

# Pathways to Prosperity

THE ECONOMIC IMPACT OF INVESTMENTS IN BICYCLE FACILITIES



A CASE STUDY OF THE NORTH CAROLINA NORTHERN OUTER BANKS  
N.C. DEPARTMENT OF TRANSPORTATION, DIVISION OF BICYCLE AND PEDESTRIAN TRANSPORTATION



## THE NORTH CAROLINA NORTHERN OUTER BANKS.

A long, thin ribbon of land adjacent to the sea. A welcome retreat for tourists and a sunny home for residents. And with temperate climates and multi-use **paths**, an ideal location for **bicycling**. Indeed, all along the Outer Banks, residents and tourists alike can be seen bicycling for exercise, **recreation** or practical transport. In fact, about 680,000 **tourists** spend time bicycling in the Outer Banks each year.

*"The travel and tourism industry is one of the most important industries to this state and we must continue to apply our energies toward keeping and creating jobs in North Carolina. I applaud the efforts of NCDOT to foster tourism through the development of valuable transportation programs, like those highlighted in this study, that encourage citizens and visitors alike to take advantage of the wonderful opportunities North Carolina has to offer."*

– **Governor Mike Easley**

*"This study provides concrete evidence that the availability of bicycling opportunities is an important component to the economic success of North Carolina. I commend the Division of Bicycle and Pedestrian Transportation for their continuing dedication to providing multi-modal transportation solutions that will further the growth and development of our state."*

– **Lyndo Tippet, Secretary, N.C. Department of Transportation**

*"This study of the economic benefits of bicycle facilities highlights a well-known fact: that good public policy is good for business! The Division of Bicycle and Pedestrian Transportation along with the N.C. Bicycle Committee is committed to spreading these benefits to local economies throughout North Carolina."*

– **Dennis Rash, Chairman, N.C. Bicycle Committee**

**680,000** bicycle in the area  
**VISITORS** annually, representing  
17% of all tourists to  
the area.

# THE ECONOMIC IMPACT OF INVESTMENTS IN BICYCLE FACILITIES: A CASE STUDY

Do bicycling and bicycling facilities provide benefits to resort communities like the Outer Banks area?  
Can these facilities produce economic benefits for North Carolina communities?

The answer is a resounding “yes.”

In the summer of 2003, the North Carolina Department of Transportation (NCDOT) Division of Bicycle and Pedestrian Transportation (DBPT) commissioned a study to examine the value of public investment in bicycle facilities. The northern Outer Banks region was selected for the study because of existing high levels of bicycling activity and the presence of an extensive system of special bicycle facilities. Over the past ten years, an estimated \$6.7 million of public funds was spent to construct off-road paths and add wide paved shoulders to roads in the region, from Corolla south to Nags Head and west to Manteo. A map of the study area appears on the last page of this report.

The study was conducted by the Institute for Transportation Research and Education (ITRE) at North Carolina State University. Researchers surveyed bicyclists riding on the bicycle facilities — paths and wide paved shoulders — and also obtained data from self-administered surveys of tourists at three visitors' centers in the region.

## THE ECONOMIC BENEFIT STUDY CONCLUDES THAT:

- Bicycling activity in the northern Outer Banks provides substantial economic benefits to the area — an estimated \$60 million annually.
- The bicycle facilities in the area are an important factor for many tourists in deciding to visit the region.
- Investment in bicycle facilities improves the safety of the transportation system for all users and also benefits health and fitness, quality of life and the environment.

For more information visit [www.ncdot.org/transit/bicycle/safety/safety\\_economicimpact.html](http://www.ncdot.org/transit/bicycle/safety/safety_economicimpact.html).

Bicycling visitors to the  
northern Outer Banks  
generate an economic  
impact of **\$60  
MILLION  
ANNUALLY**



# economic impact



## BICYCLE FACILITIES ENCOURAGE TOURISM AND BOOST THE ECONOMY

The study determined that an estimated 680,000 tourists engage in some bicycling activity while in the northern Outer Banks area annually. This represents 17% of all visitors to the area. The quality of bicycling was an important factor in choosing to visit the area for 43% of bicyclists who were surveyed. While other tourists may not choose to visit the Outer Banks specifically because of its bicycle facilities, many may choose the area over another coastal or resort community because of these amenities.

Bicycling visitors and tourists have a direct and substantial economic impact on the area, according to the study. A conservative estimate of bicyclists' expenditures in the northern Outer Banks is \$60 million annually. These visitor expenditures are expected to produce many other widespread benefits to the local economy, including:

- 1,400 jobs are created or supported annually
- Increased retail sales to local restaurants, lodging establishments and retail stores
- Subsequent expenditures by local merchants to suppliers of materials and services

43%

report bicycling as an important factor in selecting this area for vacation.

53%

report bicycling as a strong influence in decision to return for subsequent visit.



# economic impact

## BICYCLE FACILITIES EXTEND VACATIONS AND ENCOURAGE RETURN TO AREA

The longer tourists stay in an area, the more they generally spend. This means that the duration of bicyclists' trips was an important economic factor to measure. Twelve percent of respondents reported that the duration of their visit was longer because of bicycling, by an average of four days.

The average bicyclist surveyed on the facilities reported riding on 69% of the days of their trip while in the area. This high rate of bicyclist activity — as well as decisions to extend the duration of visits — may have been influenced by safety. Two-thirds of respondents reported that the bicycle facilities made them feel safer while riding.

In addition to encouraging more bicycling and extending bicyclists' stays, the study found that the quality of bicycling was important in decisions to return to the area. In fact, a higher percentage of respondents said that bicycling would be more important in deciding to return (53%) than it was in their decision to come to the area (43%). The research suggests, therefore, that once exposed to the quality of bicycling in the region, visitors are more likely to come back.

For more information visit [www.ncdot.org/transit/bicycle/safety/safety\\_economicimpact.html](http://www.ncdot.org/transit/bicycle/safety/safety_economicimpact.html).

**12%** reported staying four days longer due to the quality of bicycling in the area.



# economic impact



## BICYCLING TOURISTS TEND TO BE WELL EDUCATED AND EARN HIGHER INCOMES

The northern Outer Banks study found that bicycling tourists may have a good deal of purchasing power – they tend to be well educated with fairly high incomes. And, they love to bicycle.

Study findings revealed the following bicyclist characteristics:

- 87% earn more than \$50,000 annually
- 78% completed college
- 73% rate themselves as an intermediate skill-level cyclist who rides 10-49 miles per month
- The average survey respondent rode 14 miles per day on five days of his or her trip

Clearly, bicycle tourists drawn to the good bicycling opportunities on the northern Outer Banks are having a positive economic impact on this area.

**1,400  
JOBS**

are created/supported annually with the expenditures made by bicyclists.



# economic impact

## THE ECONOMIC BENEFIT OF BICYCLE FACILITIES OUTWEIGHS THEIR COSTS

The northern Outer Banks study found that bicycling tourists represent a high economic impact for the resort communities. But how does that compare against the cost of building the bicycle facilities?

Approximately \$6.7 million of municipal, state and federal funds were used to construct the special bicycle facilities in the northern Outer Banks. The *annual* economic impact of cyclists (\$60 million) is estimated to be almost nine times greater than the one-time expenditure of public funds to construct the bicycle facilities.

The measurable economic benefits of bicycle facilities may begin with increased tourist expenditures in the region, but further intangible results may be seen long after the visitors leave. In addition to the positive economic impact versus the cost of bicycle facilities, the study observed that other, less quantifiable, economic benefits may result from the bicycle facilities, including:

- Enhancement of nearby property values along areas that feature bike paths and trails
- Reduced healthcare costs that may result from increased opportunities for healthful exercise
- Less damage to roads and preservation of the highway infrastructure resulting from wider paved shoulders

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The *annual* economic impact of cyclists  
is **nine times** the initial costs of  
the bicycle facilities built in the region.

# quality of life benefits

## BICYCLE FACILITIES GIVE VISITORS AND RESIDENTS MORE OPPORTUNITIES TO ENJOY THEIR SURROUNDINGS

While the northern Outer Banks study looked specifically at the economic impact of bicycling tourists, other studies have shown that bicycle facilities improve the overall quality of life in a community. For example, the bicycle facilities can:

- Encourage people to enjoy the area from an outdoor perspective
- Provide opportunities for families to safely enjoy a healthy activity together
- Encourage walking or bicycling to locations within a reasonable distance — such as school, work and recreational areas — rather than driving
- Enhance the safety and convenience of travel to many residential and commercial areas, beach access sites and other points of interest
- Provide benefits to all road users by reducing congestion and enhancing motorist safety
- Reduce parking congestion at popular destinations
- Increase safe and affordable options for recreation and exercise, helping to improve the health of visitors and residents alike

**90%** believe state and federal tax dollars should be used to build these facilities.

**75%** indicated that more bicycle facilities should be built.

# environmental experience

## BICYCLE FACILITIES ENCOURAGE OUTDOOR EXPERIENCES

Bicycle paths, greenways and on-road bicycle improvements can also help to enhance the overall experience of a visitor to a coastal or resort community. Visitors who bicycle are more connected to the natural and built environment and to the experiences that the area has to offer. In the northern Outer Banks, for example, a bicycle path across the Wright Brothers National Memorial property provides a unique perspective on this popular attraction. The system of bicycle facilities in the area connects the towns and villages along the Outer Banks and provides access to historic sites, recreation areas, beach access sites and places to shop and eat. In short, the bicycle paths and on-road improvements encourage tourists to enjoy an outdoor vacation and promote the full experience of being in a coastal community. And those tourists who take advantage of all a resort community has to offer may be more likely to return.

For more information visit [www.ncdot.org/transit/bicycle/safety/safety\\_economicimpact.html](http://www.ncdot.org/transit/bicycle/safety/safety_economicimpact.html).



Nearly **66%** of respondents indicated that riding on bicycle facilities made them feel safer.

# THE ECONOMIC IMPACT OF INVESTMENTS IN BICYCLE FACILITIES: A CASE STUDY OF THE NORTH CAROLINA NORTHERN OUTER BANKS

The North Carolina Department of Transportation (NCDOT) Division of Bicycle and Pedestrian Transportation (DBPT) commissioned a study to examine the value of public investment in bicycle facilities. The northern Outer Banks region was selected for the study because of existing high levels of bicycle activity and the presence of an extensive system of special bicycle facilities. Over the past ten years, an estimated \$6.7 million of public funds was spent to construct off-road paths and add wide paved shoulders to roads in the region. The study was conducted by the Institute for Transportation Research and Education at North Carolina State University.

The following information provides a summary of the northern Outer Banks economic impact study. You may also download a copy of the complete technical report and executive summary at [www.ncdot.org/transit/bicycle/safety/safety\\_economicimpact.html](http://www.ncdot.org/transit/bicycle/safety/safety_economicimpact.html).

## CASE STUDY TIMEFRAME

Summer, 2003

## CASE STUDY AREA

Currituck and Dare counties, from Corolla south to Nags Head and west to Manteo

## TYPES OF DATA COLLECTED AND CASE STUDY METHODOLOGY

Three types of data were collected:

- Bicyclists riding on local bicycle facilities were intercepted and surveyed by researchers.
- Self-administered surveys were placed in three area visitors' centers.
- Bicycle traffic counts were taken at eleven locations along the local bicycle facilities.

Researchers used an economic impact model to analyze the raw data collected from the surveys.

## VISITOR PERCEPTIONS OF THE VALUE OF BICYCLE FACILITIES

- Nearly two-thirds of respondents indicated that riding on bicycle facilities made them feel safer.
- More than 75% of all respondents indicated that additional bicycle facilities should be built.
- Nine out of ten respondents strongly agreed that state and/or federal tax dollars should be used to build more bicycle facilities.

## KEY FINDINGS SUPPORTING THE VALUE OF INVESTMENTS IN BICYCLE FACILITIES

- 680,000 visitors bicycle in the area annually, representing 17% of all tourists to the area.
- An estimated 102,000 of these visitors report bicycling to be an important factor in choosing to vacation in the northern Outer Banks.
- A conservative estimate of the annual economic impact of bicyclists in the area is \$60 million.
- The annual return from bicyclists is nearly nine times the one-time expenditure of \$6.7 million of public funds to construct bicycle facilities in the region.



**680,000** bicycle in the area  
VISITORS annually, representing  
17% of all tourists to  
the area.

- 1,400 jobs are created and/or supported annually by bicyclists' expenditures.
- The quality of bicycling in the region has a positive impact on respondents' vacation planning:
  - 12% report staying three to four days longer to bicycle.
  - 43% report that bicycling is an important factor in their decision to come to the area.
  - 53% report that bicycling will strongly influence their decision to return to the area in the future.

### KEY BICYCLIST DEMOGRAPHICS

- Almost half of respondents earn more than \$100,000 per year.
- 87% earn more than \$50,000 per year.
- 40% earned a Masters or Doctoral degree.
- An additional 38% completed a college degree.

### RECOMMENDATIONS

The study suggests that continued investment in bicycle facilities could only be expected to increase the favorable economic impact found in the northern Outer Banks and is therefore recommended by the NCDOT. These investments can also help North Carolina remain competitive with other nearby coastal states for bicycling tourists.

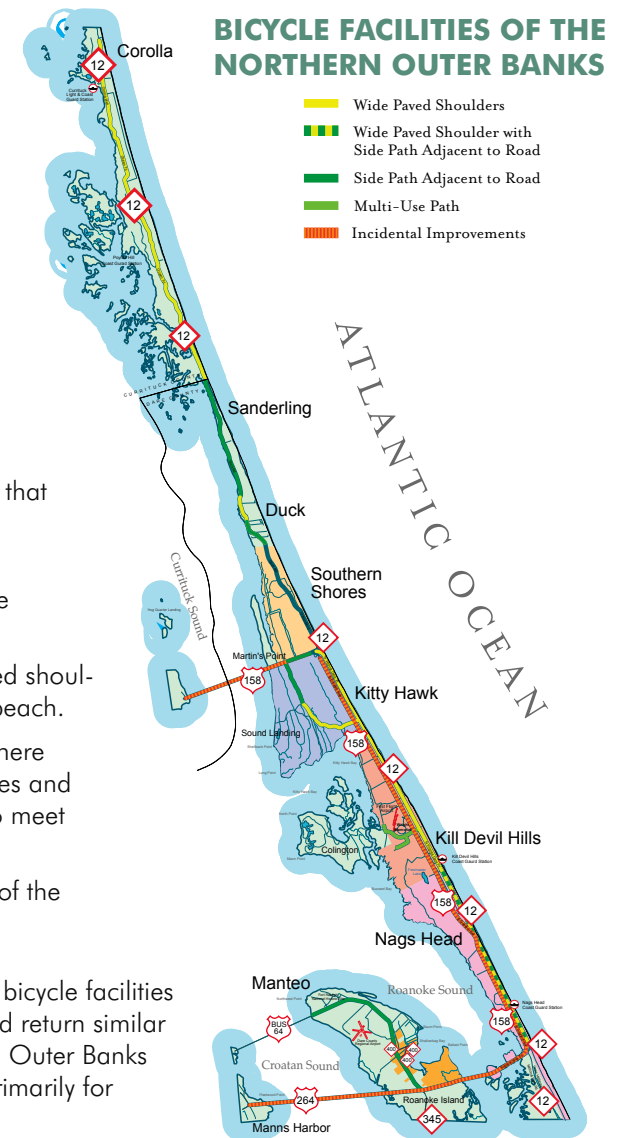
The types of bicycle facility investments found to be most desired in this study are:

- More and/or wider bicycle paths and lanes
- More and/or wider paved shoulders on roads

In addition, the NCDOT recommends that state and local governments:

- Pursue opportunities to create connections between existing bicycle facilities where possible.
- Develop more bicycle lanes or paved shoulders on side streets away from the beach.
- Upgrade existing bicycle facilities where necessary to meet national guidelines and standards and build new facilities to meet these standards.
- Increase efforts to promote the use of the bicycle facilities in the area.

The study suggests that investments in bicycle facilities in other coastal and resort areas would return similar benefits to those found in the northern Outer Banks — whether the area attracts tourists primarily for bicycling or for other reasons.



For more information visit [www.ncdot.org/transit/bicycle/safety/safety\\_economicimpact.html](http://www.ncdot.org/transit/bicycle/safety/safety_economicimpact.html).

1. Kill Devil Hills



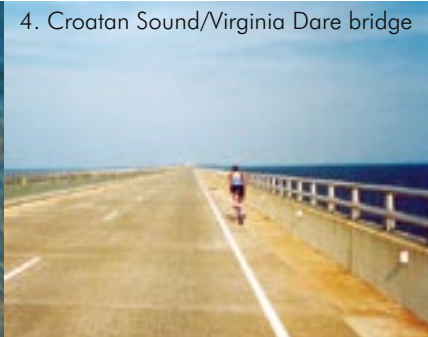
2. Nags Head



3. Duck



4. Croatan Sound/Virginia Dare bridge



From left to right:

1. Wright Brothers National Memorial bike path
2. Nags Head side path
3. Wide-paved shoulder bicycle improvement
4. Bicycle safe bridge with wide shoulder and high railings

Bicycling visitors to the northern Outer Banks generate an economic impact of

**\$60**  
**MILLION**  
**ANNUALLY**

To download a copy of the entire report visit:  
[www.ncdot.org/transit/bicycle/safety/safety\\_economicimpact.html](http://www.ncdot.org/transit/bicycle/safety/safety_economicimpact.html)



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