

PROTECTING HUMAN HEALTH AND THE ENVIRONMENT



Effective transportation systems can produce multiple benefits at the local and regional level by linking communities' roadway, trail and pedestrian systems, helping to protect natural resources, and adding to the economic vitality and livability of the area. However, it is important to evaluate the potential social, environmental, and economic impacts of the plan to ensure that future transportation projects will have a positive impact on the quality of life of the people of Central Oklahoma.

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HUMAN HEALTH AND ENVIRONMENTAL IMPACTS CONSIDERED IN THE PROJECT SELECTION PROCESS

As part of the Encompass 2040 development process, ACOG staff evaluated social, environmental, and economic factors important to the study area, and developed plan goals that would promote early consideration of these factors when evaluating the potential impact of transportation projects.

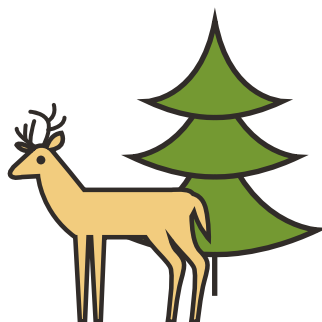
Additionally, socioeconomic and environmental data was utilized during the Encompass 2040 project evaluation and scoring process to encourage initial consideration at the local level. Projects submitted for inclusion in Encompass 2040 were evaluated against several performance criteria, including their anticipated impact on air and water quality, culturally and environmentally sensitive lands, and disadvantaged populations. These criteria were used to reward projects that would reduce the amount of vehicle miles traveled and fuel consumption, mitigate potential adverse environmental and social impacts, and improve the overall performance of the transportation system. Projects with multimodal aspects were most likely to achieve these goals.

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PROTECTING THE ENVIRONMENT

PROTECTING ENVIRONMENTAL RESOURCES

Central Oklahoma contains a wide variety of important natural resources. Geographically, it is essentially a transition buffer between the wetter and more forested Eastern Oklahoma (Cross Timbers) and the semi-arid high plains of Western Oklahoma (Southern Great Plains).



The region has an abundance of wildlife and plant species, including federally listed threatened and endangered species (e.g. Whooping Crane, Interior Least Turn and the Arkansas River Shiner). Oklahoma has the largest number of man-made lakes in the United States with Central Oklahoma containing approximately 25 square miles of lakes.

Environmental Data Evaluated:

- Parks and Recreational Areas
- Wildlife and Endangered Species
- Flood Plains
- Water Quality: Surface and Aquifers
- Hazardous Waste and Superfund Sites (LUST, LAST, and CERCLA)
- Air Quality – MOVES Evaluation

PROTECTING SOCIAL AND CULTURAL RESOURCES

For long-range transportation planning, it is important to consider the potential impacts on cultural and social resources as well as environmental resources. Transportation projects are evaluated in terms of their proximity to and their potential effect on noise sensitive community resources such as hospitals, schools, and churches. Before projects are constructed, their potential impact on historic resources must also be determined. Even though Oklahoma as a state has a relatively recent history, its archaeological record is quite extensive with an abundance of identified prehistoric and Native American sites. Nationally, the Cross Timbers of Central Oklahoma is increasingly recognized as an important location for explaining prehistoric peoples' adaptations to changing ecological situations.



Social/Cultural Data Evaluated:

- Archaeological Sites
- Tribal Lands
- National Historic Sites and Districts
- Noise Sensitive Areas/Sites

MINIMIZING SOCIO-ECONOMIC IMPACT

A major producer of natural gas, oil and agricultural goods, Oklahoma relies on an economic base of aviation, energy, telecommunications, and biotechnology. To support and foster this thriving community and its economic base, the transportation system must provide access to jobs and offer strong connections between economic centers - inside and outside of the region.



The diverse and changing population requires adapting transportation options beyond driving alone, with particular emphasis on alternatives for those who cannot drive due to financial or physical limitations, or lifestyle preference.

Economic Data Evaluated:

- Residential and Employment Displacements (due to roadway construction projects)
- Low Income and Traditionally Underserved Groups (Environmental Justice)
- Encompass 2040 Plan Costs and Revenues

PROTECTING HUMAN HEALTH FROM TRANSPORTATION SYSTEM IMPACTS

The transportation system directly and indirectly impacts the health of Central Oklahomans. Driving produces exhaust fumes and pollutants that can damage lung tissue, and is especially harmful for those with heart disease, asthma, and other chronic lung diseases.

Air pollution affects humans, animals, plant life, water quality, property, and visibility. There are numerous sources of air pollution, including those occurring naturally (vegetation, windblown dust, volcanic eruptions), transportation sources (cars, buses, planes, trucks, and trains), and other man-made stationary sources (factories, power plants).

The Clean Air Act Amendments of 1990 (CAAA) strengthened the need for improved coordination between air quality and transportation planning, and established mandatory requirements for metropolitan areas that violate federal air quality standards.

As required by EPA, ozone levels are routinely monitored by the Oklahoma Department of Environmental Quality (ODEQ) at six locations in Central Oklahoma between the months of May and October. Carbon monoxide is monitored at one site in north Oklahoma City. If the ozone standard is exceeded at just one monitoring station, the entire region is considered to be in violation.

AIR QUALITY PROGRAM ACTIVITIES

While the Oklahoma City Area Regional Transportation Study (OCARTS) area remains in attainment for all federally regulated pollutants, ground level ozone continues to be a problem. Consequently, ACOG has been proactive in its planning endeavors to reduce mobile source emissions—cars and trucks—which account for approximately 60 percent of the region’s pollution. ACOG employs proactive planning efforts to help maintain its air quality attainment status, including the following:

- Daily review of ozone and carbon monoxide monitoring sites throughout the OCARTS area
- Opting into an 8-hour Ozone Flex Program with the Environmental Protection Agency (ACOG also participated in a previous EPA program, the 8-hour Ozone Early Action Compact)
- Administration and support of regional rideshare programs
- Administration of a Public Fleet Conversion Grant program
- Administration of the Central Oklahoma Clean Cities program
- Administration of the Air Quality Awareness Grant program (2014)
- Use of an “air quality friendly” criterion in the selection of projects that will utilize the MPO’s Surface Transportation Program Urbanized Area (STBG-UZA) funds
- Award of additional points for proposed long-range transportation plan projects that reduce emissions by decreasing fuel consumption and vehicle miles traveled, as well as by improving transportation system performance
- Promotion of alternative forms of transportation
- Air quality public education initiatives including the Clean Air Alert Day program

