

Percent of projects completed without environmental violation-10a

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Kathy Harvey, State Design Engineer

Purpose of the Measure:

This measure tracks environmental violations. MoDOT projects must comply with several environmental laws and regulations. To be in compliance, MoDOT makes commitments throughout the project development process that must be carried forward during construction and maintenance. In addition, the various permits obtained for projects also contain specific requirements for compliance. MoDOT must also comply with the environmental laws and regulations as it conducts its daily work in all areas of the organization.

If a violation is noted, it can result in either a Letter of Warning (LOW) or a Notice of Violation (NOV) to MoDOT. Letters of Warning can also be received as simply that, a warning to MoDOT of a special circumstance to be aware of, or for a situation that needs to be monitored so that a violation does not occur. For that reason, LOWs never will be eliminated but should be kept to a minimum. However, it is unacceptable to the department to have an NOV.

Measurement and Data Collection:

Both LOWs and NOVs are written correspondence to MoDOT or MoDOT's contractors from regulatory agencies, which are tracked in a MoDOT database by location or project number, as appropriate. Where tracked by project, the project with violations received may span several years. The first chart is based on a calendar year of construction projects reported to be completed during that year and the number of violations received on those projects over the life of the project. The second chart is a report by calendar year of the LOWs and NOVs received by the department for any activity and the data is updated quarterly.

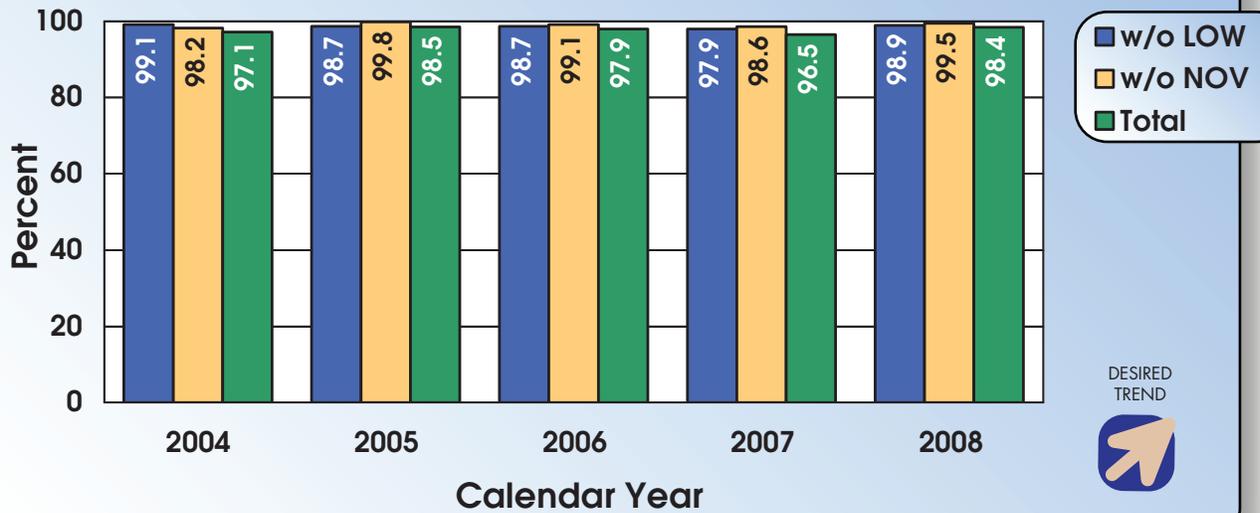
Improvement Status:

The percentage of projects completed without environmental violation shows a relatively level trend line for the past five years. In 2008, MoDOT received two NOVs and four LOWs, significantly reducing the number of both NOVs and LOWs from the previous two years.

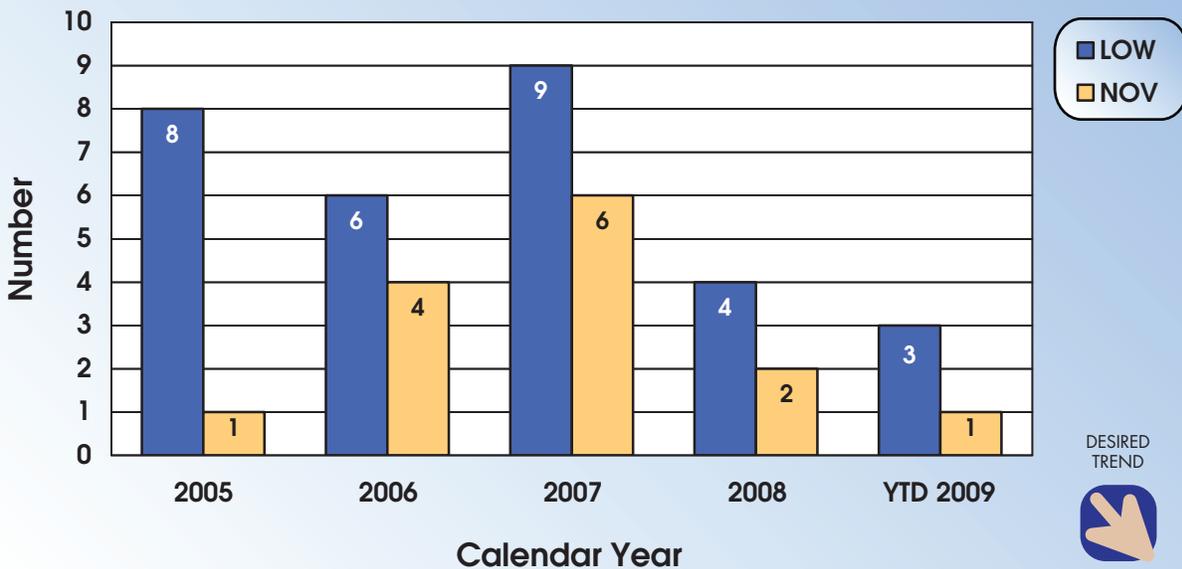
- First quarter 2009 – MoDOT received one LOW and zero NOVs. The LOW was for discharge concerns at a MoDOT salt storage facility.
- Second quarter 2009 – MoDOT received one NOV and two LOWs. The NOV was for hazardous waste issues at one of our maintenance facilities. One LOW was for failure to submit a discharge monitoring report and the other was related to best management practices for erosion and sediment control on a construction project.



Percent of Projects Completed without Environmental Violation



Number of LOWs & NOVs



Note: There is no benchmark data presented with this measure. MoDOT has a zero-tolerance policy toward NOVs, but recognizes LOWs will never be eliminated due to their nature. Therefore, regardless of what other states are doing, MoDOT's desired results are zero NOVs, because NOVs are usually violations of law and state statute.

Number of projects MoDOT protects sensitive species or restores habitat-10b

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Gayle Unruh, Environmental & Historic Preservation Manager

Purpose of the Measure:

Missouri is home to many rare species of plants and animals, some of which are on the federal endangered species list. The Endangered Species Act of 1973 prohibits harm or harassment of these species.

Avoiding or minimizing harm to these species and protecting or restoring their habitat is a fundamental obligation of this organization. Avoidance and/or protection are the first goals of MoDOT's efforts, but in circumstances where avoidance cannot be achieved, restoration of habitat is a minimum acceptable result.

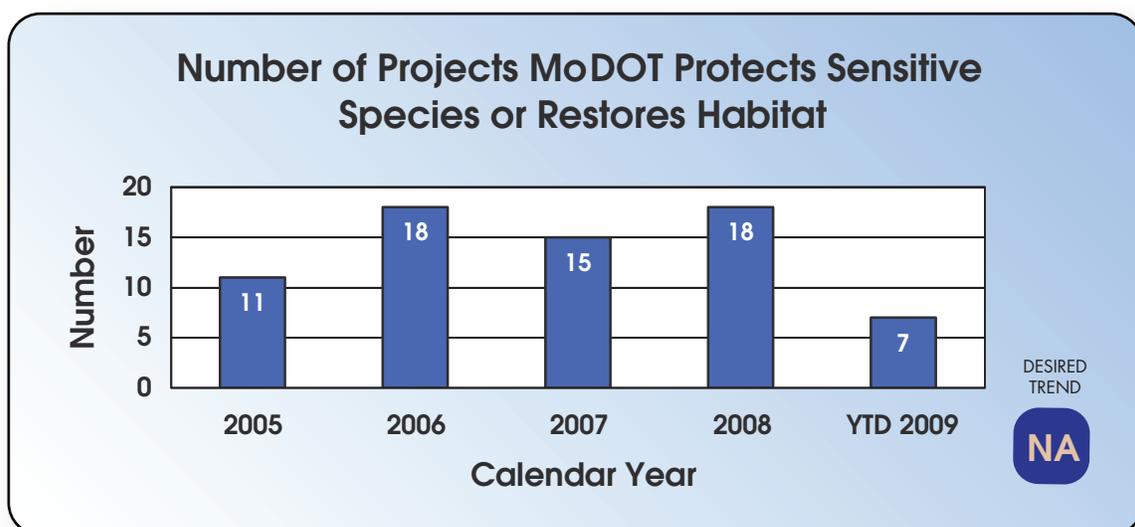
Measurement and Data Collection:

On all MoDOT projects, the department investigates and informs the U.S. Fish and Wildlife Service (USFWS) of any activity in the vicinity of a known threatened or endangered species or critical habitat. Through consultation with USFWS, MoDOT has the data to report on this measure. Because this measure focuses on projects that protect or restore sensitive habitats that could not initially be avoided, most MoDOT projects are not included in this data. This measure is tracked by calendar year with quarterly updates. Annual data are finalized and shown in the

January Tracker. There is no desired trend with this measure. The number reported will fluctuate depending on the size of MoDOT's construction program each year, type of projects being constructed, location and the ability to make adjustments to avoid impacts on sensitive species or their habitat. There are occasionally more than one species on a project.

Improvement Status:

MoDOT has protected sensitive species or restored their habitat on seven projects in the first half of this calendar year. These species and habitats include the eastern hellbender (one project), Niangua darter (one project) and bird nests on bridges (five projects). Under the Migratory Bird Treaty Act, birds are protected from deliberate harassment, collection or nest destruction. In cases where colonies of swallows build their nests on the department's bridges, MoDOT can either keep birds from building nests on bridges or limit maintenance work such as paint blasting and repainting to times outside of the nesting season.



Ratio of acres of wetlands created compared to the number of acres of wetlands impacted-10c

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Gayle Unruh, Environmental & Historic Preservation Manager

Purpose of the Measure:

Wetlands are a valuable resource in Missouri, having beneficial functions such as wildlife habitat, flood storage and water quality improvement. In addition to these benefits, it is required in the Clean Water Act that impacts to wetlands are avoided, minimized or that wetlands are recreated when a wetland is destroyed during a transportation project.

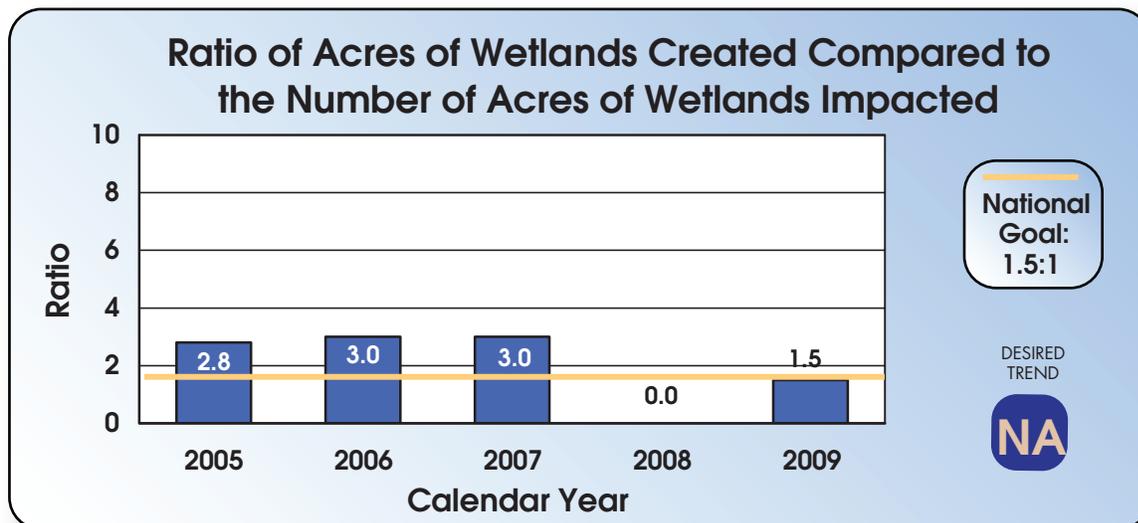
Measurement and Data Collection:

Data for this measure is calculated by comparing acres of project impacts taken from Clean Water Act permits to acres of wetland constructed, as shown in roadway design plans or by calculating the actual wetland areas recreated by MoDOT, or wetland mitigation purchased from a commercial wetland bank. Impacts may occur in a different year from the mitigation; so for the purposes of this measure, the timeframe for the reporting is when the mitigation construction is complete based on a calendar year. The national goal set by the FHWA for recreating wetland is to construct 1.5 acres of wetland for every 1.0 acre of wetland impacted. Recreating wetlands at this ratio helps to offset the beneficial functions lost during the time it takes for a wetland to develop. This measure helps ensure that MoDOT is doing its part to maintain wetlands in Missouri.

Since this measure is also tracked by FHWA for the nation, MoDOT contacted state DOTs that are successful at meeting the 1.5-to-1 ratio. Most of the states queried said that the biggest factor in meeting the ratio is in the use of wetland mitigation banks. They had greater control over achieving their target ratios and more ecologically successful wetland mitigation. MoDOT has a statewide umbrella wetland mitigation banking agreement. This measure is tracked by calendar year with quarterly updates.

Improvement Status:

MoDOT had seven projects with wetland impacts and mitigation in the first half of calendar year 2009. Impacts to 3.04 acres of wetland resulted in 4.58 acres of mitigation, which is a ratio of 1.5 to 1. This ratio is consistent with the national goal of 1.5 to 1. MoDOT recently made application to the Corps of Engineers to build its fourth bank, the North Fork Spring River Mitigation Bank, in Barton County. MoDOT has operating wetland mitigation banks located in the Kansas City, Central and Southeast Districts.



Percent of Missouri's clean air days-10d

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Eric Curtit, Long-Range Transportation Planning Coordinator

Purpose of the Measure:

Vehicle emissions are a significant contributor to poor air quality. MoDOT makes every effort to build and operate roads in ways that improve air quality.

Measurement and Data Collection:

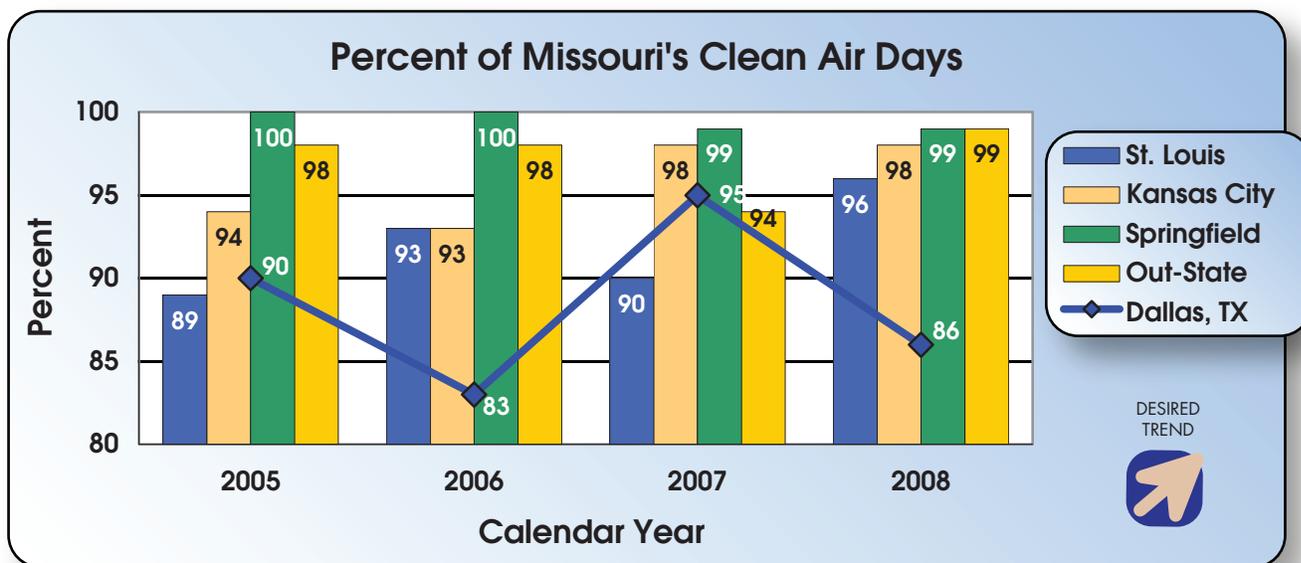
The U.S. Environmental Protection Agency (EPA) establishes air quality standards for the United States. The ground level ozone standard is used in this measure as a threshold for determining if areas of the state have clean air. EPA collects ozone readings in Kansas City, St. Louis, Springfield and the out-state areas during the annual monitoring period – April through October.

The data contained in the table below reflects the available percentage of days, by area, that Missourians experienced clean air. MoDOT compares Missouri's ozone readings to Dallas, Texas, because of its similar pollutants and distance from other areas that affect its air quality.

Improvement Status:

In 2008, a cooler summer contributed to cleaner air than previous years. A new, stricter standard has been established to better meet long-term air quality improvement goals. MoDOT is committed to improving the regions' air quality by managing congestion to reduce emissions, modifying daily operations, modifying employee action, providing information to the public, being a leader in air quality improvement, providing alternative choices for commuters and promoting the use of environmentally friendly fuels and vehicles. MoDOT continues to serve on the air quality committees in Kansas City, St. Louis and Springfield.

MoDOT partnered with the Missouri Department of Natural Resources and was awarded more than \$700,000 from EPA through a Diesel Emissions Reduction Act grant. The grant activities are focused on retrofitting MoDOT vehicles with new diesel emission reduction technologies and increasing fuel efficiency.



Number of gallons of fuel consumed-10e

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Jeannie Wilson, Central Office General Services Manager

Purpose of the Measure:

This measure tracks the use of fuel and fuel efficiency within MoDOT. It shows MoDOT's contribution toward environmental responsibility and conservation of resources. The first chart shows the total number of gallons of fuel consumed. The second chart indicates the average miles per gallon for the five vehicle classes that accumulate the majority of miles driven.

Measurement and Data Collection:

This measure is intended to focus on the total fuel consumed and how wise choices can impact fuel economy. Data is collected based on the number of gallons of fuel consumed by unit recorded in the statewide financial system.

MoDOT must meet the following state guidelines: 70 percent of the light duty vehicles ($\leq 8,500$ GVW) purchased must be alternative fuel capable; 30 percent of the fuel that our light duty alternative fuel fleet uses must be alternative fuel; 75 percent of all diesel fuel burned (off road and on road) must be a minimum of B20 blend (20 percent biodiesel and 80 percent diesel) or higher.

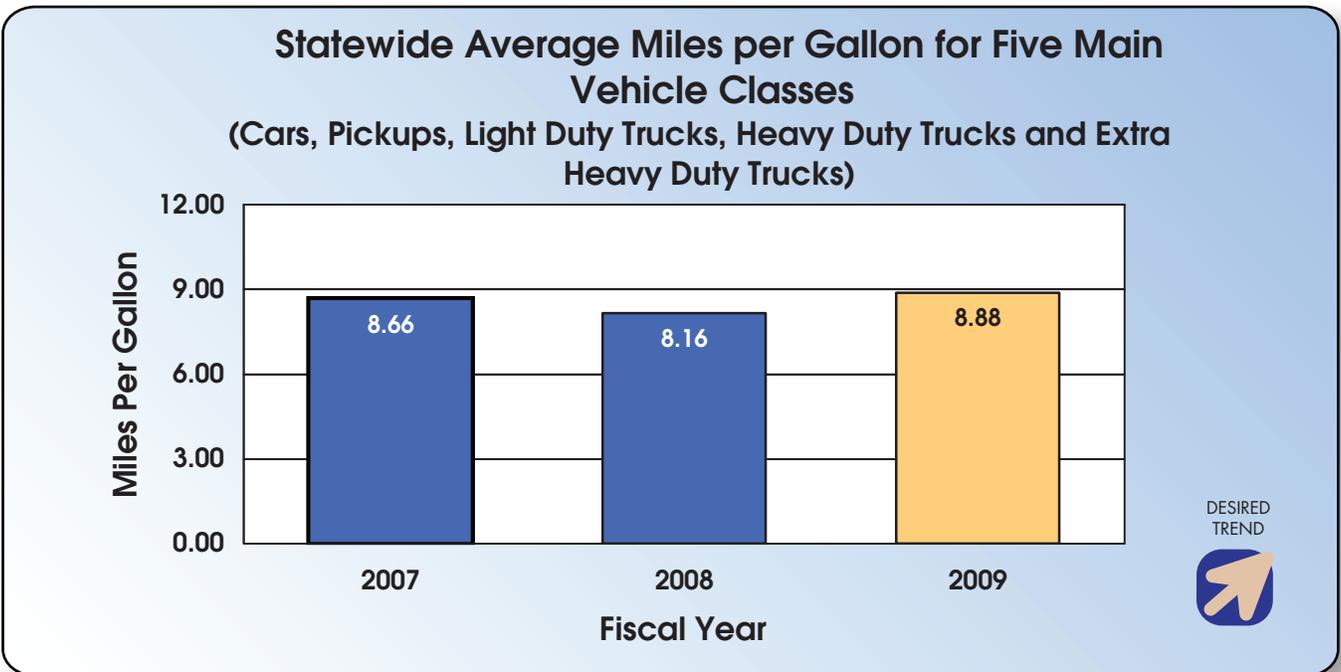
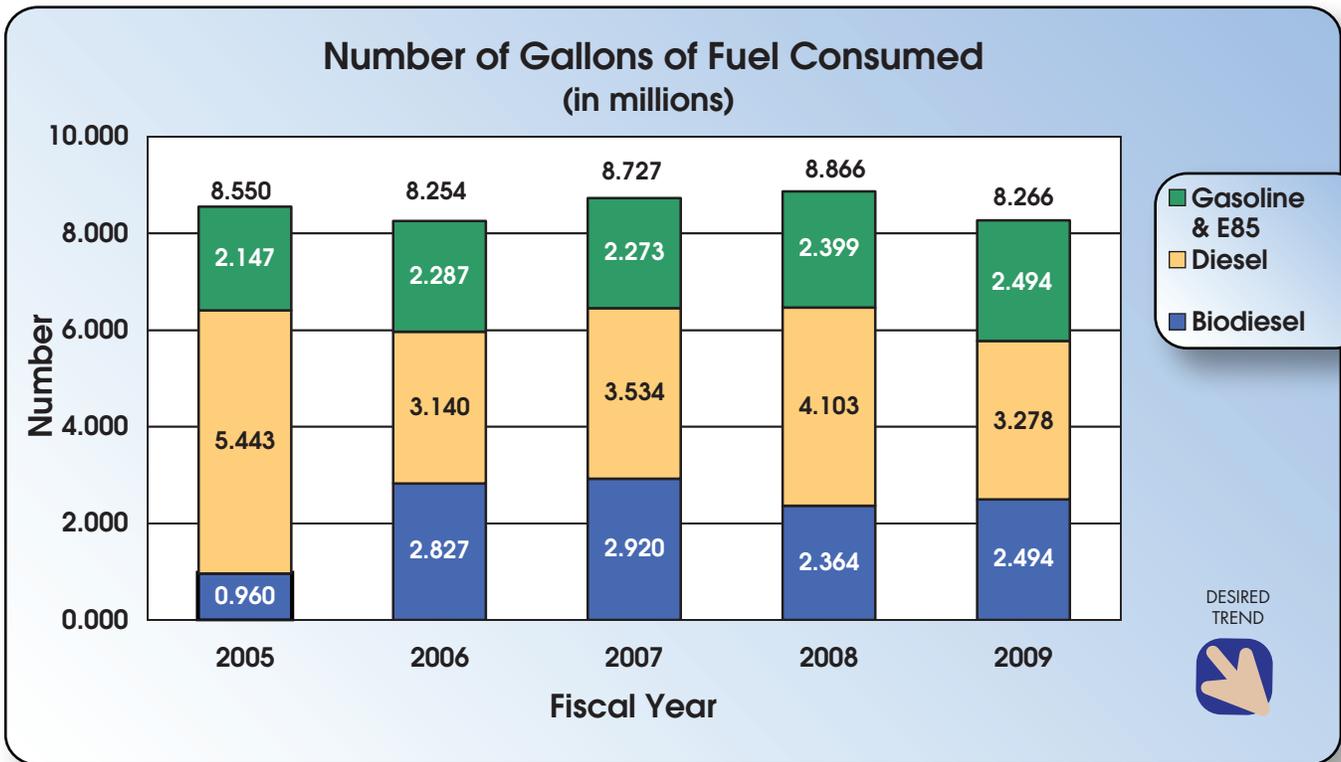
Improvement Status:

In comparing fiscal year 2009 to fiscal year 2008, the total fuel consumed decreased by 6.8 percent and the miles driven decreased by 3 percent. This equates to approximately 600,000 gallons of fuel conserved.

In reviewing the data by fuel type, diesel decreased approximately 695,000 gallons (10.8 percent), unleaded gasoline increased by 122,000 gallons (5.4 percent), and E85 decreased by 27,000 gallons (19.3 percent).

Some of the reasons for the reduction are: a milder winter in most areas of the state; using the most fuel efficient piece of equipment to do the job; performing work that required lighter pieces of fleet; replacing diesel units with gasoline units; and installing automatic idle shut down features on heavy equipment in most districts.





Number of historic resources avoided or protected as compared to those mitigated-10f

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Bob Reeder, Historic Preservation Coordinator

Purpose of the Measure:

Federal historic preservation laws relating to federally funded projects, gaining public and agency support for particular projects, and general environmental stewardship require MoDOT to avoid, minimize or mitigate project impacts to historic buildings, bridges and marked cemeteries whenever feasible. Compiling information about project impacts to important cultural resources provides a measure of MoDOT's success at avoiding, protecting or mitigating project impacts to important cultural resources.

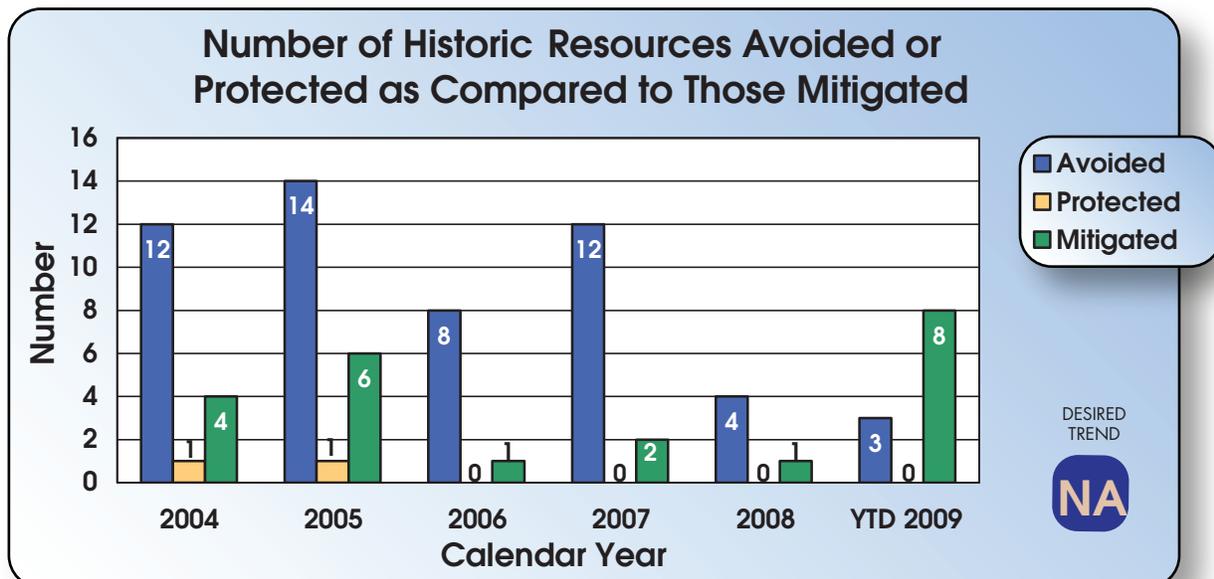
Measurement and Data Collection:

Data collection begins at the approved conceptual plans stage for projects. As project design plans and right of way plans are prepared by the district, department staff track the number of historic resources in project footprints and the number of resources that can be avoided or protected by revising the design of a project versus the number of resources MoDOT can not avoid and must be mitigated. The data includes only historic resources identified as potentially affected by projects after the conceptual plan stage. The data does not include historic resources avoided during early project planning or

those avoided during consideration of different alignments during National Environmental Policy Act studies. This measure has no overall desired trend. For any year, data for the measure will vary due to the number of projects in the MoDOT program and the specific nature of those projects. This measure is tracked by calendar year with quarterly updates.

Improvement Status:

MoDOT avoided project impacts to all but eight historic resources during the first two quarters of 2009. All eight impacted historic resources were bridges, including two on Route 17 (one in Miller County and one in Pulaski County), the Missouri River Bridge at Miami and five smaller bridges to be replaced by the Safe & Sound Bridge Improvement Program. Adverse impacts from the demolition of these bridges were mitigated through the preparation of detailed photographic and historical documentation of each bridge. While there is no desired trend to this measure, the goal of MoDOT's historic preservation efforts is to minimize adverse project impacts to historic properties whenever it is feasible and prudent.



Number of tons of recycled/waste materials used in construction projects-10g

Result Driver: Dave Nichols, Director of Program Delivery

Measurement Driver: Dave Ahlvers, State Construction and Materials Engineer

Purpose of the Measure:

This measure tracks MoDOT’s efforts to be environmentally conscious through the use of recycled/waste material when applicable.

Measurement and Data Collection:

The number of tons of recycled/waste material used in construction projects is measured through MoDOT’s construction management database, which tracks material incorporated into projects. Data is collected on an annual basis due to the seasonal nature of the construction. The annual total is finalized in each April edition.

Improvement Status:

Reclaimed concrete pavement on the new I-64 project in St. Louis comprises the largest part of recycled material used in first half of 2009. There were nearly 240,000 tons of concrete crushed for use as rock fill, aggregate base and haul road surfacing. Crushing of concrete removed from the project is 98 percent complete.

