



ENERGY AND THE ENVIRONMENT

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IX. ENERGY AND THE ENVIRONMENT

MINNESOTA STATEWIDE POLICY PLAN

I. Energy and the Environment

A. Improve the energy efficiency and environmental sustainability of Minnesota’s transportation system

1. Environmental Stewardship in Project Development

a. Mn/DOT and local transportation authorities will continue to integrate environmental stewardship throughout the transportation project development and system operations processes.

- i. Maintain and enhance regular communication and collaboration with resource management agencies. Identify additional opportunities to develop formalized programmatic agreements or memorandums of understanding. A collaborative approach to planning and project development stages will allow transportation agencies to effectively avoid or minimize environmental impacts.
- ii. Continue to support and implement system level solutions to mitigation requirements as well as at the individual project level. Mn/DOT has been using programmatic approaches to mitigation long before suggested in SAFETEA-LU. Wetland banking and cultural resource investigation/mitigation are systems level approaches to project mitigation. Mn/DOT has developed a longstanding wetland banking system in cooperation with federal and state wetland resource and regulatory agencies. This interagency team has evolved this system so that it is compatible with state and federal regulatory requirements. Mn/DOT has an agreement with the Minnesota Board of Water and Soil Resources to operate this system and develop wetland sites so that acceptable wetland mitigation credits are available for projects as needed. Programmatic approaches are also used in the cultural resource area. Programmatic statewide cultural resource investigation have been developed for archeological sites (MnModel), historic bridges, railroads and farmsteads. A programmatic agreement on pre-1955 historic bridges has resulted in the preservation and ongoing maintenance of 24 representative historic bridges as mitigation for unavoidable project impacts to other potentially historic bridges. Additional areas for programmatic investigation and mitigation to promote project streamlining will continue to be developed.

- iii. Strive to improve compliance with environmental regulations in all aspects of operations. Mn/DOT will continually measure its regulatory compliance rates and modify practices accordingly. Mn/DOT will work with resource agencies to establish agreed upon best practices. For example, as the mobile source air toxics science progresses and FHWA updates its guidance, Minnesota will respond to the guidance set forth by EPA and FHWA.
 - iv. Mn/DOT will provide technical assistance and communicate best practices and solutions, including water quality management best practices, with both internal and external customers.
- 2. Emissions and Energy Consumption
 - a. Mn/DOT will advance the emissions reduction objectives put forward by the Next Generation Act and increase the use of alternative fuels.
 - i. Promote the use of transportation modes with high occupancy and/or low pollutant emissions to help reduce energy demands and the emission of greenhouse gases and other pollutants. As discussed in Policies 4, 5, 6, 7, and 8, examples of these transportation modes include rail and waterway for freight along with intercity bus, intercity passenger rail, transit, ridesharing through carpools or vanpools, biking, and walking for people.
 - ii. Increase energy conservation practices and the use of renewable supplies in the management of facilities and fleets. [b]
 - iii. Explore methods for managing Mn/DOT right-of-way and properties in ways that more effectively offset greenhouse gas emissions.

MN/DOT STRATEGIC PLAN

- I. Innovation
 - A. Promote a Culture of innovation in the organization
 - a. Flagship Initiative: Sustainability Initiative

ITS ARCHITECTURE PLAN

- I. Energy Consumption, Environmental Impacts & Costs
 - A. Reduce Energy Consumption, Environmental Impacts and costs of Transportation.
 - 1. Reduce emissions/energy impacts and use associated with congestion
 - a. O-24 Reduce congestion and delay.
 - b. O-33 Keep travelers informed of travel conditions.
 - c. O-43 Enhance compliance of air quality standards
 - 2. Reduce the need for new facilities.
 - a. O-31 Increase throughput of roadways.
 - b. O-36 Enhance asset and resource management.
 - c. O-37 Enhance credential process automation.

3. Reduce negative impacts of the transportation system on communities
 - a. O-14 Reduce violation of traffic laws.
 - b. O-28 Increase transit ridership.
 - c. O-30 Increase carpoolers.
 - d. O-44 Reduce environmental impacts of de-icing material use.

ST. CLOUD APO 2035 TRANSPORTATION PLAN

- I. Social, Economic & Environmental Impacts
 - A. Minimize Social, Economic and Environmental Impacts
 1. Protect and enhance the environment
 2. Promote energy conservation for support of positive changes affecting climate change

METROPOLITAN COUNCIL 2030 TRANSPORTATION PLAN

- I. Transportation System Investment
 - A. Coordination of Transportation Investments and Land Use
 1. Regional transportation investments will be coordinated with land use objectives to help implement the Regional Development Framework's growth strategy and support the region's economic vitality and quality of life.
 - a. Alternative Modes
 - i. Transportation investments and land development will be coordinated to create an environment supportive of travel by modes other than the automobile including travel by transit, walking and bicycling.
 - B. Energy and Environmental Considerations in Transportation Investments
 1. Transportation planning and investment decisions will consider and seek to minimize impacts on the environment.
 - a. Reduction of Transportation Emissions
 - i. The Council will promote strategies to reduce transportation emissions of pollutants identified in the federal Clean Air Act and its amendments.
 - b. Compliance with Federal Standards
 - i. Projects that help the region maintain compliance with federal air quality standards will have funding priority over projects that do not.
 - c. Preservation of Cultural and Natural Resources
 - i. Regional transportation projects should give special consideration to the preservation and enhancement of the region's cultural and natural resources, and should be consistent with regional plans and policies for parks and open space to the extent feasible.
 - d. Protection of Surface Water
 - i. The Council will work to ensure that surface water management programs and policies are implemented in the metropolitan area when transportation facilities are planned and implemented.

- e. Reduction of Greenhouse Gas Emissions
 - i. The Council will support and implement initiatives to reduce greenhouse gas emissions including programs that reduce the impact of transit on energy usage and the environment such as Metro Transit’s “Go Greener” initiative.
- f. Transit Priority for Fuel
 - i. In times of limited resources, the Council will advocate that transit be given priority for available fuel.

II. Highway System

A. Highway Planning

- 1. The Council, Mn/DOT, and local governments will plan the Metropolitan and Regional Highway Systems and local roads to provide a cost-effective, multimodal and safe roadway system that reflects the needs of a growing population and economy.
 - a. Context-Sensitive Design
 - i. All new and reconstructed roads will be planned and designed in a way that protects and enhances the environment and is sensitive to community attributes and objectives.

III. Transit System

A. Transit System Planning

- 1. Regional transit providers should plan, develop and operate their transit service so that it is cost-effective, reliable and attractive, providing mobility that reflects the region’s diverse land use, socioeconomic conditions and travel patterns and mitigating roadway congestion with the goal of doubling regional transit ridership by 2030 and a 50% increase in ridership by 2020.
 - a. Underrepresented Populations
 - i. Regional transit providers will continue to ensure their transit planning fairly considers the transit needs of all populations and is compliant with the environmental justice directives outlined in various federal legislation, including Title VI of the Civil Rights Act of 1964 and the National Environmental Policy Act.

B. A Cost-Effective and Attractive Regional Transit Network

- 1. Regional transit providers will preserve, operate, maintain and expand the transit system in a cost-effective manner that optimizes existing and future investments. The Council will continue to improve transit service coordination, travel speed, passenger safety, financial incentives and customer amenities to make the system more attractive, visible, travel time competitive and user-friendly.
 - a. Ridesharing
 - i. The Council will promote programs that encourage shared vehicle usage including carpooling, vanpooling and car sharing.

C. Transitway Development and Implementation

- 1. As one element of an overall transit network, the Metropolitan Council will strongly pursue, in coordination with CTIB, county regional railroad authorities and transit providers, the cost-effective implementation of a regional network of transitways to provide a travel-time advantage for transit vehicles, improve transit service reliability and increase the convenience and attractiveness of transit service.

- a. Criteria for Transitway Selection
 - i. Transitway investment decisions will be based on factors such as ridership, mobility improvements, operating efficiency and effectiveness, environmental impacts, regional balance, economic development impacts and cost-effectiveness. Readiness, priority and timing will be considered when making transitway investments, as will local commitment to transitway implementation and land use.
- b. Process for Transitway Selection
 - i. Every transitway corridor will be studied in-depth before investments are made. Every potential commuter rail and light rail project will undergo an alternatives analysis and develop an environmental impact statement before seeking funding for implementation. All bus rapid transit corridors will be studied and a range of implementation alternatives developed.
- c. Transitways and Development
 - i. The Council will work with local units of government to ensure that transitways promote efficient development and redevelopment.

IV. Other Surface Transportation

A. Providing for Regional Freight Transportation

- 1. The region will maintain an effective and efficient regional freight transportation system to support the region's economy.
 - a. Freight Terminal Access
 - i. The Council will work with its partners to analyze needs for freight terminal access.
 - b. Congestion Impacts on Freight Movement
 - i. The Council will work to reduce the impacts of highway congestion on freight movement.

V. Aviation

A. Consistency with Federal and State Plans/Programs

- 1. The planning, development, operation, maintenance and implementation of the regional aviation system should be consistent with applicable Federal and State aviation plans and programs.
 - a. Responding to National Initiatives
 - i. Project sponsors need to include the following in their planning and operational activities; Environmental sustainability efforts. Security needs as identified by National Homeland Security through the Transportation Security Administration.

B. Agency and Public Coordination

- 1. The regional aviation planning partners will promote public participation and awareness of aviation issues including involvement of non-traditional populations, system users and individuals.
 - a. Governmental Roles Defined
 - i. The region's aviation partners will have a regional aviation management system that clearly defines government roles and responsibilities for planning, development, operations, environmental mitigation and oversight.

C. Airports and Land Use Compatibility

1. In areas around an airport, or other system facilities, land uses should be compatible with the role and function of the facility. The planning, development and operation of the region's aviation facilities must be conducted to minimize impacts upon the cultural and natural environment, regional systems and airport communities.
 - a. Surface-Water Management
 - i. Airport LTCPs should include a plan for surface-water management that contains provisions to protect surface and groundwater. The LTCP must be consistent with plans of watershed management organizations and the state wetland regulations. The water management plan should also include provisions to mitigate impacts from construction and include the pretreatment of runoff prior to being discharged to surface waters.
 - b. Protecting Groundwater Quality
 - i. Airport LTCPs should include a management strategy to protect groundwater quality that indicates proposed policies, criteria and procedures for preventing, detecting and responding to the spill or release of contaminants on the site. The plans should identify the location, design and age of individual/group/central sewer systems on-site and all well location sites, and evaluate system deficiencies and pollution problems.
 - c. Providing Sanitary Sewer
 - i. Airport LTCPs should include detailed proposals for providing sanitary sewer services. Reliever airports should be connected to the sewer system when service is available near the airport. Whenever connecting is not practical, the airport owner and the local governmental units must adopt and implement ordinances and administrative and enforcement procedures that will adequately meet the need for trouble-free on-site sewage disposal in accordance with the Council's guidelines in its water resources management policy plan.
 - d. Monitoring Air Quality
 - i. The MAC should periodically evaluate the air quality impacts of MSP operations and report to the Council on air quality problems or issues through the MAC annual environmental review of the capital improvement program.
 - e. Aircraft Noise Abatement and Mitigation
 - i. Communities and aviation interests should work together on noise abatement and mitigation. Local comprehensive plans and ordinances for communities affected by aircraft noise should incorporate the Land Use Compatibility Guidelines for Aircraft Noise.

DIRECTIONS 2035 DULUTH-SUPERIOR LONG RANGE TRANSPORTATION PLAN

I. Environmental Protection

A. Protect and enhance the environment through responsible and compatible transportation projects

1. Reduce negative environmental impacts

a. Reduce transportation impacts on air and water quality; ensure transportation projects are compatible with ecological processes

- i. Help ensure that projects meet NEPA and CAA standards.
- ii. Promote projects that minimize traffic congestion and emissions.

- iii. Promote efforts to increase transit ridership in the Twin Ports.
 - iv. Promote efforts to increase non-motorized travel in the Twin Ports.
 - v. Promote projects that incorporate design features to mitigate stormwater runoff.
 - vi. Promote projects that minimize additional impervious surfaces.
 - vii. Research de-icing strategies and technologies to minimize the impact of road salt.
2. Reduce negative social impacts
 - a. Ensure transportation projects are "context sensitive," compatible with the cultural features of an area, and consistent with local comprehensive plans.
 - i. Request MIC review of site designs for upcoming development projects.
 - ii. Educate and advocate for the inclusion of Complete Streets principles in local projects.
 - iii. Promote awareness of local transportation issues and provide educational opportunities for decision makers and the public.
 - iv. Work with jurisdictions to ensure projects adhere to environmental justice requirements.
 3. Avoid low-density expansion
 - a. Increase the number of transportation projects that address existing development centers, promote density and reduce the need to expand transportation facilities.
 - i. Advocate for jurisdictions to exercise Smart Growth principles in their communities.
 - ii. Promote the policies and recommendations of the MIC's 2004 Duluth Urban Area Growth Impact Study.
 4. Improve energy conservation
 - a. Increase the number of projects that promote energy conservation and incorporate design features aimed at increasing local and regional sustainability.
 - i. Work with jurisdictions to identify growth areas; develop strategies to share revenues.
 - ii. Identify key corridors to improve signal operations and to reduce fuel consumption.
 - iii. Research "green" transportation strategies or technologies relevant to MIC area.

2035 LA CROSSE AND LA CRESCENT METROPOLITAN AREA TRANSPORTATION PLAN

I. Themes

- A. Enhance and protect the region's natural resources.

FARGO-MOORHEAD METROPOLITAN TRANSPORTATION PLAN

1. Manage and operate roadways efficiently
 - a. Manage congestion to improve traffic flow and conserve energy
 - i. Establish multijurisdictional protocols for special events.
 - ii. Develop region-wide protocols to respond to incidents and emergencies (flooding, hazmat, terrorism, etc.).
 - iii. Ensure region-wide coordination among traffic, emergency, and maintenance agencies.

- iv. Regularly monitor peak hour travel times on key corridors.
- v. Study corridors experiencing congestion; schedule and fund appropriate measures to relieve congestion.
- vi. Continue development and maintenance of a regional traffic demand model to forecast future corridor levels-of-service.

GRAND FORKS-EAST GRAND FORKS MPO TRANSPORTATION PLAN

- 1. Minimize adverse impacts from transportation
 - a. Minimize, avoid or mitigate adverse social and economic impacts resulting from existing or new transportation facilities
 - i. Initiate corridor preservation and right of way acquisition procedures where appropriate.
 - ii. Incorporate assessment of potential for environmental impacts into the alternatives screening process.
 - iii. Seek transportation enhancement projects that reduce existing transportation impacts to the environment.
 - b. Reduce environmental impacts by vehicles
 - i. Reduce VMT and VHT growth rates and optimize vehicle speeds.
 - ii. Promote projects, policies that increase the use of non-motorized modes, transit, and other travel demand management strategies.

ROCHESTER COUNCIL OF GOVERNMENTS TRANSPORTATION PLAN

- I. Management
 - A. Manage transportation systems to maximize effectiveness while minimizing impacts to the fiscal, economic, social, natural and built environments
 - a. Manage short and long term investment to minimize costs consistent with social, economic and environmental goals
 - i. Minimize long term costs to users of the transportation system.
 - ii. Minimize the public costs of providing facilities and services.
 - iii. Continue to incorporate revenue and expenditure forecasting and life cycle management into annual budgeting processes.
 - b. Provide for timely annual maintenance of the transportation system
 - i. Provide cost-effective operations supporting safety and environmental goals.
 - ii. Life cycle pavement maintenance activities on highways and bridges should be completed in a timely manner.
 - c. Protect social, cultural and environmental resources from adverse impacts
 - i. Strive to meet or exceed standards for social/cultural/environmental quality established in existing environmental laws.
 - ii. Assess economic impact from a total societal perspective, managing transportation system development to maximize economic gain and minimize economic loss over both the short and long term.
 - d. Promote measures to minimize the impact of transportation on our natural resources

- i. Conserve fossil fuels energy resources through shifts to more fuel efficient modes of travel or reductions in demand for non-renewable energy.

II. Alternative Modes

A. Encourage individuals to travel the share of trips made using alternative modes of travel

- a. Increase the share of trips made using alternative modes of travel
 - i. Encourage those making low occupancy trips to divert some trips to alternative modes of travel.
 - ii. Encourage individuals to utilize private vehicles more efficiently.
- b. Increase the level of amenity associated with alternative modes of travel
 - i. Maintain acceptable access times at major travel destinations in the community.
 - ii. Provide route flexibility on fixed route transit during off-peak hours or on low volume routes.
 - iii. Strive to improve the comfort/ambiance of transit vehicles as one means to attract more users to the system.
 - iv. Provide safe and secure facilities for pedestrians and bicyclists.
 - v. Provide higher speed transit service along selected high demand travel corridors.
 - vi. Conduct a feasibility study of urban rail service within the Rochester urban area and regional commuter rail service utilizing the existing Canadian Pacific corridor.
- c. Promote the use of public parking policy to influence individual's choice of travel
 - i. Support transit use within designated transit service areas with complementary off street parking policies.
 - ii. Promote the broader application of market based pricing of employee parking, other long term parking demand, and on-street short term parking.

III. Information & Education

A. Provide citizens, businesses and leaders of the community with information they need to make informed transportation choices

- a. Foster informed community debate on sustainable development and transportation policy
 - i. Educate the community about the costs of transportation to business and individuals and its influence on development patterns.
 - ii. Promote the benefits of alternatives to travel in low occupancy private automobiles through education/awareness and information programs.
 - iii. Increase awareness of how transportation and land use influence and impact sustainable development issues.

IV. Technology

A. Stimulate the application of new technology to the solution of transportation problems

- a. Provide strategic direction for the application of new technologies to the solution of transportation needs
 - i. Educate citizens and officials about sustainable transportation technologies and intelligent transportation systems (ITS) highlighting Minnesota-based initiatives
 - ii. Complete and periodically update a strategic plan for ITS deployment focused on technologies that will improve the efficiency, safety or effectiveness of transportation service in the region
- b. Support a public leadership role in developing and gaining market acceptance of alternative fuels

- i. Support research and development of alternative fuel markets.
- ii. Increase awareness of public sector support for alternative fuels.
- c. Promote the development and use of technologies which may substitute for the need to travel
 - i. Encourage broad range acceptance of telecommuting.
 - ii. Encourage telecommuting in contracts with vendors or service.
 - iii. Increase awareness of public sector support for telecommuting.

V. TDM and Sustainability

1. Influence travel choice

- i. Complete Safe Routes to Schools (SRTS) Plan for Rochester and Small Cities School Districts.
- ii. Continue to work with Mayo Clinic to refine and revise workplace commute options to reduce single occupant vehicle commuting.
- iii. ROCOG and the City of Rochester should work cooperatively with business interests to encourage employers to offer programs or benefits to employees designed to reduce drive alone commuting.
- iv. Evaluate final implementation and proceed to institute those parking pricing strategies in the Rochester Downtown Mobility Plan that are determined to have validity and will move the community towards goals.
- v. ROCOG and the City of Rochester should promote joint public-private development plans that incorporate desirable TDM features such as park & ride facilities or transit centers in combination with private commercial development, especially in corridors where transit and commuter bus service exists or is planned.
- vi. Establish a process for monitoring and reporting on indicators that measure the extent to which alternative modes of travel are financially supported and the extent to which individuals are using alternative modes to reduce the demand for private vehicular travel.
- vii. Continue to work with City of Rochester on implementation of traffic calming measures.
- viii. Promote telecommuting, flexible work hours and/or compressed work weeks as a means to reduce demand for peak hour commuting.

2. Provide travel choice

- i. Continue to invest in improvements to walking and bicycling networks.
- ii. In Rochester urban area, continue to apply adopted Complete Streets policy and principles to all new roadway construction/reconstruction/repaving projects as a matter of routine practice.
- iii. MNDOT, the City of Rochester and small cities should continue to expand the system of regional park and ride facilities to promote the use of carpools and express transit service to major employment and major business centers.
- iv. Opportunities should be explored regarding the viability of car sharing programs as part of TDM program.

3. Reduce Need to Travel

- i. ROCOG should work with local governments to explore the adoption of land use policies and guidelines that foster alternative transportation choices.

- ii. Develop education and outreach materials and showcase developments that are "transit friendly" and promote alternative modes of transportation programs to local commissions, elected officials, developers and concerned citizens..

4. Sustainability

- i. As a matter of investment principles, ROCOG and its partner agencies should consider sustaining and extending the investment value of existing infrastructure through commitment to "fix it first" policy that would give higher priority to spending on existing facilities before expending funds on new capacity.
- ii. ROCOG should develop modified street design standards that would link urban street design options to not only functional and operational characteristics of the traffic but also to account for the land use environment in which the facility is located and characteristics.
- iii. Create incentives and establish goals, policies, programs or standards that will encourage the utilization of sustainable development principles in the areas of Complete Streets, bicycle mobility systems, transit-oriented development, parking, public transit, and pedestrian mobility systems/
- iv. Investigate efforts that could help make the community a pioneer in electrified vehicles.