

Federal Highway Administration's (FHWA) Surface Transportation Environment and Planning Cooperative Research Program (STEP)

STEP: A Federal Research Program - conducting research that links to practice.



U.S. Department
of Transportation
**Federal Highway
Administration**

Global climate change, congestion, safety planning, bicycle/pedestrian and health, historic preservation, travel modeling, bi-national border planning and ecological systems are just a few key issues that fuel a dynamic partnership between the Surface Transportation Environment and Planning Cooperative Research Program (STEP) and stakeholders.

Through the FHWA's Office of Planning, Environment and Realty (HEP) STEP funds research to improve the understanding of the complex relationship between surface transportation, environment and planning.



What Is FHWA's STEP?

STEP is a Federally administered research program authorized in the "Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users" (SAFETEA-LU). It improves the understanding of the relationship between surface transportation, environment and planning. STEP implements a national research agenda reflecting national priorities based on input and feedback from partners and stakeholders. STEP funds identify, address and reassess national research priorities for environment, planning and realty, and develop tools to support these areas. STEP research efforts also help achieve national objectives for environmental stewardship and streamlining, congestion reduction, safety and security.

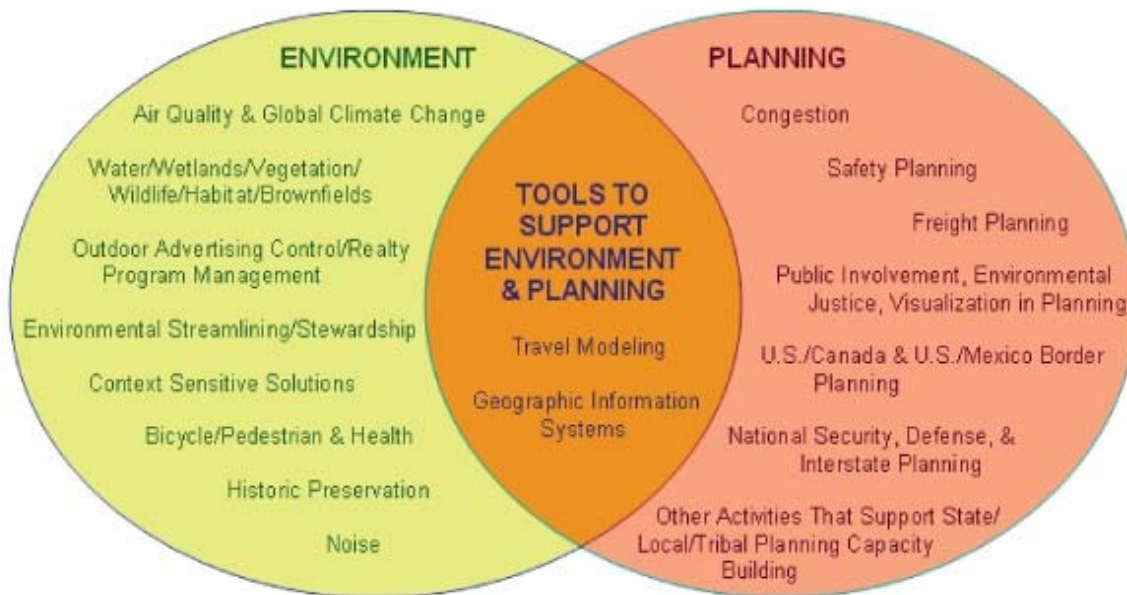
Due to obligation limitations and rescissions, approximately \$14 million of the \$16.875 million authorized is expected to be available in FY09.

How Are Stakeholders Involved?

FHWA uses stakeholder input to help identify and prioritize STEP research topics. Stakeholder feedback is also used to help refine and implement the national research agenda and form partnerships to leverage and coordinate other funding sources.

FHWA's STEP Emphasis Areas

For STEP emphasis area contacts: www.fhwa.dot.gov/HEP/STEP/contacts.htm



FHWA's STEP Research Highlights

For additional STEP research: www.fhwa.dot.gov/HEP/STEP/fy08rp.htm

ENVIRONMENT

Climate Change Local Mitigation and Impacts

A growing area of research for FHWA is climate change and how to mitigate its effects. A pilot program with the New Mexico DOT determines how much carbon dioxide can be captured in plants and soils along highway right-of-way (ROW). The process known as biological carbon sequestration is a tool for reducing greenhouse gases already in the atmosphere. Upon successful completion of this project, state DOTs will be able to design ROW management projects to sequester carbon and sell the credits, thereby generating revenue while improving the environment. Please visit: www.environment.fhwa.dot.gov/strmlng/newsletters/sep08nl.asp

Ecological Grant Program

Avoidance, minimization and mitigation efforts employed on transportation infrastructure projects may not always provide the greatest environmental benefit or may do very little to promote ecosystem sustainability. This concern mobilized an Interagency Steering Team to collaborate to write *Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects*. *Eco-Logical*, outlines an ecosystem approach that identifies and addresses the greatest conservation needs associated with mitigation for infrastructure projects. Fifteen cooperative agreements have been awarded to organizations in 10 states totaling approximately \$1.4 million. These grants demonstrate how infrastructure development and ecosystem conservation can be integrated to harmonize economic, environmental and social needs and objectives. Please visit: www.environment.fhwa.dot.gov/ecological/eco_index.asp

International Best Management Practices (BMP) Stormwater Database

The International Stormwater BMP Database provides information on BMPs for use in selection, design and performance of stormwater management facilities. This activity is in partnership with the Environmental Protection Agency, Water Environment Research Foundation, American Society of Civil Engineers and others. Please visit: www.bmpdatabase.org

FHWA's STEP Research Highlights - (continued)

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ENVIRONMENT-(continued)

Safety Effects of Electronic Advertising on Driver Attention and Distraction

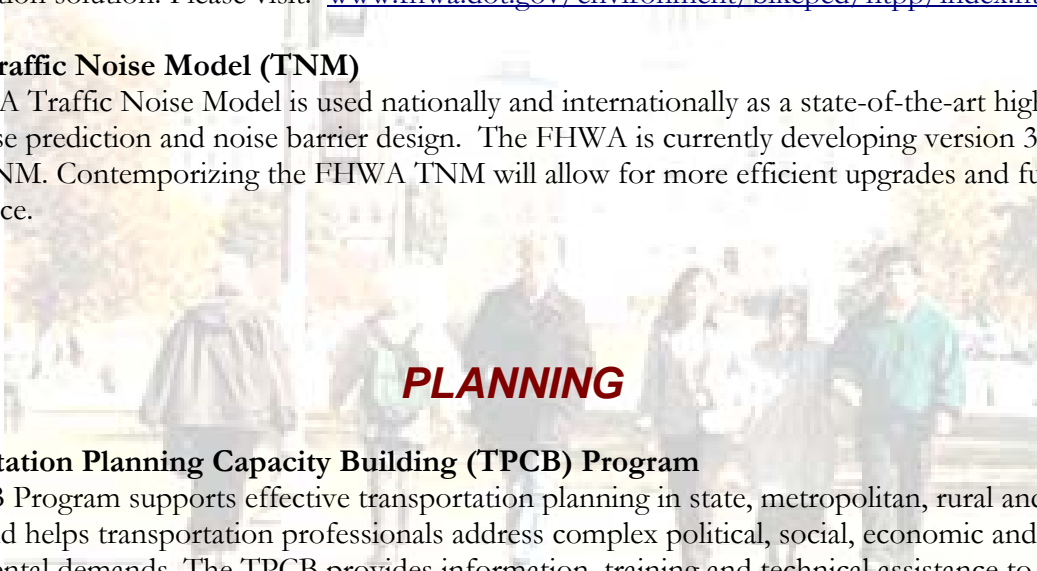
The Safety Effects of Electronic Advertising on Driver Attention and Distraction evaluates effects of a recent change in Outdoor Advertising technology, Commercial Electronic Variable Message Signs, on driver distraction and safety. Results will be critical to assessing the need for new or refined FHWA policies on Outdoor Advertising Control. Results will also help stakeholders including regulators and the industry in development of practices, policies and procedures to implement this new technology in a safe manner. Please visit: www.fhwa.dot.gov/REALESTATE/elecbbird/chap3.htm

Interim Report to the U.S. Congress on the Nonmotorized Transportation Pilot Program (NTPP)

This interim report summarizes progress and initial results of the FHWA and four pilot communities' participation in the NTPP. The purpose of the NTPP is to demonstrate the extent to which bicycling and walking can carry a significant part of the transportation load and represent a major portion of the transportation solution. Please visit: www.fhwa.dot.gov/environment/bikeped/npp/index.htm

FHWA Traffic Noise Model (TNM)

The FHWA Traffic Noise Model is used nationally and internationally as a state-of-the-art highway traffic noise prediction and noise barrier design. The FHWA is currently developing version 3.0 of the FHWA TNM. Contemporizing the FHWA TNM will allow for more efficient upgrades and future maintenance.



PLANNING

Transportation Planning Capacity Building (TPCB) Program

The TPCB Program supports effective transportation planning in state, metropolitan, rural and tribal settings and helps transportation professionals address complex political, social, economic and environmental demands. The TPCB provides information, training and technical assistance to help transportation professionals create plans and programs that respond to the needs of the many users of local transportation systems. The TPCB Peer Program is a critical piece of the overall TPCB Program and provides opportunities for transportation planning professionals to share experiences and noteworthy, solution-based ideas. It is designed to meet the specific needs of state, regional, local and tribal governments. Peer program activities include peer exchanges, peer workshops, roundtables, teleconferences and topic-specific forums. Several peer exchanges have been conducted in regions throughout the country. Please visit: <http://planning.dot.gov/>.

Border Wait Times

An effort is underway to measure travel times in freight significant corridors and border crossing times at major U.S. international land border crossings. Border crossing times or wait times indicate transportation system performance and have major impacts on the U.S. economy. This project is developing several technologies including satellite technology to automatically measure travel time and border crossing times.

FHWA's STEP Research Highlights – (continued)

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TOOLS TO SUPPORT ENVIRONMENT & PLANNING

Travel Modeling

Travel Model research supports technology deployment to planning agencies, training and technical capacity building. For example, model practices at selected Metropolitan Planning Organizations, such as Portland, Sacramento and Dallas have been highlighted. Peer review programs support technology enhancement by recommending improved travel model practices to planning agencies. Dynamic network modeling technologies and activity-based demand methods are being developed and moved into practice. Examples of this include the implementation of synthetic population models and dynamic networks at the Atlanta Regional Commission and the documentation of applied activity-based models.

Using GIS in Planning and Environment Linkages (PEL)

A report of three case studies shows how GIS has been effectively implemented into the FHWA's PEL approach. PEL is an approach to transportation decision-making that considers environmental, community and economic goals early in the transportation planning stage and continues through project development, design and construction. This can minimize duplication of effort, promote environmental stewardship and reduce delays in project implementation. FHWA also convenes GIS Transportation Webcasts to highlight geospatial technologies applications for state DOTs, MPOs and other transportation agencies. Please visit: <http://gis.fhwa.dot.gov>.

FHWA's STEP PROGRAM & PROCESS

For additional STEP frequently asked questions: www.fhwa.dot.gov/HEP/STEP/faq.htm

Who gets STEP money?

STEP funds can be awarded to State governments, Metropolitan Planning Organizations, Local and Tribal governments, Universities, Federal Agencies, Non-governmental organizations and the private sector

Is there a match requirement for STEP funds?

Yes, for grants and cooperative agreements. Congress mandates a 50 percent non-Federal match for research funded under Title V of SAFETEA-LU, including STEP. This "non-Federal match" does not apply to funds that are awarded via contracts or Federal Interagency Agreements.

Can University Transportation Centers (UTC) or State Planning and Research funds be used as a match to STEP funds?

No. SAFETEA-LU does not allow UTC or State Planning and Research funds to be used as the non-Federal match for STEP.

How are STEP projects selected?

Projects are selected using a rolling, yearly process. Each fiscal year, an announcement is published in the Federal Register requesting suggested lines of research from stakeholders. This feedback is used to coordinate and develop the Annual STEP Plan. The FHWA Associate Administrator for the Office of Planning, Environment and Realty makes final funding decisions and approves the Annual STEP Plan.

General STEP & Contact Information: www.fhwa.dot.gov/hep/step/index.htm or 202-266-0233