March 1990), reports the results of public telephone surveys conducted by the University of Minnesota, Center for Survey Research in annual omnibus surveys of adults, age 18 and over, who reside in Minnesota. Questions will be repeated every other year.

DISCUSSION OF PAST PERFORMANCE :

Other than the 1989 data, little is known about the public's perception of the overall safety of Minnesota's roadways.

Mn/DOT has made safety one of its top priorities. Virtually everything Mn/DOT does has its roots in safety: from early project planning decisions through specifications and standards used in design and construction, and on through the maintenance and operation of the roadways system.

PLAN TO ACHIEVE TARGETS :

Mn/DOT will continue to implement strategies that improve highway safety by focusing not only on roadway improvements, but also by influencing driver behavior which is, by far, the leading cause of crashes.

The target goal is to raise and maintain the public's perception of overall safety on Minnesota's roadways to 90%. Per the discussion relating to Objective 1 (work zone safety), a rating of 85% is considered excellent. Since the rating in 1989 was 87%, Mn/DOT's goal is to achieve a higher rating.

OTHER FACTORS AFFECTING PERFORMANCE :

Driver behavior is the largest contributor to crash causation, and Mn/DOT traditionally has done little to improve driver behavior. The department is beginning to commit resources to that effort; however, any changes in driver behavior will take many years to accomplish.

Goal 3 : Safe trips are provided through sound engineering, maintenance, education and information.

Objective 3 : To reduce the number and severity of traffic crash rates on all roadways in Minnesota to a level that is at or below the previous 3-year average for each statistic measured.

Measure 1 : Crash and fatality rates by roadway classification.

| | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Crash Rates per million vehicle miles-Interstate | | | | | | |
| Actual | 1.0 | 1.1 | 0.9 | | | |
| Target | | | | 1.0 | | |
| Crash Rates-Trunk Highway | | | | | | |
| Actual | 1.9 | 1.8 | 1.7 | | | |
| Target | | | | 1.8 | | |
| Crash Rates-C.S.A.H. | | | | | | |
| Actual | 2.9 | 2.7 | 2.7 | | | |
| Target | | | | 2.7 | | |
| Crash Rates-County Road | | | | | | |
| Actual | 2.3 | 2.1 | 2.2 | | | |
| Target | | | | 2.2 | | |
| Crash Rates-Other | | | | | | |
| Actual | | 4.7 | 4.6 | | | |
| Target | | | | 4.6 | | |
| Crash Rates-STATE TOTAL | | | | | | |
| Actual | 2.39 | 2.30 | 2.18 | | | |
| Target | | | | 2.29 | | |
| Fatality Rates per 100 million vehicle miles-Interstate | | | | | | |
| Actual | 0.3 | 0.6 | 0.4 | | | |
| Target | | | | 0.4 | | |
| Fatality Rates-Trunk Highway | | | | | | |
| Actual | 1.4 | 1.8 | 1.4 | | | |
| Target | | | | 1.5 | | |
| Fatality Rates-C.S.A.H. | | | | | | |
| Actual | 1.7 | 2.0 | 2.1 | | | |
| Target | | | | 1.9 | | |
| Fatality Rates-County Road | | | | | | |
| Actual | 1.9 | 2.2 | 2.5 | | | |
| Target | | | | 2.2 | | |

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Fatality Rates-Other

| | | | |
|--------|-----|-----|-----|
| Actual | 1.1 | 1.4 | |
| Target | | | 1.2 |

Fatality Rates-STATE**TOTAL**

| | | | |
|--------|------|------|------|
| Actual | 1.27 | 1.48 | 1.35 |
| Target | | | 1.37 |

DEFINITION :

Crash Rate is the total number of crashes occurring each year per million vehicle miles traveled. Fatality Rate is the total number of deaths occurring each year per 100 million vehicle miles traveled.

The State Roads program area includes Interstate and Trunk Highways.

RATIONALE :

The measure indicates the relative safety of travel on Minnesota's various roadway classifications.

DATA SOURCE :

State and local agencies collect the data by the Department of Public Safety tabulates it. The crash and fatality rates are calculated by the Mn/DOT's Transportation Information System.

DISCUSSION OF PAST PERFORMANCE :

The state crash and fatality rates have declined for many years. This trend is occurring across the country and it is attributed to many improvements to the roadway environment, vehicle safety features, emergency medical care and social attitudes about using seat belts and not driving after drinking.

PLAN TO ACHIEVE TARGETS :

Mn/DOT will continue to emphasize the engineering of a safe roadway environment in all phases of highway planning, design, construction, operation, and maintenance. High crash locations will continue to be identified and safety improvement projects undertaken when appropriate. Through the Safety Management System, Mn/DOT will provide leadership to reduce the road toll by fostering partnership opportunities among groups and individuals concerned with roadway safety.

Mn/DOT recognizes that almost every crash is caused by driver error and therefore will begin a public safety education program to influence driver attitudes so as to encourage safe driving behavior.

OTHER FACTORS AFFECTING PERFORMANCE :

Driver behavior is the key factor in determining crashes, and to a great extent, fatality rates. It will be up to individual drivers to exhibit safe driving behavior. Enforcement also influences driver behavior.

Goal 3 : Safe trips are provided through sound engineering, maintenance, education and information.

Objective 4 : To reduce the number and severity of traffic crashes on all roadways and by all vehicle types to a level that is at or below the previous 3-year average for each statistic measured.

Measure 1 : Total crashes, fatal crashes, and injury crashes by road system; and total crashes, fatalities, and injuries by special vehicle type.

| | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Crashes-Interstate | | | | | | |
| Actual | 9,083 | 10,122 | 9,123 | | | |
| Target | | | | 9,443 | | |
| Crashes-Trunk Highway | | | | | | |
| Actual | 31,464 | 30,203 | 29,060 | | | |
| Target | | | | 30,242 | | |
| Crashes-CSAH | | | | | | |
| Actual | 25,358 | 24,368 | 24,808 | | | |
| Target | | | | 24,845 | | |
| Crashes-Co. Rd. | | | | | | |
| Actual | 2,247 | 2,089 | 2,071 | | | |
| Target | | | | 2,136 | | |
| Crashes-Twp. Rd. | | | | | | |
| Actual | 1,883 | 1,987 | 2,052 | | | |
| Target | | | | 1,974 | | |
| Crashes-Local St. | | | | | | |
| Actual | 30,129 | 30,117 | 28,135 | | | |
| Target | | | | 29,460 | | |
| Crashes-Other Rd. | | | | | | |
| Actual | 743 | 815 | 773 | | | |
| Target | | | | 777 | | |
| Crashes-TOTAL | | | | | | |
| Actual | 100,907 | 99,701 | 96,022 | | | |
| Target | | | | 98,877 | | |
| Fatal Crashes-Interstate | | | | | | |
| Actual | 29 | 43 | 32 | | | |
| Target | | | | 35 | | |
| Fatal Crashes-TH | | | | | | |
| Actual | 231 | 261 | 207 | | | |
| Target | | | | 233 | | |
| Fatal Crashes-CSAH | | | | | | |
| Actual | 148 | 159 | 174 | | | |
| Target | | | | 160 | | |
| Fatal Crashes-CR | | | | | | |
| Actual | 18 | 19 | 20 | | | |
| Target | | | | 19 | | |

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| | | | | |
|----------------------------------|--------|--------|--------|--------|
| Fatal Crashes-Twp. Rd. | | | | |
| Actual | 19 | 25 | 30 | |
| Target | | | | 74 |
| Fatal Crashes-Local St. | | | | |
| Actual | 30 | 40 | 50 | |
| Target | | | | 40 |
| Fatal Crashes-Other Rd. | | | | |
| Actual | 2 | 3 | 2 | |
| Target | | | | 2 |
| Fatal Crashes-TOTAL | | | | |
| Actual | 477 | 550 | 515 | |
| Target | | | | 514 |
| Injury Crashes-Interstate | | | | |
| Actual | 2,272 | 2,596 | 2,443 | |
| Target | | | | 2,437 |
| Injury Crashes-TH | | | | |
| Actual | 10,041 | 10,045 | 9,891 | |
| Target | | | | 9,992 |
| Injury Crashes-CSAH | | | | |
| Actual | 8,498 | 8,579 | 9,324 | |
| Target | | | | 8,800 |
| Injury Crashes-CR | | | | |
| Actual | 798 | 731 | 765 | |
| Target | | | | 765 |
| Injury Crashes-Twp. Rd. | | | | |
| Actual | 662 | 803 | 795 | |
| Target | | | | 753 |
| Injury Crashes-Local St. | | | | |
| Actual | 7,851 | 8,392 | 8,236 | |
| Target | | | | 8,160 |
| Injury Crashes-Other Rd. | | | | |
| Actual | 135 | 161 | 157 | |
| Target | | | | 151 |
| Injury Crashes-TOTAL | | | | |
| Actual | 30,257 | 31,307 | 31,611 | |
| Target | | | | 31,058 |
| Pedestrians-Fatalities | | | | |
| Actual | 47 | 53 | 49 | |
| Target | | | | 50 |
| Pedestrians-Injuries | | | | |
| Actual | 1,390 | 1,400 | 1,471 | |
| Target | | | | 1,420 |
| Pedestrians-Crashes | | | | |
| Actual | 1,383 | 1,409 | 1,458 | |
| Target | | | | 1,417 |
| Bicycles-Fatalities | | | | |
| Actual | 9 | 16 | 5 | |
| Target | | | | 10 |

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| | | | | |
|--------------------------------|-------|-------|-------|-------|
| Bicycles-Injuries | | | | |
| Actual | 1,240 | 1,359 | 1,283 | |
| Target | | | | 1,294 |
| Bicycles-Crashes | | | | |
| Actual | 1,321 | 1,436 | 1,333 | |
| Target | | | | 1,363 |
| Motorcycles-Fatalities | | | | |
| Actual | 37 | 43 | 37 | |
| Target | | | | 39 |
| Motorcycles-Injuries | | | | |
| Actual | 1,255 | 1,390 | 1,139 | |
| Target | | | | 1,261 |
| Motorcycles-Crashes | | | | |
| Actual | 1,245 | 1,381 | 1,126 | |
| Target | | | | 1,251 |
| Trains-Fatalities | | | | |
| Actual | 15 | 17 | 16 | |
| Target | | | | 16 |
| Trains-Injuries | | | | |
| Actual | 63 | 75 | 34 | |
| Target | | | | 57 |
| Trains-Crashes | | | | |
| Actual | 128 | 144 | 132 | |
| Target | | | | 135 |
| Trucks-Fatalities | | | | |
| Actual | 77 | 94 | 86 | |
| Target | | | | 86 |
| Trucks-Injuries | | | | |
| Actual | 1,764 | 1,902 | 1,869 | |
| Target | | | | 1,845 |
| Trucks-Crashes | | | | |
| Actual | 4,931 | 5,132 | 4,752 | |
| Target | | | | 4,938 |
| School Buses-Fatalities | | | | |
| Actual | 3 | 2 | 2 | |
| Target | | | | 2 |
| School Buses-Injuries | | | | |
| Actual | 432 | 401 | 457 | |
| Target | | | | 430 |
| School Buses-Crashes | | | | |
| Actual | 894 | 821 | 898 | |
| Target | | | | 871 |

DEFINITION :

Crash data for the three levels of severity (fatal, personal injury, and property damage only) by road system represent the number of crashes as opposed to the number of people involved (i.e. not fatalities or injuries). The data by vehicle type indicate total crashes and for the number of individuals killed or injured.

RATIONALE :

By tracking these data, Mn/DOT can identify emerging problem areas and target specific counter measures to those problems.

DATA SOURCE :

These data are reported by the Department of Public Safety in Crash Facts, an annual publication.

DISCUSSION OF PAST PERFORMANCE :

Because the relative number of the crashes shown is small when compared with the total number of crashes that occur, there is substantial variability in the data from year to year. This variability is probably due to chance.

PLAN TO ACHIEVE TARGETS :

The largest cause of these crashes is attributed to driver behavior. The only way to change driver behavior is through education. Mn/DOT will analyze all available crash data and target education initiatives toward those areas that show the largest potential for improvement.

OTHER FACTORS AFFECTING PERFORMANCE :

As mentioned above, the relatively small frequency of occurrence shown by these data suggest that substantial variability can occur year to year due to change. Also, influencing driver behavior is difficult and requires long term solutions.

Goal 4 : Quality products and services will be delivered in an effective and efficient manner.
Objective 1 : Program delivery costs will remain within a 22 - 24% range in the coming biennium while maintaining acceptable quality.

Measure 1 : Ratio of program delivery costs to construction expenditures/investments

| | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Program Delivery Cost Ratio | | | | | | |
| Actual | 26% | 23% | 26% | | | |
| Target | 24% | 24% | 27% | 23% | 22% | 22% |

DEFINITION :

The numerator in the above ratio is the program delivery portion of the budgets for Design and Construction Engineering. These two areas of the department have the primary roles for delivering the State Road Construction Program which is the denominator in the above ratio. The program includes Construction Contracts awarded, Right of Way costs, and Supplemental and Cooperative Agreements averaged over 3 years to dampen year to year fluctuations. The 3-year approach helps account for the lead time/lag time relationship.

RATIONALE :

The ratio describes the budget dollars expended (basically labor, equipment, and supplies) which are inputs used to produce a major product or output, the State Road Construction Program. The intended outcome is a better (e.g., safer, smoother, more congestion-free) and more efficiently delivered transportation infrastructure used by autos, trucks, buses, bicycles, and pedestrians.

DATA SOURCE :

The budget information comes from the Budget Office and the FTE data from the Office of Technical Support. The construction program information comes from the Office of Investment Management. These are updated annually.

DISCUSSION OF PAST PERFORMANCE :

The indicator was somewhat higher in past years than is projected because the program level was somewhat lower. Actual percentages in 1994 and 1995 are slightly better than targeted because savings in other areas and a strong economy meant that the program could be increased. Staffing was not increased by the same proportion. Note that a slightly different program calculation method was used in the 1994 APR.

PLAN TO ACHIEVE TARGETS :

Mn/DOT continually looks for ways to improve efficiency through automation, process improvements, improvements in construction techniques, and elimination of redundant methods. Mn/DOT expects these improvements to balance or outweigh increases in complexity that are regularly encountered.

OTHER FACTORS AFFECTING PERFORMANCE :

New laws, rules, and regulations can have a major impact on efficiency. Retirements of experienced personnel have had and will continue to be important. The health of the economy and federal budgets can have a big impact on program levels both up or down. These are hard to predict. Staffing is a less dynamic factor where the department tries to use consultants and seasonal workforce to handle peaks.

Goal 4 : Quality products and services will be delivered in an effective and efficient manner.
Objective 2 : Costs per lane mile required for state road operations will remain relatively flat while maintaining acceptable service levels.

Measure 1 : Average cost of state road operations per lane mile of inventory.

| | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> |
|-----------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Cost/Lane Mile (\$1,000's) | | | | | | |
| Actual | 5.9 | 5.9 | 7.0 | 6.9 | | |
| Target | | | | | 7.0 | 7.0 |

DEFINITION :

The cost of operating state roads includes costs for labor, equipment depreciation, attributable administrative costs, materials and contracts budgeted during the fiscal year. This total is proportional to the lane miles of roadway from the current Transportation Information System (TIS).

RATIONALE :

The cost per lane mile is an overall index of state road operations performance. This is true since road operations seeks only to maintain the present status and not substantially improve capacities. It is also an indirect measure of internal efficiency. If road condition measurements (a measurement of outcome for this budget) remain flat and the cost per lane mile decreases, the department assumes operational efficiency is improving.

DATA SOURCE :

The lane mile component will be contained in TIS. Total costs will come from the Budget Office.

DISCUSSION OF PAST PERFORMANCE :

This indicator has seen an upward trend in recent years. Road condition measures are flat or decreasing causing higher investments in short term repairs. As the system ages, it requires more preventive maintenance.

PLAN TO ACHIEVE TARGETS :

The broad nature of this indicator makes it difficult to establish targets that are meaningful and controllable by managers. However, through continuous research for new methods, materials and management techniques, their effectiveness should improve. The department is strongly considering converting to management through product lines with their own indicators. This will help achieve closer cause to effect ratios and encourage timely management interventions that produce efficiencies in resources that cannot be presently measured.

OTHER FACTORS AFFECTING PERFORMANCE :

State road operations are always affected by weather conditions in both winter and summer. Severe winters and natural disasters can cause major changes in plans for preventative maintenance. Not performing preventive maintenance causes increased costs in later years which impact indicator values. Mn/DOT is presently implementing a new "Transportation Worker" Classification with the cooperation of the affected unions. This will allow greater flexibility in deploying workers to take advantage of the natural peaks and valleys in workloads. The department expects the efficiencies generated with this classification to be reflected in achieving peak performance. Partnerships with other governmental subdivisions also contribute to efficiencies. The value of these partnerships have increased in recent years while numbers of them have decreased.

Goal 5 : Travel information is provided so that travelers can optimize their trips.
Objective 1 : To provide information on winter road conditions so that travelers can make better decisions.

Measure 1 : The level of satisfaction of travelers with winter road condition information.

| | <u>C.Y.1990</u> | <u>C.Y.1993</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1998</u> | <u>C.Y.2000</u> |
|------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Level of satisfaction | | | | | | |
| Actual | 90% | 90% | | | | |
| Target | | | | 90% | 92% | 95% |

DEFINITION :

Data is gathered via statewide public opinion telephone survey conducted by the University of Minnesota among 800 randomly sampled households from throughout the state.

RATIONALE :

Mn/DOT provides travel information on winter road conditions for motorists through a dial-in phone service and radio broadcasts. The survey provides a direct measure of the outcome, which is traveler satisfaction with the information they receive.

DATA SOURCE :

Public telephone surveys will be conducted by the University of Minnesota, Center for Survey Research in annual Omnibus Surveys of adults, age 18 and over, who reside in Minnesota. Questions will be repeated every other year beginning in 1996.

DISCUSSION OF PAST PERFORMANCE :

This is a new measure.

PLAN TO ACHIEVE TARGETS :

The department is developing the Road Weather Information System that monitors weather conditions at sites throughout the state. It will prepare a plan for the proposed sites in the 1998-1999 biennium. At that time, Mn/DOT will develop the personnel and software that gauges status and prediction of winter road conditions.

OTHER FACTORS AFFECTING PERFORMANCE :

Motorists are more aware of road conditions during severe storms; their responses are more negative in general because of a harsh winter. Very mild winters may make winter road conditions a non-issue or cause a more neutral response.

The degree to which radio stations and television stations use Mn/DOT information is outside of Mn/DOT's control, but directly affects how many and how frequently travelers receive the information and how frequently. It is assumed this factor will remain constant.

The state-of-the-art technology for predicting weather changes determines how reliable Mn/DOT information is viewed by travelers and affects level the of satisfaction

Goal 5 : Travel information is provided so that travelers can optimize their trips.
Objective 2 : To provide information on road construction and maintenance activities so travelers can plan for additional travel time or take alternate routes.

Measure 1 : The level of satisfaction of travelers with information on construction and maintenance activities.

| | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> |
|-------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Level of satisfaction of travelers. | | | | | | |

DEFINITION :

Data is gathered via statewide public opinion telephone survey conducted by the University of Minnesota among 800 randomly sampled households from throughout the state.

RATIONALE :

Mn/DOT provides travelers with information on how our construction and maintenance activities may affect their trips through newspapers, radio, television, and roadside signs. This survey directly measures the outcome, which is traveler satisfaction with the information they receive.

DATA SOURCE :

Public telephone surveys conducted by the University of Minnesota, Center for Survey Research in annual omnibus surveys of adults, age 18 and over, who reside in Minnesota. Questions will be repeated every other year beginning in 1996.

DISCUSSION OF PAST PERFORMANCE :

This is a new measure.

PLAN TO ACHIEVE TARGETS :

A survey will be conducted to identify the most effective media for providing construction and maintenance information and best practice in assuring the distribution of the information.

OTHER FACTORS AFFECTING PERFORMANCE :

People do not readily distinguish Mn/DOT's roads and construction and maintenance activities from those of counties and cities. Bad experiences may influence their perceptions caused by local jurisdictions. The cooperation of local media is required to publish or broadcast press release information. It is assumed media cooperation will remain constant over time.

- Goal 5** : Travel information is provided so that travelers can optimize their trips.
- Objective 3** : To provide information on congestion in the Metro area so travelers can adjust departure time, their route, or their attitude to have a more satisfactory trip.

Measure 1 : The level of satisfaction of Metro travelers with information on congestion.

| | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Level of satisfaction of Metro Travelers | | | | | | |

DEFINITION :

Data will be collected from the Metro portion of a statewide public opinion telephone survey conducted by the University of Minnesota among 800 randomly sampled households from throughout the state.

RATIONALE :

Mn/DOT provides information directly through radio station KBEM, as well as through digital broadcasts, roadside signs, the Internet, and commercial radio stations. This survey is a direct measure of the outcome of these efforts, and the level of satisfaction of travelers with the information they receive.

DATA SOURCE :

Public telephone surveys conducted by the University of Minnesota, Center for Survey Research in annual Omnibus Surveys of adults, age 18 and over, who reside in Minnesota. Questions will be repeated every other year beginning in 1996.

DISCUSSION OF PAST PERFORMANCE :

This is a new measure and data is not available for prior years.

PLAN TO ACHIEVE TARGETS :

The department is piloting new methods of disseminating congestion information including cable TV and digital traffic data broadcasts to in-vehicle receivers and dispatchers. Instrument are also being placed on freeways to provide more comprehensive coverage of the Twin Cities metropolitan area.

OTHER FACTORS AFFECTING PERFORMANCE :

The cooperation of radio stations is required to broadcast the congestion data provided to them frequently, accurately and completely. It is assumed that the current level of cooperation will remain constant.

Goal 5 : Travel information is provided so that travelers can optimize their trips.

Objective 4 : To provide information to producers, shippers, receivers, and transporters of heavy goods on spring road restrictions so they can effectively plan their shipments and estimate costs.

Measure 1 : The level of satisfaction of producers, shippers, receivers and transporters of heavy goods with information they receive on spring road/weight restrictions.

| | <u>C.Y.1993</u> | <u>C.Y.1994</u> | <u>C.Y.1995</u> | <u>C.Y.1996</u> | <u>C.Y.1997</u> | <u>C.Y.1998</u> |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Spring Road Restriction Information | | | | | | |

DEFINITION :

A telephone survey among current producers, shippers, receivers and transporters of heavy goods is proposed to collect information (baseline) regarding satisfaction of travel information including spring road conditions currently provided by Mn/DOT.

RATIONALE :

Spring load restriction information is announced by radio, newspapers and by mailings. Maps showing routes affected are mailed out. The beginning and ending dates are sent to news services. The survey is a direct measure of a key outcome, the level of satisfaction of those who use the information.

DATA SOURCE :

A survey of the level of satisfaction of those on the mailing list of Mn/DOT for spring load restriction information.

DISCUSSION OF PAST PERFORMANCE :

Data not available for prior years.

APPENDIX

AGENCY : Department of Transportation's APR Appendix

PLANNING PROCESS

Measurement efforts have been underway at Mn/DOT since 1993 with the development of the Mn/DOT Department level Family of Measures. A Family of Measures is a mix and balance of measures created to support different levels of an organization. Families of Measures are currently being developed throughout the agency at the division, office, district and special project levels with guidance from Mn/DOT's Measurement and Evaluation Section. Input from Management Teams and employees in the various divisions, offices, districts and projects has been used to define outcomes or goals, and performance measures. Where appropriate, these outcomes (goals) and measures were incorporated into the Agency Performance Report.

In program areas where Families of Measures have not yet been developed, Measurement and Evaluation Section staff met with the Program Manager and several employees to review and revise goals and measures from the 1994 APR, and other appropriate Mn/DOT Families of Measures. As Families of Measures are developed in these program areas with more input from staff and customers, goals and measures in future APRs will be revised or supplemented.

For the 1996 APR, program managers, along with data experts, collected data and determined targets and objectives with assistance from the Measurement and Evaluation Section. Program managers and their staff wrote their own program summaries and program drivers and definitions, rationales, data sources, discussions of past performances, plans to achieve targets and other factors affecting performance. The Executive Summary was prepared by the Measurement and Evaluation Section utilizing data submitted by program managers and others.

CHANGES FROM 1994 REPORT

NEW APR MEASURES:

Aeronautics

- Number of aircraft accidents
- Average number of airport safety deficiencies per inspection
- Percent of projects receiving capital improvement funding
- Airport pavement condition ratings
- Airport lighting system ratings
- Percent of time navigation aids are operational
- Percent of airports with scheduled air service that have a precision landing system
- Number of students participating in aviation education activities
- Number of general public contacts that receive promotional information

APPENDIX

Transit

- Number and percentage of regional centers served by public transit in Greater Minnesota
- Percentage of targeted audiences in Greater Minnesota with satisfactory transit options
- Operating cost per vehicle mile for public transit systems in Greater Minnesota

Railroads and Waterways

- Number of projects that improve railroad grade crossings to desired standards
- Number of crashes at railroad grade crossings
- Number of projects that improve or maintain rail or water freight service

Motor Carrier

- Percentage of driver and vehicle out-of-service violations experienced by Minnesota-based motor carriers after compliance reviews and the percentage of violations experienced by those who did not have compliance reviews
- Average safety noncompliance score (For STS and Limousines)
- Number of compliance reviews (CRs) and Minnesota carrier reviews (MCRs) conducted (M) (See measures dropped)
- Number of training hours received by drivers and carrier officials
- Number of shipper reviews conducted

State Roads

- Percent of major investment projects with completed analysis of economic benefits and life-cycle costs
- Percentage of Minnesotans satisfied with condition of Minnesota roads
- Spring road restrictions
- Condition rating of bridges by functional class of the roadway
- Percent of bridges considered deficient by federal rating criteria
- Bare pavement ratio
- Percent of trunk highway miles where Pavement Quality Index (PQI) is 3.3 or greater
- Roadways clear of obstructions indicator
- Percentage of Minnesotans feeling safe while driving or riding through work zones
- Percentage of Minnesotans satisfied with the safety of Minnesota's roadways
- Total crashes, fatal crashes, and injury crashes by road system; total crashes, fatalities and injuries by vehicle type
- Ratio of program delivery costs to construction expenditures/investments
- Average costs of state road operations per lane mile of inventory
- Level of satisfaction of travelers with winter road condition information
- Level of satisfaction of Metro travelers with information on congestion
- Level of satisfaction of travelers with information on construction and maintenance activities
- Level of satisfaction of producers, shippers, receivers and transporters of heavy goods with information they receive on spring road/weight restrictions

APPENDIX**1994 APR MEASURES DROPPED:****Aeronautics**

- Number of airports where weather data is collected for dissemination to pilots
- Number of landing areas inspected
- State construction grants issued
- State maintenance grants issued
- Federal construction grants issued
- Number of state owned electronic navigational aids
- Number of client (students, educators, and the general public) contacts made
- Active aviation partnership initiatives

Transit

- Percentage of population in Greater Minnesota with access to transit services
- Number of transit systems in Greater Minnesota
- Cost per passenger trip mile on public transit systems in Greater Minnesota

Railroads and Waterways

- Number of crossing safety improvements (signals, signs and/or pavement markings, closures & surfaces)
- Additional revenue earned by producers (cents/bushel) when shipping via rail
- Miles of rail line acquired and rehabilitated for freight service

Motor Carrier

- Number of three-day classes offered
- Number of hazardous materials shippers safety reviews conducted
- Number of safety reviews conducted
- Number of compliance reviews conducted. Replaced by (M) in "New" Section
- Number of intrastate motor carrier audits conducted. Replaced by (M) in "New" Section
- Number of intrastate motor carriers which receive a safety rating
- Number of provider audits conducted
- Number of vehicle inspections conducted
- Number of random, unannounced inspections conducted
- Number of training class audits conducted

State Roads

- Percent of wholesale and retail sales in the 65 significant economic centers served by 10-ton per axle market artery routes
- Percent of trunk highway bridges sufficient in load capacity, vertical and horizontal clearance

APPENDIX

- Key construction accomplishments
- Total injury accidents per million vehicle miles traveled on state highways
- Total property damage accidents per million vehicle mile traveled on state highways
- Miles of trunk highway rated "good" or "fair" for bicycle travel
- Number of Urbanized Areas not in compliance with Federal Standards for a safe air quality environment
- Recycled bituminous used in TH road construction
- Recycled concrete used in TH pavement construction
- "Landscape Partnership" projects per year
- Positive acreage balance in state wetlands bank
- Number and miles of wildflower routes
- Percent design engineering cost/state road construction dollars let
- Percent construction engineering cost/state road construction dollars let
- Maintenance preservation accomplishments
- Tons of deicing salt per million vehicle miles traveled, adjusted by the weather index
- Percentage respondents indicating they are satisfied with appearance (cleanliness) of roadsides along major highway routes

DATA MODIFIED FROM 1994 APR:

Aeronautics

- Total attendance at pilot safety seminars

(Data in the 1994 Report reflected attendance at the safety seminars sponsored by the agency. Data in the 1996 Report reflects attendance at the seminars sponsored jointly with the FAA. Plus, a portion of the difference is attributable to better records.)

- Number of weather products requested by pilots on computer weather terminals

This measure used to read, "provided to" in place of "requested by"

(Since preparation of the 1994 Report, the vendor that provides the service did some reprogramming of their computer system. The differences in data are due to the way their system counts the products.)

FOR FURTHER INFORMATION REGARDING THIS DOCUMENT, CONTACT:

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