

Strategic Plan 2006 - 2010



U.S. Department
of Transportation

**U.S. DEPARTMENT OF TRANSPORTATION
CENTER FOR CLIMATE CHANGE
AND ENVIRONMENTAL FORECASTING**

STRATEGIC PLAN 2006 – 2010

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EXECUTIVE SUMMARY

As climate variability and change become more prominent concerns for society, there are four primary reasons why it is essential for the U.S. Department of Transportation to engage in related issues:

- Transportation contributes over a quarter of all U.S. human-produced greenhouse gas emissions;
- Climate change will likely have significant impacts on transportation infrastructure and operations;
- Increasing energy efficiency and use of fossil fuel alternatives in the transportation system are critical to the sector's energy security and ability to reduce GHG emissions; and
- There is a dearth of knowledge on transportation and climate change, severely limiting the ability of transportation planners and policy makers to make informed decisions.

When Congress, environmental groups, and others look for solutions to climate change, transportation is often considered to be a major source of the problem. The U.S. Department of Transportation must be able to participate in and contribute to these discussions to ensure that policies balance the need for reductions with the pursuit of other transportation goals.

Transportation will also be affected by climate change, which has the potential to create significant weather irregularities, including sea level rise and more intense storms that could severely affect the safety and security of national transportation infrastructure. Extreme weather conditions could also require significant changes in emergency and routine transportation operations.

USDOT established the Center for Climate Change and Environmental Forecasting in 1999 to play a leadership role in meeting these challenges. The Center has become the focal point within USDOT for information and technical expertise on transportation and climate change, working with its component organizations to coordinate related research, policies, and actions. The Center promotes comprehensive multimodal approaches to reduce GHG emissions and prepare for the effects of climate change on the transportation system, while advancing USDOT's core goals of safety, mobility, environmental stewardship, and security.

The Center has identified the following Vision, Goals, and Strategies for 2006-2010:

VISION

A transportation system that minimizes greenhouse gas emissions and is prepared for the impacts of climate change.

GOALS

- * **Foster strategies to avoid, mitigate, or adapt to the potential impacts of climate variability and change on the transportation system, while meeting future transportation needs.**
- * **Promote cost-effective strategies that reduce greenhouse gas emissions while supporting transportation safety, mobility, efficiency, and energy security.**
- * **Establish a leadership role on transportation and climate change issues by involving the transportation community and coordinating related USDOT programs and policies.**

STRATEGIES

- * **Research and Policy Analysis:** Leverage ongoing research and policy analysis with partners and act as a catalyst for further work through partnerships with the University Transportation Centers and other research entities.
- * **Integrated Approaches and Mutual Benefits:** Encourage decision-makers to take integrated approaches that recognize mutual benefits, allowing climate change goals to be pursued as complementary to other goals.
- * **State and Local Transportation Planning:** Focus on transportation and climate change initiatives with state and local transportation planning agencies through outreach, capacity building, and other collaboration.
- * **Communication, Education, and Capacity Building:** Improve communication and educate transportation decision-makers on climate change, disseminating information and tools to increase their ability to address climate change issues.

I. INTRODUCTION

As climate variability and change become more prominent concerns for society, there are four primary reasons why it is essential for the U.S. Department of Transportation to engage in related issues:

- Transportation contributes over a quarter of all U.S. human-produced greenhouse gas emissions (GHGs);
- Climate change will likely have significant impacts on transportation infrastructure and operations;
- Increasing energy efficiency and use of fossil fuel alternatives in the transportation system are critical to the sector's energy security and ability to reduce GHG emissions; and
- A dearth of knowledge on transportation and climate change, severely limits the ability of transportation planners and policy makers to make informed decisions.

At the current rate of growth, transportation's share of human-produced GHG emissions in the U.S. will increase from 28 percent currently to 36 percent by 2020. When Congress, environmental groups, and others look for solutions to climate change, transportation is often considered to be a major source of the problem. The U.S. Department of Transportation (USDOT) must be able to participate in and contribute to these discussions to ensure that policies balance the need for reductions with other transportation goals.

Transportation will also be affected by climate change, which has the potential to create significant weather irregularities, including sea level rise and more intense storms that could severely affect the safety and security of national transportation infrastructure. Extreme weather conditions could also require significant changes in emergency and routine transportation operations.

Energy security and fossil fuel use are critical concerns for the transportation community and have major implications for climate change. In the U.S., 69 percent of all oil is used by the transportation sector, which relies on oil for 98 percent of its fuel. It will be critical to advance the use of fossil fuel alternatives and more energy efficient technologies and operations in the transportation sector to maintain a strong economy while decreasing GHG emissions.

Finally, there is a paucity of knowledge on the dual focuses of this plan: the impacts of climate change on transportation, and the technologies and policies that most effectively reduce GHG emissions from transportation. The complexity of transportation and climate change issues and the lack of related expertise pose major challenges for transportation decision-makers and planners. Decision-makers, who are often unfamiliar with how transportation contributes to and will be affected by climate change, are making choices with significant long-term implications for climate change.

USDOT established the Center for Climate Change and Environmental Forecasting (the Center) in 1999 to play a leadership role in meeting these challenges. Stakeholders interviewed in the development of this plan confirmed that there is a critical national role for USDOT and the Center to play on climate change.

The Center has become the focal point within USDOT for information and technical expertise on transportation and climate change, working with its component organizations to coordinate related research, policies, and actions. The Center promotes comprehensive multimodal approaches to reduce GHG emissions and prepare for the effects of climate change on the transportation system, while advancing USDOT's core goals of safety, mobility, environmental stewardship, and security.

As part of USDOT, the Center contributes credibility and objectivity to efforts to bring key partners together with divergent interests and perspectives. The Center can assure that the views of USDOT's partners, stakeholders, and the public, which relies on the national transportation system, are considered as governments and other institutions develop national and international climate change policies.

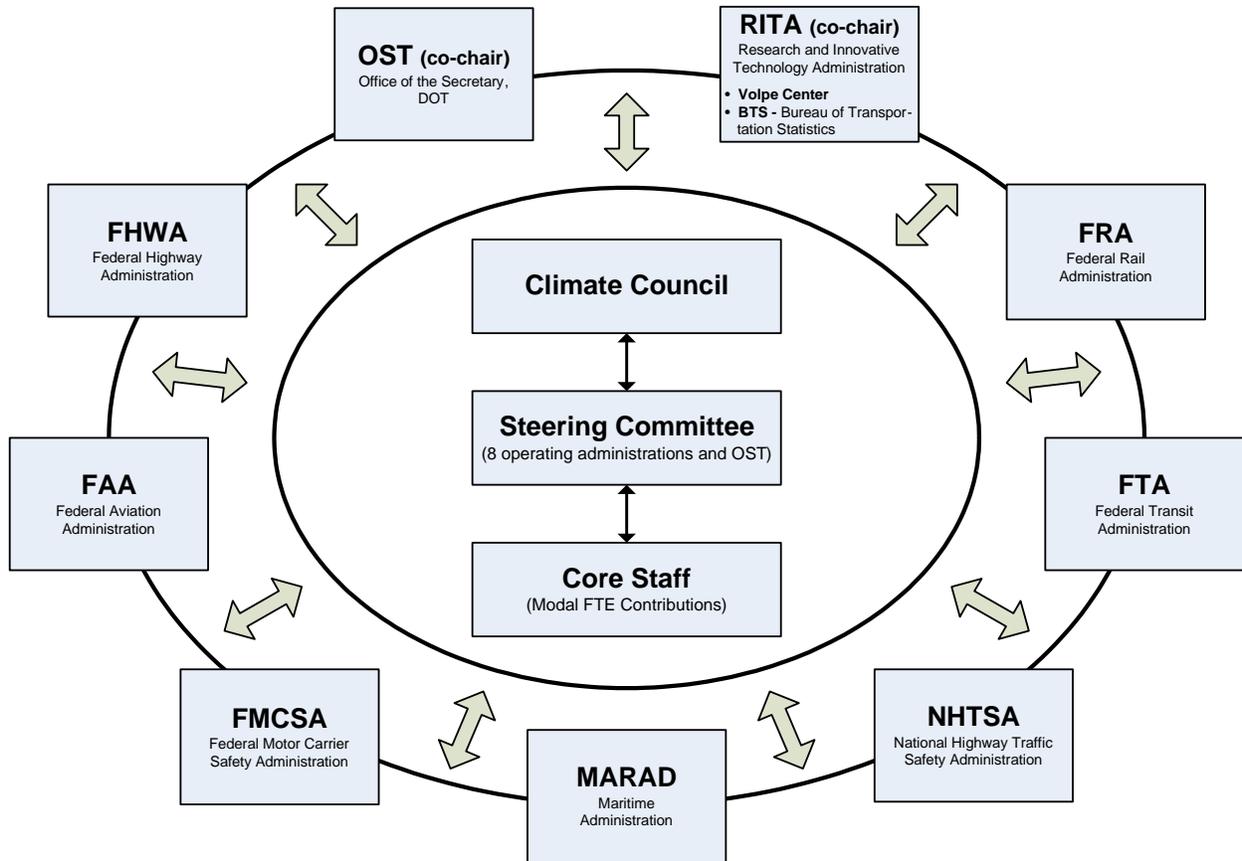
The vision, mission, goals, strategies, and short- and long-term actions presented in this plan are for 2006 to 2010. Using this plan as a strategic foundation, the Center will conduct implementation planning to match staff and budget resources to refine priorities, determine the feasibility of actions, and identify products and outcomes.

Organization: A USDOT-Wide Center

Climate issues cut across the Department's organizational structure with individual modal missions and programs. The Center relies on collaboration among USDOT administrations, as all modes contribute to greenhouse gas emissions and all modes will be affected by climate change and weather irregularities.

The Center is a USDOT-wide organization, with a membership of eight operating administrations and the Office of the Secretary (OST), as shown in Figure 1. Operating administrations support the Center's work through contributions of funds, staff, and technical expertise, and by participating in Center efforts to share information, build partnerships, and coordinate cross-modal activities related to climate change.

**Figure 1: The Center for Climate Change and Environmental Forecasting:
A USDOT-Wide Center**



The USDOT Climate Council, composed of member Administrators, provides strategic direction for the Center. A Steering Committee of senior executives from each of the member organizations leads the Center and approves action plans and spending. The Office of the Secretary for Policy and the Research and Innovative Technology Administration (RITA) co-chair the Steering Committee. Core team members provide staff-level participation from each administration and are responsible for the operations of the Center. Strategic planning and other support from the RITA Volpe National Transportation Systems Center (Volpe Center) builds upon the Volpe Center's work and experience with relevant programs across the Department and its expertise in climate-related areas.

The Center will work with other USDOT bodies through staff and administrative support as appropriate. Specifically the Center will explore mutually beneficial organizational and operational cooperation with the USDOT alternative fuels program.

Challenges

The Center faces significant near term challenges primarily because of funding structure limitations and the inherent complexity of transportation and climate change issues. The Center relies on annual commitments of funds and staff from participating modal administrations, which are subject to frequent shifts in budgets and priorities. Despite these uncertainties, the Center has accomplished a great deal since its inception. However, to realize its potential as a critical resource within USDOT and the transportation community, as charted in this strategic plan, the Center must establish a stable funding plan.

Although there is a vast amount of ongoing climate change research, there continues to be a paucity of knowledge on the dual focuses of this plan: the impacts of climate change on transportation, and the technologies and policies that most effectively reduce GHG emissions from transportation. Considering limited resources and competing research priorities inside and outside USDOT, the Center must leverage its resources and work closely with other research entities to accomplish its research goals.

The complex nature of transportation and climate change issues poses a further challenge when educating transportation decision-makers. Decision-makers are often unfamiliar with how transportation contributes to and will be affected by climate change, yet are making choices with significant long-term implications for the transportation system and climate change. The Center's core staff and Steering Committee need the time and expertise to participate in and interpret the evolving debate over climate issues and uncertainties and to cogently communicate the implications to transportation decision-makers.

Center Accomplishments

Over the last five years, the Center has completed 21 research studies and has over ten reports in process. The Center is conducting one of the Climate Change Science Program's 21 high priority synthesis and assessment projects on the "Impacts of Climate Change in the Gulf Coast Region – A Case Study," exploring the effects of climate change on transportation infrastructure.

The Center is also partnering with the Transportation Research Board to examine transportation-climate change policy issues, and has successfully organized conferences and outreach activities to raise the profile of climate change within the transportation community. This strategic plan, which builds on the accomplishments of the 2001 to 2005 Strategic Plan, establishes a clear direction for the Center over the next five years.

Since the Center's inception in 1999, the Steering Committee and core team have developed expertise on a broad range of climate change and transportation topics. These individuals knowledgeable represent USDOT and the Center in interactions with other federal agencies, state and local governments, academia, the private sector, and non-government organizations. The Center provides a valuable source of expertise for the Department on the complex and important issues related to transportation and climate change.

Strategic Planning and Partnerships

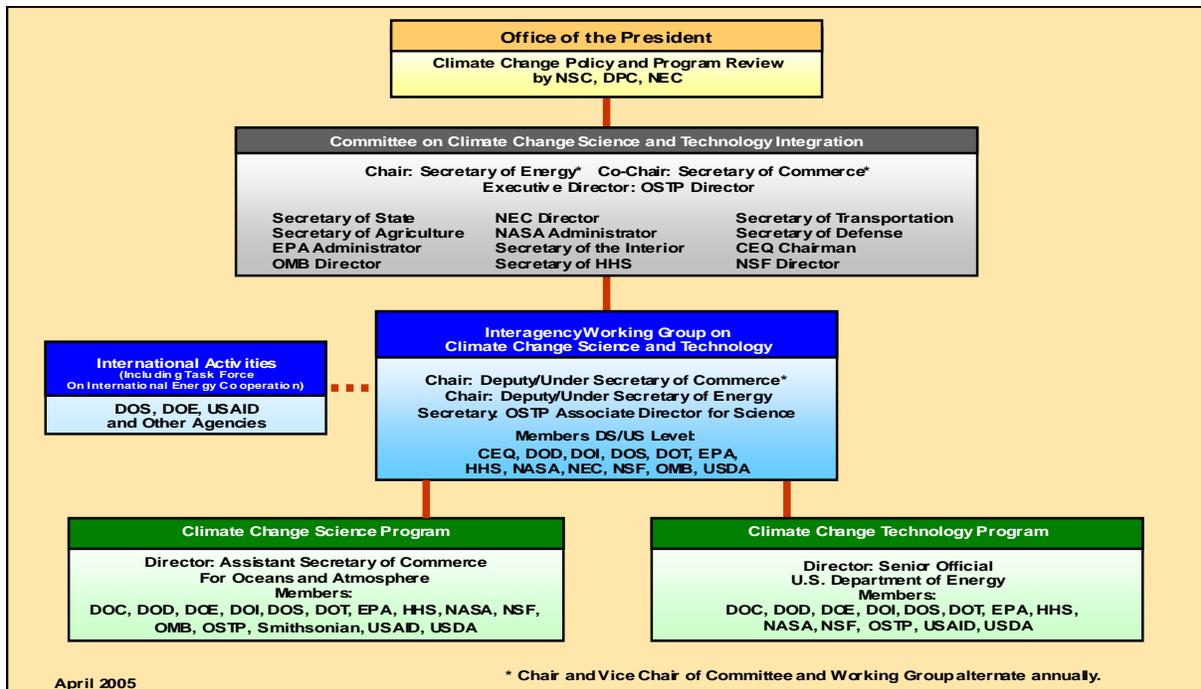
In developing this strategic plan, the Center interviewed over 25 representatives of key partners and stakeholders from federal, state, and local government, non-government, research, and private sector organizations (see Appendix 2). The interviewees discussed their programs related to transportation and climate change, reviewed the Center's vision and goals, proposed focus areas, and identified collaborative opportunities. The core team synthesized the information from the interviews into major themes that were further refined during a Steering Committee workshop. These themes, which helped shape the goals, strategies, and actions in this plan, are summarized in Appendix 3.

This plan aligns the Center's goals, strategies, and actions with those reflected in federal interagency strategic plans for climate change and related USDOT strategic plans, including:

- **USDOT Strategic Plan 2003-2008:** This strategic plan promotes USDOT's core goals of safety, mobility, global connectivity, environmental stewardship, security, and organizational excellence. In the USDOT strategic plan, climate change activities undertaken throughout the operating administrations are attributed exclusively to the Environmental Stewardship Strategic Objective which is included as one of DOT's Cross-Cutting Programs.
- **Charter for the USDOT Center for Climate Change and Environmental Forecasting (2005):** The Charter, signed by the Administrators of the Department's modal operating administrations, states USDOT's multimodal vision to address global climate risks and meet the Department's commitment to the Administration's Climate Change Research Initiative.
- **USDOT/RITA Planning:** The USDOT's Research and Innovative Technology Administration, which was created by Congress in 2005, is developing its first Strategic Plan, as well as a Department-wide five year strategic plan for research, development, and technology (RD&T). This strategic plan supports the research objectives and focus on cross-modal approaches reflected in the RITA strategic plan.

- Federal Interagency Planning:** This strategic plan supports key goals of the President's climate change program, as reflected in the Climate Change Science Program (CCSP, 2005) and Change Technology Program (CCTP, 2005) Strategic Plans.

Figure 2: USDOT and the U.S. Government Climate Change Program



USDOT's Climate Center is a part of the President's climate change program, working to support Federal goals to address climate change. The Center participates in the Climate Change Science Program (CCSP) and Climate Change Technology Program (CCTP).

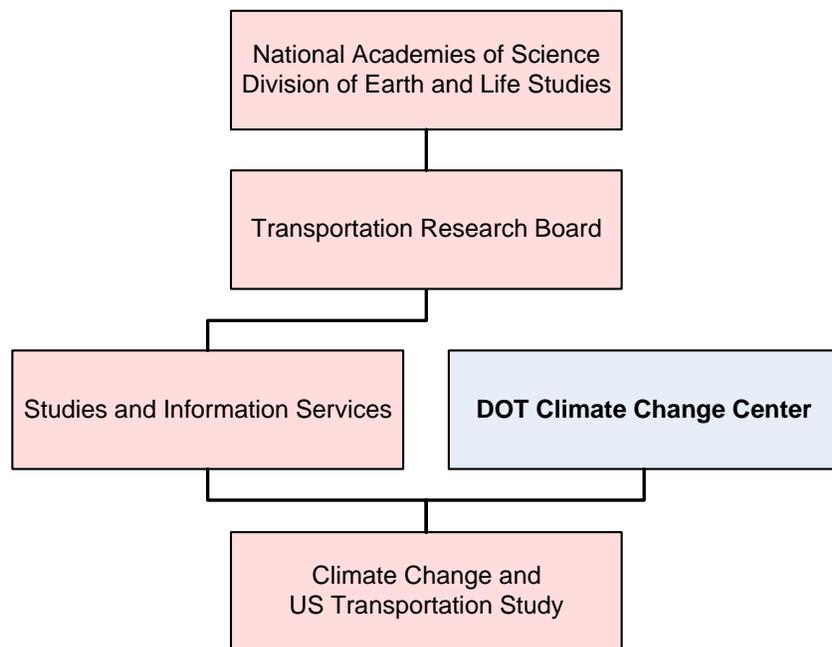
USDOT, through RITA and OST, also provides high-level participation in the Interagency Working Group on Climate Change Science and Technology.

- **National Academies of Science/Transportation Research Board:** The Center is partnering with the Transportation Research Board (TRB) of the National Academies of Science to study strategies for the transportation system to adapt to potential impacts of climate change.

The Center/TRB study will:

- Reexamine the role of design standards for transportation infrastructure considering potential impacts from climate change;
- Develop operational responses to potential climate change impacts; and
- Review approaches to decision-making under uncertainty.

Figure 3: USDOT Climate Center and TRB



DOT's Climate Center is partnering with TRB to study adaptation strategies to enable the transportation sector to respond to the potential impacts of climate change.

II. VISION, MISSION, GOALS AND STRATEGIES

VISION

A transportation system that minimizes greenhouse gas emissions and is prepared for the impacts of climate change.

MISSION

Promote comprehensive multimodal approaches to reduce greenhouse gases and prepare for the effects of climate change on the transportation system, while advancing USDOT's core goals of safety, mobility and accessibility, environmental stewardship, and security.

GOALS

- * Foster strategies to avoid, mitigate, or adapt to the potential impacts of climate variability and change on the transportation system, while meeting future transportation needs.
- * Promote cost-effective strategies that reduce greenhouse gas emissions while supporting transportation safety, mobility, efficiency, and energy security.
- * Establish a leadership role on transportation and climate change issues by involving the transportation community and coordinating related USDOT programs and policies.

STRATEGIES

- * **Research and Policy Analysis:** Leverage ongoing research and policy analysis with partners and act as a catalyst for further work through partnerships with the University Transportation Centers and other research entities.
- * **Integrated Approaches and Mutual Benefits:** Encourage decision-makers to take integrated approaches that recognize mutual benefits, allowing climate change goals to be pursued as complementary to other goals.
- * **State and Local Transportation Planning:** Focus on transportation and climate change initiatives with state and local transportation planning agencies through outreach, capacity building, and other collaboration.
- * **Communication, Education, and Capacity Building:** Improve communication and educate transportation decision-makers on climate change, disseminating information and tools to increase their ability to address climate change issues.

III. STRATEGIES AND ACTIONS

This section presents strategies and actions to accomplish the goals identified above. Each of the four strategies in this plan includes short- and long-term actions that support all three of the Center's goals, as summarized in Table 1. The short-term actions are intended to be specific and could be accomplished in 18 months, subject to the availability of staff and budget resources. The long-term actions will be pursued over the timeframe of the strategic plan and will require additional staff and budget resources.

The Center's ongoing strategic planning will focus on implementation, considering priorities and availability of staff and budget resources required to complete all actions.

Strategy: Research and Policy Analysis

Consistent with this plan's strategic goals, the Center will identify promising research opportunities to develop, promote and disseminate research that reduces transportation GHG emissions, prepares for the potential impacts of climate change on transportation operations and infrastructure, and improves the sector's energy security. The Center will conduct basic research and act as a catalyst for further research on transportation and climate issues, focusing on:

- Supporting the US Climate Change Science Program (CCSP);
- Partnering with University Transportation Centers (UTCs) and other research entities; and
- Providing tools, data, and analysis for transportation decision-makers.

Short-Term Actions

- **Increase support for CCSP work:**
 - Fulfill the Center's commitment to complete Phase I of Synthesis and Assessment Product: "Impacts of Climate Change and Variability on Transportation – Gulf Coast Study."
 - Participate in the following Climate Change Science Program working groups: Human Contributions and Responses, Climate Variability and Change, and Land-Use/Land Cover Change.
- **Complete current research and support clearinghouse development:**
 - Synthesize and disseminate completed research and compile the information in a clearinghouse.
 - Develop a database of transportation and climate research organizations and their programs, and identify potential research partnerships.
 - Survey the availability of technical tools, models, and databases that successfully incorporate climate change considerations as part of transportation planning and decision-making.
- **Explore policies that reduce GHGs and increase energy security:**
 - Participate in EPA/DOE workshops on responses to petroleum shortages.
 - Assess the use of alternative fuels to reduce GHGs in the USDOT fleet.
 - Identify energy efficient transportation technologies, with a focus on increasing USDOT's ability to address congestion-related greenhouse gases.
- **Institutionalize and standardize climate change data collection:** Develop methods to standardize and an approach to institutionalize climate change data collection, both internally, within USDOT, and externally, with local governments and others.

Long-Term Actions

- **Continue CCSP research:**
 - Initiate Phase II of the “Gulf Coast Study;” and participate in CCSP working groups.
 - Support science-based research to develop a national survey of regional impacts, working with other agencies.
- **Study the impacts of climate change on transportation:** Build-on ongoing USDOT and TRB research, and develop other research partnerships, to understand how more extreme temperatures may affect transportation *operations* and *infrastructure*, and what steps should be taken to avoid or mitigate those potential affects.
- **Expand research on policies that reduce GHGs and increase energy security:**
 - Develop alternative fuel feasibility and strategic integration assessments.
 - Evaluate innovative international approaches to reduce transport GHGs.
 - Identify methods for getting energy efficient technologies to the public.
 - Explore how travel behavior and human-centered transportation approaches could contribute to reduced GHG emissions.
- **Develop technical tools for transportation planners and decision-makers:**
 - Expand the survey under short-term actions to document best practices in using technical tools to incorporate climate change into transportation planning and decision-making, with the intent of incorporating climate change into the multimodal transportation planning process.
 - Continue to support institutionalizing and standardizing transportation and climate change data collection and assessment methodology at international, national, state, and local levels.
 - Work closely with partners to develop and refine technical tools and scientific research to assist transportation stakeholders in performing GHG/energy analysis for regionally significant transportation projects and strategies, and national transportation policies.

Strategy: Integrated Approaches and Mutual Benefits

Transportation stakeholders are more likely to make decisions that will reduce GHG emissions when these decisions *also* further the pursuit of core goals -- mobility, accessibility, safety, security, energy savings, smart growth, public health, or environmental stewardship, especially air quality. Through this strategy, the Center will encourage integrated approaches by decision-makers outside USDOT that recognize mutual benefits, allowing climate change goals to be pursued as complementary to other goals.

The Center will also work within USDOT to identify opportunities where climate change considerations can be incorporated with other objectives in current research, programs, and policies, leveraging USDOT programs to contribute to energy efficiency improvements, GHG emission reductions, and preparation for climate change impacts.

Short-Term Actions

- **Assess USDOT activities:** Further assess departmental activities, including research, programs, and policies that have direct or indirect connections to climate change. The Center will:
 - Expand current internal summaries and recommend opportunities for USDOT activities to reduce GHG emissions or contribute to adaptation.
 - Develop outreach materials to inform USDOT managers of the importance of considering climate change and opportunities to leverage existing activities.
 - Focus follow-up on identified multimodal activities that have climate benefits.

Long-term Actions

- **Integrate climate change concerns**
 - **Internally:** Integrate climate change concerns into other transportation activities, with a focus on areas over which USDOT has direct influence, for example, the Congestion Management and Air Quality Improvement program, state and metropolitan planning, environmental reviews of transportation projects, CAFE policy, and other research, programs, and policies involving modal shifts in freight or passenger transportation.
 - **Externally:** Work with external stakeholders, including state DOTs and other agencies, MPOs, modal transportation authorities, industry, and other organizations to demonstrate how climate change goals can complement the pursuit of other goals.

Strategy: State and Local Transportation Planning

There are important opportunities for the Center to focus on initiatives with state and local transportation planning agencies through outreach, capacity building, and other collaboration. State DOTs, MPOs, and modal authorities are major partners in many core USDOT policies and programs. This strategy will build on research completed by the Center and others, assessing actions that states, regions, and cities are taking to reduce greenhouse gas emissions and prepare for climate change impacts.

Short-Term Actions

- **Develop a dialogue and partnerships:** Initiate a dialogue with transportation planning and engineering communities on key issues and opportunities to integrate climate change considerations into state and local transportation planning, along with other environmental considerations. The Center, in coordination with other appropriate modal administration offices, will organize working meetings with associations of state DOTs, MPOs, and others to explore mutual interests and partnerships to encourage consideration of climate change in transportation planning.
- **Organize a pilot regional exchange:** Convene a regional pilot meeting of organizations interested in transportation and climate change. As part of USDOT, the Center can bring together representatives of different levels of government and transportation, energy, and environmental sectors to explore collaboration on transportation and climate change issues.
 - The Center will document lessons learned and assess whether it would be worthwhile to organize other similar meetings.
- **Undertake MPO Pilot Project:** Identify one or more MPOs to participate in a pilot to explore ways to improve greenhouse gas data collection and to consider greenhouse gas emissions in regional visioning and scenarios.
 - The Center will document lessons learned for a national audience.

Long-Term Actions

Expand state and local initiatives: Collaborate with state and local transportation planning organizations on initiatives to develop or disseminate models, databases, and other technical tools; educate and build capacity; and document best practices.

- **Discuss the Role of Greenhouse Gas Emissions in Regional Transportation Planning Processes** - At the Federal level, explore the appropriateness and potential of providing tools, guidance, and best practice information to analyze greenhouse gas emissions from transportation sources at a regional level.
- **Coordinate emergency planning:** Work closely with USDOT's Office of Emergency Transportation to develop regional emergency/evacuation plans for extreme climatic events at national or local levels.

Strategy: Communication, Education, and Capacity Building

Educating USDOT staff and policy-makers, the transportation sector, and the public about the relationship between transportation and climate change is a key strategy that advances all three of the Center's goals. The Center will work with its partners to raise broad awareness through improved communications. The Center will improve the knowledge and analytical skills of transportation decision-makers by disseminating technical information and tools to build capacity for addressing climate change issues.

Short-Term Actions

- **Initiate a clearinghouse for transportation stakeholders:** A clearinghouse will provide a valuable source of information and knowledge on the connection between transportation and climate change.
 - Analyze the feasibility of a clearinghouse.
 - Create an enhanced resource for transportation stakeholders to find information on transportation-related greenhouse gas emissions, best practices for mitigation strategies, and the impact of climate change on transportation infrastructure.
- **Initiate webinar outreach sessions:** With the Federal Highway Administration's (FHWA) Office of Freight Management and Operations, develop a web cast(s) on reducing greenhouse gas emissions from freight transportation as part of the "Talking Freight Seminars."
- **Develop a communications strategy in cooperation with USDOT Public Affairs Offices:** Coordinate with USDOT Offices of Public Affairs to educate the transportation community about transportation and climate change issues and disseminate Center research and technical information.
 - Develop a standard protocol with the Public Affairs Offices for responding to media requests related to transportation and climate change.
- **Identify opportunities with partners:** The Center will assess opportunities to participate in partners' events and invite partners to Center meetings. The Center will build on the contacts made with stakeholders and partners during the interviews for this strategic plan.

Long-Term Actions

- **Develop a "Congressional Outreach Strategy":** Raise awareness and educate members of Congress and staff on transportation-related greenhouse gas emissions, available mitigation strategies, and the impacts of climate change on transportation infrastructure.
- **Expand the clearinghouse:** Build a comprehensive clearinghouse with an enhanced website function. Eventually, the site will incorporate "communities of practice" --

collaboration among transportation stakeholders to exchange knowledge and expand internal and external capacity.

- **Prepare for Reauthorization:** Develop language for the next federal transportation reauthorization bill.

- **Strengthen Partnerships**
 - **Inter-agency partnerships:** The Center will increase collaboration with other government agencies and programs, including the U.S. Geological Survey (USGS), EPA, DOE, Climate Change Technology Program (CCTP), Climate Change Science Program (CCSP), DOD, and National Oceanic and Atmospheric Administration (NOAA).

 - **Non-federal partnerships:** The Center will expand strategic partnerships with groups outside of the federal government. These partnerships will allow the Center to leverage its resources.

Table 1: Strategies, Actions, and Goals

Strategies and Actions		Goals*		
		Emissions Reductions & Mitigation	Preparation for Impacts & Adaptation	Leadership & Unified Voice
1. Research and Policy Analysis				
<i>Short term</i>	Increase support for CCSP work			P
	Complete current research and support clearinghouse development			P
	Explore policies that reduce GHGs and increase energy security	S		P
	Institutionalize and standardize climate change data collection			P
<i>Long term</i>	Continue CCSP research			P
	Research impacts of climate change on transportation operations		P	
	Study regional impacts of climate change		P	
	Expand research on policies that reduce GHGs and increase energy security	P		
	Develop technical tools for planners and decision-makers	P	S	
2. Integrated Approaches				
<i>Short term</i>	Assess USDOT activities for connections to climate change			P
<i>Long term</i>	Integrate climate change concerns into transportation activities (internally and externally)	S	S	P
3. State and Local Transportation Planning				
<i>Short term</i>	Develop a dialogue and partnerships			P
	Organize a pilot regional exchange	S	S	P
	Undertake MPO Pilot Project	P	S	
<i>Long term</i>	Expand State and Local Initiatives			P
	Coordination on emergency planning		P	S
4. Communication, Education, and Capacity Building				
<i>Short term</i>	Initiate a clearinghouse for transportation stakeholders			P
	Initiate Webinar outreach sessions	P		S
	Develop a communication strategy in cooperation with USDOT public affairs			P
	Invite Partners to Center Meetings and Events			P
	Identify Opportunities with Partners			P
<i>Long term</i>	Develop a "Congressional Outreach Strategy"			P
	Expand the clearinghouse			P
	Prepare for TEA-4			P
	Strengthen Partnerships (Inter-Agency and Non-Federal)			P

* "P" indicates that the action makes a primary contribution to the indicated goal.

"S" indicates that the action makes a secondary contribution to the indicated goal.

IV. CONCLUSION AND NEXT STEPS

This strategic plan presents a vision, mission, goals, strategies, and short- and long-term actions presented for the period 2006 to 2010. Each of the four strategies provides short- and long-term actions that support all three of the Center's goals. The short-term actions are intended to be specific and could be accomplished in 18 months, subject to the availability of staff and budget resources. The Center selected these actions based on available resources and the likelihood of early results. Most of the short-term actions are initial steps that are essential to provide a focus and build support for the more ambitious long-term actions.

The long-term actions will be pursued over the timeframe of the plan and will require additional staff and budget resources.

Using this plan as a strategic foundation, the Center will conduct implementation planning to match staff and budget resources, refine priorities, determine the feasibility of actions, and identify products and measurable outcomes. As part of on-going implementation planning, the Center is committed to conducting continuous assessment of results.

The Center relies on annual commitments of funds and staff from participating modal administrations, which are subject to frequent shifts in budgets and priorities. The Center will work with USDOT senior managers to build organizational support and secure necessary resources for the broad scope of activity in this plan. A stable funding plan for the future will be essential for the Center to realize its potential as a critical resource within USDOT and the transportation community.

Appendix 1

Acronyms or Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
AMPO	Association of Metropolitan Planning Organizations
BTS	Bureau of Transportation Statistics
CCSP	Climate Change Science Program Strategic Plan
CCTP	Climate Change Technology Program Strategic Plan
The Center	The USDOT Center for Climate Change and Environmental Forecasting
DOE	U.S. Department of Energy
DOT	Department of Transportation
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	Green House Gas
ICLEI	International Council for Local Environmental Initiatives
IPCC	International Panel on Climate Change
MPOs	Metropolitans Planning Organizations
NEPA	National Environmental Policy Act
OST	Office of the Secretary
RD&T	Research, Development, and Technology
RITA	Research and Innovative Technologies Administration
USDOT	U.S. Department of Transportation
UTCs	University Transportation Centers

Appendix 2

Internal and External Interviewees for Strategic Plan

Federal Agencies

- Department of Commerce
- Climate Change Science Program
- Department of Interior
- U.S. Geological Survey
- Department of Transportation
- Office of the Secretary
 - Federal Aviation Administration
 - Federal Highway Administration
 - Research and Innovative Technology Administration
 - Office of Counsel
 - Volpe Center
- Environmental Protection Agency

Research Institutions

- Aerodyne
- Center for Clean Air Policy
- International Council for Local Initiatives
- Massachusetts Institute of Technology
- Joint Program on the Science and Policy of Global Change
- Oak Ridge National Laboratory
- Pew Center
- Resources for the Future
- Transportation Research Board
- Union of Concerned Scientists
- University of California at Davis
- Institute of Transportation Studies
- University of Southern California
- National Center for Metropolitan Transportation Research

Associations and Stakeholders

- American Association of State Highway and Transportation Officials
- Association of Metropolitan Planning Organizations
- Diesel Technology Forum
- Houston-Galveston Metropolitan Planning Organization
- New England Governors Council
- Parsons Brinckerhoff
- Port Authority of New York and New Jersey
- U.S. Conference of Mayors

Appendix 3

Themes Identified During Stakeholder Interviews and Steering Committee Workshop

Themes	Sub-themes (if any)
Balancing Mitigation and Adaptation	Mitigation/Reduction
	Adaptation Impacts
	Both
Education/Communication	Outreach
	Information Dissemination
Integrated Approaches	Intermodal
	Mutual Benefits
International	
Leadership/Unified Role for CCCEF	External
	Internal Capacity Building
Partnerships	
Planning	Strategic Planning
	State and Local
Policy Analysis	
Programmatic Opportunities within USDOT	
Research	