

# Transportation

## INTRODUCTION

This Element provides guidance about policies and practices that can be used to maintain and improve the transportation system serving the Centre Region. Many public and private entities are involved in the operation, maintenance, and improvement of the transportation system, including the Region's municipalities. The policies and practices are intended to provide the framework for a transportation system that meets the current and future needs of the Region's residents and visitors.

The Transportation Element is organized into the following sections:

- **Key Issues and Findings**
- **Goals, Objectives, and Policies**
  - **Mobility and Safety - Map M9**
  - **Mode Choice - Map M10**
  - **Transportation and the Environment - Map M11**
  - **Land Use and Transportation**
  - **Transportation Funding**



## KEY ISSUES AND FINDINGS

The transportation system serving the Centre Region has expanded its focus from rural roads and railroads to a system that includes modern roadways, bus service, air travel, pedestrian/bike facilities, and rail freight service. The following issues and findings emerged as a result of the Inventory and Assessment of Existing Conditions and form the basis from which goals, objectives, and policies are identified:

1. The opening of Interstate 99 reduced travel time and relieved traffic congestion for travelers to the Centre Region from distant areas. The opening of I-99 also changed traffic patterns on certain roadways, either reducing or increasing traffic volumes. However, vehicular traffic volumes on most roadways in the Region have changed very little in recent years.
2. Rail freight service along the Region's only railroad line declined to only occasional use after the closing of the Corning manufacturing facility in College Township.
3. Commercial air travel and general aviation activities at the University Park Airport continued to grow, resulting in expansion of services and facilities and plans for additional expansion in the near future.
4. Expansion of the pedestrian/bicycle system provided more links between residential areas and employment centers and more links to recreation and open space areas.
5. Trends in CATA's public transportation passenger trips, revenue miles of service, revenue hours of service, and rising carpool and vanpool participation suggest that a preference is growing for transportation options other than single-occupant vehicles.
6. The supply and use of CATA's public transportation service is growing faster than the transit fleet size, placing additional burdens on an aging fleet.
7. The supply and use of CATA's public transportation service is gradually overtaking the space available for storing and maintaining the transit fleet, increasing storage and maintenance challenges.
8. Public transportation, pedestrian, and bicycle accommodations are important elements in land use decisions made by the Region's municipalities.
9. Pennsylvania Act 44 of 2007 increased the amount of state funding for roadway and bridge improvements, and improved the equity of state funding for public transportation systems. However, rejection of the Interstate 80 tolling proposal left Act 44 underfunded, reducing the amount of funding available for roadway and bridge projects, and keeping the full potential of state funding for transit projects from being realized.
10. Limits on the amount of federal, state, and local funding for transportation improvements focused scarce resources on the maintenance and preservation of existing roadways, bridges, public transit routes and facilities, and pedestrian/bicycle amenities. The fiscal constraints resulted in more focus on small-scale projects, including implementation of safety improvement projects. Fewer investments in new and/or expanded facilities were made in recent years.

## GOALS, OBJECTIVES, AND POLICIES

### Mobility & Safety



The primary purpose of any transportation system is to provide safe and efficient ways of traveling. The focus of this goal is to collect data on the demand and performance of the transportation system, give a high priority to maintaining the system in good condition, and involve multiple stakeholders in the delivery of transportation services. In the Centre Region, this goal is particularly important given that many residents choose to travel on foot or bicycle, or use public transportation, in addition to using private automobiles. Air travel has grown in terms of both demand and importance. Although rail freight service on the Region's only active rail line in College Township has declined, preservation of this rail line may provide opportunities for businesses to move materials and goods in the future.

**GOAL 1** - The Region's transportation system provides mobility for people and goods in a safe and efficient manner.

#### Objective 1.1

**Collect and evaluate data about the purpose and function of the transportation system.**

##### Policy 1.1.1

Evaluate all available crash data at least every four years during the federally required update of the Centre County Metropolitan Planning Organization (MPO) Long Range Transportation Plan to identify intersections and roadways that need safety improvements.

##### Policy 1.1.2

Evaluate traffic operations to determine changes in volume and levels of service that warrant improvements.

##### Policy 1.1.3

Evaluate public transit ridership data, public input, land-use patterns, and financial capacity to implement changes in the level and frequency of public transportation service.

##### Policy 1.1.4

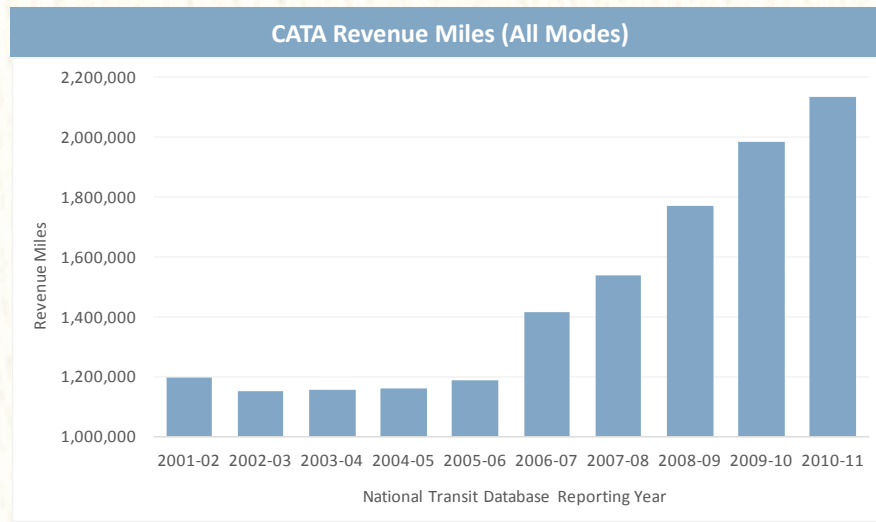
Monitor enplanements, general aviation operations, and demand for other air services at University Park Airport during standard operations and special events.

Policy 1.1.5

Collect data on bicycle and pedestrian travel.

Policy 1.1.6

Use information collected by the Nittany and Bald Eagle Railroad and the SEDA-COG Joint Rail Authority to review usage of the railroad line in College Township, and to review maintenance and operations activities that may impact the College Township rail line.



**Objective 1.2**

**Work proactively with public and private stakeholders to facilitate improvements to the transportation system.**

Policy 1.2.1

Coordinate with the Nittany and Bald Eagle Railroad and the SEDA-COG Joint Rail Authority to evaluate the potential for new rail service relative to potential users along the railroad line in College Township.

Policy 1.2.2

Work with producers and shippers of freight to identify and implement improvements that allow for safe and efficient movement of goods.

Policy 1.2.3

Monitor and evaluate ongoing changes in the freight and passenger rail industries to identify opportunities and implement improvements relative to the movement of people and goods by rail.

Policy 1.2.4

Coordinate with Penn State University, the Centre County Airport Authority, providers of air transport, and Benner Township to identify and implement improvements in commercial and general aviation services and facilities at the University Park Airport.

## Policy 1.2.5

Work with the Centre County MPO, PennDOT, and operators of transit, rail, and air modes of travel to advance transportation improvement projects and programs for all modes through the Centre County MPO's Long Range Transportation Plan and Transportation Improvement Program, and other federal, state and local implementation programs.

## Objective 1.3

**Maintain and improve existing transportation infrastructure to preserve the system for the foreseeable future, consistent with PennDOT's "maintenance forever" policy.**

### Policy 1.3.1

Adopt and use a municipal multi-year Capital Improvement Program and infrastructure management systems (e.g., pavement, bridge, drainage, traffic control/signing, etc.) to guide investments that prolong the useful life of municipal transportation assets, including preventative maintenance activities, roadway pavement and bridge rehabilitation projects, and traffic sign and signal improvements.

### Policy 1.3.2

Use the Capital Improvement Program and Centre County MPO Long Range Transportation Plan and Transportation Improvement Program to fund safety-related improvements that reduce the number of crashes, injuries, and fatalities.

### Policy 1.3.3

Update CATA's Capital Improvement Program to guide investments in rehabilitating and replacing public transportation vehicles, and to make improvements in CATA's operations facility and infrastructure.



The Route 26 truck pull-off and escape ramp on Pine Grove Mountain were constructed in 2012. Projects such as these are important to improving safety and preserving the existing road system in the Centre Region.

## Mode Choice

Providing travel choices for all residents of the Centre Region is a key factor in sustaining a growing community that continues to change in its demographic identity. One example of the challenges facing local officials is managing demand for different types of transportation services from diverse users such as students at the Penn State University and a growing population of older residents. The focus of this goal is to ensure that travel choices are available and accessible to all users by providing several modes of transport and interconnecting those modes as much as possible.

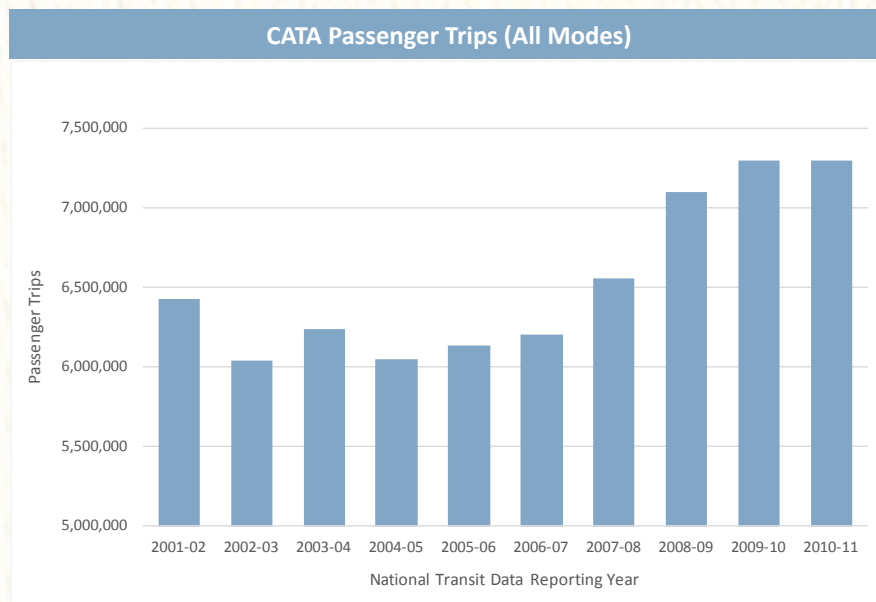
**GOAL 2** - All users are afforded choices for means of travel via multiple, interconnected modes of transportation.

**Objective 2.1**

**Deliver transportation projects and programs that support a broad range of transportation options.**

Policy 2.1.1

Continue implementing and expanding **CATABUS**, **CATARIDE**, and **CATACOMMUTE** services that provide affordable transportation choices for residents and commuters from surrounding areas, and help to reduce peak-hour commuter trips and mitigate demand for parking from single-occupant vehicles.



Policy 2.1.2

Provide transit and paratransit service through **CATARIDE** and the Centre County Office of Transportation Services to meet the demand by citizens for access to employment centers, medical services, retail and other commercial services, and recreation areas.

Policy 2.1.3

Encourage the private sector, public entities, and Penn State University to institute parking and commuter-oriented strategies that promote the use of multiple modes of travel.

Policy 2.1.4

Develop a continuous, interconnected network of bicycle and pedestrian facilities, of all types (designated route, on-road, off-road, etc.) that can be implemented in phases, linking neighborhoods, schools, parks, open space, and commercial and employment centers.

## Policy 2.1.5

Conduct winter maintenance of existing and proposed shared-use paths where appropriate and within fiscal constraints established by the municipalities.

## Policy 2.1.6

Advance roadway projects and improvements in other travel modes that improve safety for both vehicular and pedestrian traffic, and reduce congestion where possible.



CATA's buses and paratransit vehicles are fully accessible to persons with disabilities.



In 2012, the League of American Bicyclists awarded the Centre Region a Bronze Level designation as Bicycle Friendly Community. The League designated Penn State University as a Bicycle Friendly University in 2012.



## Objective 2.2

**Improve connections among roadways, bicycle and pedestrian facilities, transit routes, and intercity bus connection locations.**

### Policy 2.2.1

Plan the interconnection of streets and other bicycle and pedestrian facilities between neighborhoods in a manner that ensures connectivity while minimizing undesirable through traffic.

### Policy 2.2.2

Establish, maintain, and improve facilities at locations where connections between modes of travel are made, including material loading/unloading infrastructure, crosswalks and sidewalks, bus shelters, bicycle racks and storage lockers.

### Policy 2.2.3

Facilitate pedestrian travel through improved signage, design of sidewalk and crosswalk areas, establishment of safe walking routes to schools, and increased awareness of pedestrians by motor vehicle operators.

### Policy 2.2.4

Support training opportunities, special programs such as activities associated with the Bicycle Friendly Community designation, and public education efforts for municipal officials and residents about laws and best practices regarding bicycle and pedestrian travel.

### Policy 2.2.5

Work with CATA, the private sector, Penn State University, and providers of intercity bus service to give residents safe and accessible waiting areas and connections among intercity buses, local buses, and taxi service.

**Objective 2.3**

**Design the alignment and profile of streets to be consistent with PennDOT’s Smart Transportation Guidebook, and the fundamental principles of the Complete Streets approach to provide access for pedestrian, transit, and vehicular traffic.**

Policy 2.3.1

Adopt a Complete Streets policy that encourages use of all modes of travel, and monitor the ongoing development of Complete Streets principles in order to update the policy.

Policy 2.3.2

Adopt ordinances stipulating that bicycle, pedestrian, and public transit facilities be required in land-development plans where appropriate.

Policy 2.3.3

Consider alternative design solutions such as traffic-calming measures (e.g., curb extensions, speed tables, chicanes, roundabouts, etc.) and innovative traffic control and operations devices (e.g., interconnected signals, adaptive signal systems, transit signal priority, etc.).

**Objective 2.4**

**Use aggregated and real-time data to optimize the operation of the transportation network, and to inform travelers about routes and modes of travel.**

Policy 2.4.1

Continue development of CATA’s Advanced Public Transportation System to enhance the accuracy and usability of information available to the public about operation of the bus system, and to assist in making operational and management decisions regarding transit service.

Policy 2.4.2

Extend coordination of roadway traffic control devices to additional corridors and areas, with a long-term goal of moving toward Region-wide coordination.

Policy 2.4.3

Optimize real-time data resources and make them available publicly to encourage private-sector development of applications that use the data.

| Number of Traffic Signals in the Centre Region |           |           |            |
|--|-----------|-----------|------------|
| Municipality                                   | 1990      | 2000      | 2010       |
| College Township                               | 13        | 21        | 25         |
| Ferguson Township                              | 4         | 8         | 16         |
| Halfmoon Township                              | 0         | 0         | 0          |
| Harris Township                                | 2         | 2         | 4          |
| Patton Township                                | 3         | 10        | 21         |
| State College Borough                          | 27        | 30        | 33         |
| <b>Centre Region Total</b>                     | <b>49</b> | <b>71</b> | <b>99</b>  |
| <b>Centre County Total</b>                     | <b>67</b> | <b>91</b> | <b>130</b> |

Source: PennDOT Signal Permit Data



## Policy 2.4.4

Develop systems and processes that allow real-time public feedback on the performance of the transportation network.



CATA was one of the first public transportation providers to convert its entire fleet of buses from diesel fuel to Compressed Natural Gas.

## Transportation and the Environment

Residents of the Centre Region enjoy a high quality of life, with good air and water quality, a growing system of parks, an expanding network of sidewalks and trails, and accessible state forest and game land areas that afford many opportunities to enjoy natural resources. As a result, it is important that future transportation facilities and programs have minimal negative impacts on the natural and built environment. The focus of this goal is to ensure that transportation facilities and programs improve the quality of life by complementing, protecting, and enhancing the natural and built environment.

**GOAL 3** - The Centre Region's transportation system supports good air and water quality, minimizes impacts to natural features, and complements the built environment.

## Objective 3.1

**Facilitate use of alternative fuels and energy conservation practices that help to minimize the Region's carbon footprint when planning and implementing transportation system improvements.**

### Policy 3.1.1

Maintain and expand CATA's Compressed Natural Gas bus fleet and fueling infrastructure through periodic rehabilitation and replacement of rolling stock, purchase of additional vehicles when warranted by an increase in demand for transit services, and upgrades to fixed infrastructure elements.

### Policy 3.1.2

Maximize the fuel efficiency of vehicles, for both conventional and alternative fuels, when considering purchase of CATA, Centre County Office of Transportation Services, COG, municipal, State College Area School District, Penn State University, and other fleet vehicles.

### Policy 3.1.3

Encourage public and private sectors and fleet operators to use alternative fuels and means of propulsion, such as Compressed Natural Gas, hydrogen fuels, electric, and hybrid technologies—including using local resources, if appropriate—and to make available fueling stations for alternative fuels and charging stations for electric vehicles.

## Policy 3.1.4

Work with the Centre County MPO to evaluate locations with recurrent congestion and implement operational and management strategies that may optimize the flow of vehicular traffic and reduce vehicle emissions.

## Policy 3.1.5

Evaluate and implement strategies such as work-at-home options, flexible work hours, and rideshare incentives that reduce the impact of peak-hour vehicular traffic on roadway congestion.

## Objective 3.2

### Promote the improvement of air quality in the Region.

#### Policy 3.2.1

Coordinate planning and construction of transportation and other infrastructure systems with utility and service providers.

#### Policy 3.2.2

Encourage the expansion of transit services, ridesharing, and modes of transportation other than single-occupant automobiles to reduce the impact of greenhouse gasses.

#### Policy 3.2.3

Support municipal and regional efforts to implement actions recommended in the Centre Region Greenhouse Gas Pilot Project.

#### Policy 3.2.4

Work with the Centre County MPO to implement transportation projects and programs to maintain conformity with federal air-quality standards, as determined through the Air Quality Conformity Analyses that are required to be completed for the Centre County MPO's Long Range Transportation Plan and Transportation Improvement Program.

| Travel to Work 2005 - 2009 Estimates |               |                  |                   |                   |                 |                 |                       |               |
|--------------------------------------|---------------|------------------|-------------------|-------------------|-----------------|-----------------|-----------------------|---------------|
| 2005-2009                            | Centre Region | College Township | Ferguson Township | Halfmoon Township | Harris Township | Patton Township | State College Borough | Centre Region |
| Drove Alone                          | 21,892        | 69%              | 69%               | 83%               | 76%             | 73%             | 37%                   | 59%           |
| Carpooled                            | 3,544         | 12%              | 9%                | 10%               | 14%             | 9%              | 9%                    | 10%           |
| Public Transportation                | 1,979         | 2%               | 6%                | 0%                | 2%              | 7%              | 6%                    | 5%            |
| Bicycle/Walk                         | 7,928         | 9%               | 10%               | 0%                | 3%              | 7%              | 45%                   | 21%           |
| Worked at Home                       | 1,629         | 6%               | 5%                | 6%                | 5%              | 4%              | 3%                    | 4%            |
| Motorcycle/Other                     | 280           | 2%               | 1%                | 0%                | 1%              | 0%              | 0%                    | 1%            |

Source: 2005-2009 American Community Survey 5-Year Estimates

## Objective 3.3

**Avoid and mitigate negative impacts to endangered or threatened species, key natural habitats, agricultural lands, water resources, and historic and cultural resources.**

### Policy 3.3.1

Use information from federal, state, and local sources to identify public water supply areas and natural, agriculture-related, historic, and cultural features early in the process of evaluating solutions to transportation problems.

### Policy 3.3.2

Consider context-sensitive approaches, mitigation strategies, and innovative designs to mitigate the unavoidable impacts of transportation solutions on sensitive resources.



The Science Park Road Corridor in Ferguson Township includes a shared-use path, sidewalks, and transit stops to facilitate travel by multiple modes.

## Land Use & Transportation

The need to coordinate land use and transportation planning is one of the basic premises of comprehensive planning, and has been a fundamental part of the Centre Region's planning efforts for decades. As sustainability and quality-of-life factors grow in importance to the Region's residents, more emphasis is being placed on the need for progressively closer coordination in making land-use and transportation decisions. The focus of this goal is to ensure that transportation services are planned hand-in-hand with desired future land uses in a manner that promotes a compact, cost-effective, and efficient development pattern, and maintains the community's status as a great place to live, work, and visit.

**GOAL 4** - Transportation projects and programs, and the Region's future land-use plan are consistent.

## Objective 4.1

**Plan and implement transportation improvements and investments in all modes that are appropriate to accommodate future land uses identified by the municipalities.**

### Policy 4.1.1

Use tools such as PennDOT's statewide travel demand model, the Centre County MPO's Long Range Transportation Plan travel-demand model, travel-demand models developed for multi-municipal and municipal projects; traffic-operations modeling; data from CATA and the Centre County Office of Transportation Services about public-transportation demand; and projections of air travel and freight movements from operators of these modes,



The Curtin Road Transit Center on the University Park Campus serves many bus riders.

identifying needs for increased capacity and evaluating the effects of those potential changes on service levels.

## Policy 4.1.2

Analyze potential transportation improvements to evaluate whether the benefits outweigh impacts to the natural and built environment.

## Policy 4.1.3

Work with the Centre County MPO to ensure that transportation improvements on the Long Range Transportation Plan and Transportation Improvement Program are consistent with the future land-use plan.

## Policy 4.1.4

Use municipal Official Maps to identify rights-of-way and guide a regional approach to planning and implementing future roadway, bicycle, and pedestrian facilities.

## Policy 4.1.5

Work with the Centre County MPO, SEDA-COG Joint Rail Authority, Chamber of Business and Industry of Centre County, and Moshannon Valley Economic Development Partnership to identify opportunities to coordinate transportation investments with development, redevelopment, and adaptive reuse activities.

## Objective 4.2

**Consider the transportation system’s capacity to accommodate changes in travel demand when considering land use, zoning, and proposed land-development activities.**

### Policy 4.2.1

Require that the transportation impact of proposed rezoning requests, master development plan proposals, and land development activities be documented prior to municipal action.

### Policy 4.2.2

Work with PennDOT on Highway Occupancy Permit requests and Traffic Impact Studies to ensure that proposed changes in access on state roadways are consistent with municipal zoning and subdivision regulations, and are coordinated with publicly funded improvements.

### Policy 4.2.3

Promote the positive impact of mixed-use development on traffic congestion by providing pedestrian and bicycle facilities, and transit service where supported by the appropriate land use densities, and as promoted by Complete Streets principles and the Smart Transportation Guidebook.

### Policy 4.2.4

Review and update municipal corridor overlay access regulations to ensure that vehicular and pedestrian traffic safety considerations are being addressed.

## Policy 4.2.5

Consider non traditional methods of mitigating the impact of development and redevelopment activities on the transportation network (e.g., reduction in vehicle trips by the provision of transit, reducing onsite parking requirements, enhancing pedestrian facilities, and making interconnections between modes, etc.).



The State Route 3011 Branch Road Bridge was replaced in 2012. The rehabilitation and replacement of structurally-deficient bridges is a primary focus of state and local officials.

## Transportation Funding

As the Region continues to grow, and with it the need to maintain and improve the transportation system, municipal officials will face challenges when committing the financial resources to maintain existing facilities and address future needs. Given the current limitations on state and federal funding, and similar limitations on county and municipal resources, local officials must be creative in identifying and developing sustainable sources of funding to maintain the transportation system. The focus of this goal is to identify and maximize use of existing sources of funding, as well as to research and evaluate non-traditional methods of financing transportation projects and programs.

**GOAL 5 - Sustainable funding sources are available to make transportation improvements.**

### Objective 5.1

**Investigate alternative strategies for funding and implementing transportation improvement projects and programs.**

#### Policy 5.1.1

Work with PennDOT and the Centre County MPO to identify funding for transportation improvement projects on the Federal-Aid System (higher classification state-owned and locally owned roadways), and for other transportation improvement projects and programs that are not on roadways.

#### Policy 5.1.2

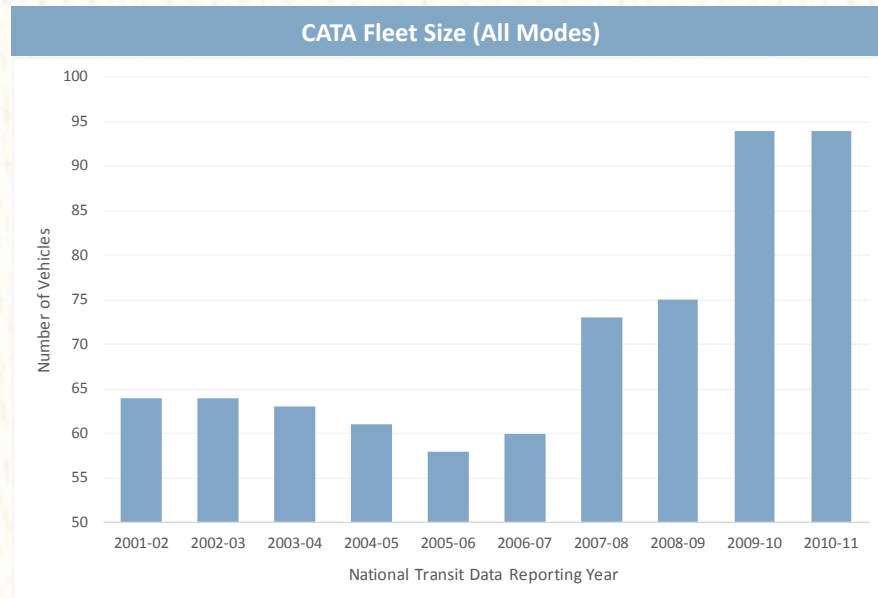
Evaluate tools available to municipalities, CATA, and Penn State University for generating funds or using cooperative services that can be allocated to transportation improvement projects (e.g., public/private partnerships, potential roadway turnback and partnership opportunities with PennDOT, partnership opportunities with other public agencies, impact fees, tax policies, etc.).

#### Policy 5.1.3

Assist CATA, the municipalities, Penn State University, and the Centre Region Council of Governments to develop periodic updates to the “Miller Formula,” which is used to allocate municipal contributions in the annual CATA Budget.

## Policy 5.1.4

Assist CATA, the municipalities, and Penn State University to prepare and periodically update a strategic plan for the **CATABUS**, **CATARIDE**, and **CATACOMMUTE** programs that will establish public policy regarding priorities for the delivery of public transportation services within changing fiscal constraints.



The size of CATA's bus fleet has grown substantially as ridership has increased. Obtaining funds to rehabilitate and replace buses will be an ongoing challenge for CATA.



The Bellefonte Central Rail Trail provides connections to several parks in Patton, College and Ferguson Townships in the Centre Region and also serves persons commuting to Penn State University.