

FISCAL NOTE

Rule Citation: 19A NCAC 02D .0531 Free Operations
19A NCAC 02D .0532 Toll Operations

Rule Topic: Establishment of tolls for all ferry routes except those designated by NC statute as free.

NCDOT Division: Ferry Division

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Impact Summary: Federal government: No
State government: Yes
Local government: Yes
Private sector: Yes
Substantial economic impact: Yes

Authority: G.S. § 136-82; 2011-145, s. 31.30(a); 2012-142, s. 24.18(a)

Necessity: The proposed rule revisions as presented are necessary to implement legislatively mandated tolling for the NCDOT Ferry system, comply with state requirements, clarify existing rule requirements, reorganize existing rules to improve usability, codify existing policies, and comply with requirements established in 19A NCAC 02D.0532.

Summary: The NC Department of Transportation last amended the State’s Ferry Division toll operation regulations in 2004. In 2011, the NC General Assembly enacted legislation that requires the establishment of ferry tolls to meet defined budgetary goals. The NC Administrative Code is being revised to codify the new tolling requirements. In addition, the rule designating the free routes has been amended to comply with the recent legislation.

The proposed rule will enable the Department to raise the funding as mandated in the legislation using as equitable a system as possible. The NC Department of Transportation estimates the total gross economic impact of these rules (benefits plus costs) at approximately \$8,286,000 in the first 12-month period following the adoption of the rules, with a five-year net present value of -\$5.75 million. The proposed rule changes will result in net costs to the private-sector and local governments and net benefits to state government.

The benefits result from \$3,429,000 in new state revenues from increased ferry tolls and \$64,000 in additional fuel taxes resulting from diversion of commuter and non-commuter (Southport-Fort Fisher route only) vehicles that choose to

drive a further distance to avoid paying the increased ferry tolls.¹ Cost impacts result primarily from increased ferry tolls paid by North Carolina residents and additional expenditures on motor fuels. The increased ferry tolls are also likely to generate additional indirect costs and benefits to public- and private-sector entities that are outside the scope of this report.

An analysis of data provided by NCDOT Ferry Division for in-state and out-of-state vehicles using the ferry system determined the highest percentage of out-of-state vehicles by route were on the Cedar Island-Ocracoke and Swan Quarter-Ocracoke ferries at 54% and 52%. Overall 26% of vehicles using all ferry routes were out-of-state vehicles. Considering only those ferries subject to the increased tolls, only 17% of the vehicles on those routes are out-of-state vehicles.²

Table 1
Costs and Benefits to Affected Parties
Years 2014 to 2018

	Year 1 2014	Year 2 2015	Year 3 2016	Year 4 2017	Year 5 2018
<i>COSTS</i>					
State Government	\$400,000	\$388,000	\$385,000	\$383,000	\$386,000
Local Government	\$63,000	\$64,000	\$63,000	\$63,000	\$64,000
Private Sector	\$4,330,000	\$4,397,000	\$4,459,000	\$4,529,000	\$4,599,000
TOTAL COSTS	\$4,793,000	\$4,849,000	\$4,907,000	\$4,975,000	\$5,049,000
<i>BENEFITS</i>					
State Government	\$3,493,000	\$3,547,000	\$3,600,000	\$3,657,000	\$3,713,000
Local Government					
Private Sector					
TOTAL BENEFITS	\$3,493,000	\$3,547,000	\$3,600,000	\$3,657,000	\$3,713,000
<i>NET BENEFITS</i>					
Net Benefits	-\$1,300,000	-\$1,302,000	-\$1,307,000	-\$1,318,000	-\$1,336,000
Gross Impact	\$8,286,000	\$8,396,000	\$8,507,000	\$8,632,000	\$8,762,000
NPV (5 Years)	-\$5,754,000				

¹ At least a portion of the additional motor fuels tax revenue is likely to be offset by a reduction in state and local revenues due to the increase in fuel purchases leading to a reduction in in-state, non-fuel purchases.

² License plate survey at ferry terminals, July 2011 – June 2012, NCDOT Ferry Division

Note: All values are rounded. For those cells that are empty, the analysis shows no material benefits. Net Benefits reflects benefits - costs. Gross Impact reflects benefits + costs. Costs and benefits increase from 2014 to 2016 due to the assumption that ridership will increase each year at an average annual growth rate of 1.5 percent. This growth rate was estimated based on North Carolina population and employment growth projections obtained from various sources, including the U.S. Census Bureau, Woods and Poole Economics, Inc., NCSBM Population Estimates and Projections, and the East Carolina University Bureau of Business Research.

Introduction and Description of Proposed Rules Changes

North Carolina Session Law 2011-145 directed the Department and Board of Transportation to establish tolls for all ferry routes except the Ocracoke-Hatteras Ferry and the Knotts Island Ferry, and to raise a specific amount of revenue from ferry tolling operations.

A North Carolina Ferry System Revenue Study completed in January 2012 developed three models to forecast projected revenues from tolling, and analyzed four pricing options to generate the required \$5.0 million in total revenues for the ferry system as required by the rule. The increase in ferry tolls may affect the travel patterns of area commuters, influence visitor behavior for non-commuters and subsequent tourism expenditures and jobs, and impact the demand for ferry services.

Overview of Rule Revisions

Since the rules were last amended, the Department has been directed to amend ferry tolls to raise a mandated amount of revenue for the Ferry Division. Therefore, the Department must amend the Toll Operations and the Free Operations rules to align with current State budgetary requirements. Other proposed revisions will improve the usability and clarity of the rules and reduce the regulatory burden of permit requirements, all of which are consistent with the regulatory principles outlined in Executive Order 70 and G.S. § 150B-19.1.

The proposed 19A NCAC 02D .0531 and .0532 rule revisions and fiscal note have been developed in accordance with the requirements of G.S. 150B. All rule revisions and proposed new rules were developed in accordance with the findings and policy, scope, and authority of the North Carolina Department of Transportation codified in General Statutes. The rules being adopted or amended include:

- 19A NCAC 02D .0531
- 19A NCAC 02D .0532

Assumptions and Rule Impact

Each proposed rule is listed below with a description of the rule, the proposed changes, and the economic impact expected for various public and private entities. The requirements under Article 6 and existing rules 19A NCAC 02D of the North Carolina General Statutes serve as the baseline for all of the proposed rule changes.

The estimated costs or benefits stem from the increases in tolls, subsequent changes in ferry ridership by commuters and non-commuters, the use of commuter passes for ferry service, and visitor impacts.

19A NCAC 02D.0532 Toll Operations

Proposed rules 19A NCAC 02D.0532

Introduction:

House Bill 200, the Appropriations Act of 2011, requires the North Carolina Department of Transportation (NC DOT) to increase annual revenue collected by the Ferry Division from approximately \$2 million to \$5 million by 2014. The bill further stipulated two ferry routes that would not be tolled, the Hatteras-Ocracoke ferry and the Knotts Island Ferry, based upon the “needs of commuters and frequent passengers.” Table 2 below shows ridership data obtained from NC DOT’s Ferry Division for the most recent 12 months (November 2011-October 2012). During this period, the NC DOT Ferry System transported nearly 893,500 total vehicles. As shown in Table 2, the Hatteras-Ocracoke route is the busiest route, transporting nearly 295,800 vehicles. The Currituck-Knotts Island route has the lowest volume of traffic, transporting nearly 23,300 vehicles.

Table 2
Total Vehicle Volumes
Nov 2011 - Oct 2012

Ferry Route	Total Vehicles
Bayview - Aurora	67,988
Cedar Island - Ocracoke	58,657
Cherry Branch - Minnesott Beach	226,097
Currituck - Knotts Island	23,284
Hatteras - Ocracoke	295,763
Southport - Fort Fisher	192,813
Swan Quarter - Ocracoke	28,841
Total	893,443

Source: NC DOT Ferry Division

Both commuters and non-commuters utilize the ferry services. In this analysis, those classified as commuters are area residents using the Ferry System to travel to and from work or conduct personal travel (e.g., errands). Non-commuters represent visitors using the Ferry System to access vacation destinations in North Carolina’s Coastal Region. Visitors include out-of-state travelers and North Carolina travelers. Table 3 on the following page identifies annual vehicle ridership by commuters and non-commuters during the most recent 12-month period.

To increase revenue, tolls would be implemented or increased on all but two ferry routes, which would remain free to the public. Two scenarios of ridership are therefore presented in Table 3. The Baseline Scenario represents ridership for the most recent time period without toll increases in effect. The Toll Increase Scenario represents ridership for the same period with new toll increases in effect. As shown,

ridership decreases by 51,017 vehicles in the Baseline Scenario, from 893,443 vehicles to nearly 842,200 vehicles in the Toll Increase Scenario, due to toll increases and passenger diversion to roadway travel. The majority of this reduction in ridership results from commuters that can divert to other routes to reach their destinations.

Table 3
Annual Ridership by Commuters and Non-Commuters
Nov. 2011 – Oct. 2012

Ferry Route	Ridership Commuters	Ridership Non-Commuters	Total Ridership
<i>Baseline Scenario</i>			
Bayview - Aurora	54,214	13,774	67,988
Cedar Island - Ocracoke	13,838	44,819	58,657
Cherry Branch - Minnesott Beach	177,905	48,192	226,097
Currituck - Knotts Island	17,199	6,085	23,284
Hatteras - Ocracoke	82,899	212,864	295,763
Southport - Fort Fisher	88,312	104,501	192,813
Swan Quarter - Ocracoke	8,909	19,932	28,841
Total	443,274	450,169	893,443
<i>Toll Increase Scenario</i>			
Bayview - Aurora	48,687	13,774	62,461
Cedar Island - Ocracoke	8,980	44,819	53,799
Cherry Branch - Minnesott Beach	155,142	48,192	203,334
Currituck - Knotts Island	17,199	6,085	23,284
Hatteras - Ocracoke	82,899	212,864	295,763
Southport - Fort Fisher	79,172	98,544	177,716
Swan Quarter - Ocracoke	6,136	19,932	26,069
Total	398,214	444,211	842,426

Source: CDM Smith

The figures in Table 3 were calculated using the methodology in CDM Smith’s *North Carolina Ferry System Revenue Study* prepared in 2012 for the North Carolina Department of Transportation’s Ferry Division. The methodology is described below:

- **Commuter Ridership – Baseline:** Calculated the percentage of commuters per month by dividing the average winter ridership by the monthly volume, capped at 95%. Total number of commuter vehicles was calculated by multiplying the monthly ridership by the percentage of commuters.
- **Non-Commuter Ridership – Baseline:** Calculated by subtracting the commuter vehicles per month from the monthly vehicle volume.

- **Commuter Ridership – Toll Increase:** Calculated the reduction in commuter demand by multiplying the percent demand reduction for each ferry route by the total number of commuter vehicles.³ Working with the North Carolina Ferry Service, a survey was developed and deployed to gauge ferry commuters’ opinions on tolls by route, trip purpose, and quantitative data about ferry users. Calculated the commuter vehicles after reduction by subtracting the reduction in commuter demand estimates from the total number of commuter vehicles.
- **Non-Commuter Ridership – Toll Increase:** This analysis assumed that non-commuter (visitor) ridership is inelastic with respect to tolls, except on the Southport-Fort Fisher route.⁴ For the Southport-Fort Fisher route, the reduction in non-commuter demand was calculated by multiplying the percent demand reduction for the route by the total number of non-commuter vehicles.⁵ We then calculated the non-commuter vehicles after reduction by subtracting the reduction in non-commuter demand from the total number of non-commuter vehicles in the Baseline Scenario.

The rule provides for the issuance of commuter passes valid for one year. Any additional passengers besides the commuter pass owner traveling in the vehicle would be subject to the “passenger in any size vehicle” toll in addition to commuter pass. Commuter passes are used by residents who regularly use the Ferry System in order to reduce their annual commuting expenses by paying a lower price for a yearly pass, rather than paying the incremental one-way fare. In the Baseline Scenario, the ferry route with the largest share of commuters with commuter passes is Southport-Fort Fisher, with nearly 76,000 commuters.

The Cherry Branch-Minnesott Beach ferry route has the most commuter pass holders in the Toll Increase Scenario, with more than 139,600 commuters. This route has considerable traffic related to Cherry Point Marine Base employees’ commutes, and will convert from free ridership to toll ridership. It is assumed that, due to the substantial cost savings, most employees who commute via the ferry will purchase annual passes. Total annual ridership is anticipated to decrease on the Cherry Branch route as some commuters will drive entirely on roadways and opt out of using the ferry. These assumptions are based on survey data. Table 4 presents annual vehicle ridership by commuters with and without commuter passes for the most recent 12 months for the Baseline and Toll Increase Scenarios.

³ “North Carolina Ferry Study Revenue Study,” prepared for North Carolina Department of Transportation, Ferry Division, January 2012

⁴ Ibid.

⁵ Ibid.

Table 4
Annual Vehicle Ridership by Commuters with/without Commuter Pass
Nov. 2011 – Oct. 2012

Ferry Route	Commuters with Commuter Pass	Commuters without Commuter Pass	Total Commuter Ridership
<i>Baseline Scenario</i>			
Bayview - Aurora	0	54,214	54,214
Cedar Island - Ocracoke	4,290	9,548	13,838
Cherry Branch - Minnesott Beach	0	177,905	177,905
Currituck - Knotts Island	0	17,199	17,199
Hatteras - Ocracoke	0	82,899	82,899
Southport - Fort Fisher	75,065	13,247	88,312
Swan Quarter - Ocracoke	2,762	6,147	8,909
Total	82,116	361,158	443,274
<i>Toll Increase Scenario</i>			
Bayview - Aurora	43,818	4,869	48,687
Cedar Island - Ocracoke	2,784	6,196	8,980
Cherry Branch - Minnesott Beach	139,628	15,514	155,142
Currituck - Knotts Island	0	16,951	16,951
Hatteras - Ocracoke	0	82,899	82,899
Southport - Fort Fisher	67,296	11,876	79,172
Swan Quarter - Ocracoke	1,902	4,234	6,136
Total	255,428	142,539	397,967

Source: CDM Smith

The figures in Table 4 were calculated using the methodology in CDM Smith's *North Carolina Ferry System Revenue Study*. The methodology is described below:

- **Commuters with Commuter Pass – Baseline:** Calculated by multiplying the percentage of commuter pass utilization by the number of commuters for each route (obtained from the North Carolina Ferry System Revenue Study).
- **Commuters without Commuter Pass – Baseline:** Calculated by subtracting the commuters with commuter pass from the total number of commuters.
- **Commuters with Commuter Pass – Toll Increase:** Calculated by multiplying the percentage of commuter pass utilization by the number of commuters for each route after ridership

reductions due to toll increases (obtained from the North Carolina Ferry System Revenue Study). There is an implicit assumption that commuters will not purchase a season commuter pass mid-year.

- **Commuters without Commuter Pass – Toll Increase:** Calculated by subtracting the commuters with commuter passes from the total number of commuters after ridership reductions.

Costs:

Costs to state government include both one-time and recurring annual costs for the construction and IT costs, staffing costs, utility costs, and credit card processing fees that will be incurred for the new tolling locations at the Pamlico River and Cherry Branch ferries. The total one-time costs for these two locations are anticipated at \$14,400, with recurring annual costs for both terminal locations at \$368,190.⁶

Estimated costs to local governments result from anticipated payment of ferry tolls for local public service of government vehicles. Currently, public service vehicles are exempt from paying ferry tolls. Under the new rule public service vehicles not in emergency status will be subject to the toll, resulting in a cost to local governments. Review of public service vehicles including school buses, police and fire, and local utilities found that these vehicles are not routinely using the ferry; however, there are non-routine trips for police, utilities, public employees, and others when the ferry is used. Assuming six round-trips per week for non-routine ferry use, spread equally across each of the tolled ferry routes using the one-way fare rates, the cost to local governments for ferry tolls will be \$48,672.⁷

Additional cost impacts due to the increased tolls will result in decreased visitor spending at their destination, resulting in a \$280,000 reduction in visitor expenditures, \$24,000 in visitor tax impacts from the reduced spending, and \$8,000 in visitor-related employment income tax impacts.

Revenues:

Total revenues collected from commuters and non-commuters (visitors) in the Baseline and Toll Increase Scenarios are identified in Table 5. Revenue increases from more than \$1.9 million in the Baseline Scenario to nearly \$5.4 million in the Toll Increase Scenario. The increase in revenue is generated by increasing one-way fares and commuter pass prices as follows:

- Increasing one-way fares on the Cedar Island-Ocracoke and Swan Quarter-Ocracoke ferry routes by a weighted average of \$12.13 per vehicle. The weighted average calculations are described in more detail on the next page.
- Increasing one-way fares on the Southport-Fort Fisher ferry route by a weighted average of \$5.01 per vehicle.

⁶ Operating cost estimates provided by NCDOT Ferry Division, assume 11.5 hour day.

⁷ A review of school bus operations determined that no local school districts are utilizing the ferry to transport buses or students on a regular basis; this was further confirmed through ferry personnel.

- Implementing one-way fares with weighted averages of \$10.24 per vehicle and \$4.16 per vehicle, respectively, for the Bayview-Aurora and Cherry Branch-Minnesott Beach ferry routes.
- Increasing the commuter pass price on the Cedar Island-Ocracoke and Swan Quarter-Ocracoke ferry routes by a weighted average of \$332.50 per vehicle.
- Increasing the commuter pass price on the Southport-Fort Fisher ferry route by a weighted average of \$80.15.
- Implementing commuter passes on the Bayview-Aurora (weighted average of \$471.93) and Cherry Branch-Minnesott Beach (weighted average of \$467.89) ferry routes.
- Implementing one-way fares for additional passengers riding in commuter and non-commuter vehicles on all ferry routes except the Hatteras-Ocracoke and Currituck-Knotts Island routes. Fares range from \$1 to \$5 per passenger, depending on the route.

Table 5
Total Annual Revenue
Nov. 2011 – Oct. 2012

Ferry Route	Total Revenue Baseline	Total Revenue Toll Increase
Bayview - Aurora	\$0	\$287,000
Cedar Island - Ocracoke	\$871,000	\$1,841,000
Cherry Branch - Minnesott Beach	\$0	\$643,000
Currituck - Knotts Island	\$0	\$0
Hatteras - Ocracoke	\$0	\$0
Southport - Fort Fisher	\$648,000	\$1,719,000
Swan Quarter - Ocracoke	\$425,000	\$883,000
Total	\$1,944,000	\$5,373,000

Source: CDM Smith

Table 6 on the following page details the revenue collected from commuters using the Ferry System in the Baseline and Toll Increase Scenarios. Total commuter revenue increases from \$410,000 in the Baseline Scenario to more than \$1.4 million in the Toll Increase Scenario. In the Baseline Scenario, the largest portion of commuter revenue (\$310,000) is collected from commuters without commuter passes. These commuters represent residents who do not use the Ferry System on a regular basis and therefore prefer to pay the one-way fare rather than purchase a yearly commuter pass. Commuters without commuter passes also generate the largest share of revenue in the Toll Increase Scenario, with \$521,000 collected.

Table 6 also identifies revenue generated by two categories of commuters that are applicable only in the Toll Increase Scenario. These include passengers riding with commuters holding commuter passes and passengers riding with commuters without commuter passes. Passengers riding in these vehicles are required to pay a toll ranging from \$1 to \$5 per passenger, depending on the ferry route. Passengers in vehicles with commuter pass holders generate \$353,000 and passengers in vehicles without commuter pass holders generate \$113,000 in the Toll Increase Scenario.

Table 6
Total Commuter Revenue
Nov. 2011 – Oct. 2012

Ferry Route	Commuters with Commuter Pass	Commuters without Commuter Pass	Commuters with Commuter Pass Passengers	Commuters without Commuter Pass Passengers	Total Commuter Revenue
<i>Baseline Scenario</i>					
Bayview - Aurora	\$0	\$0	\$0	\$0	\$0
Cedar Island - Ocracoke	\$27,000	\$148,000	\$0	\$0	\$175,000
Cherry Branch - Minnesott Beach	\$0	\$0	\$0	\$0	\$0
Currituck - Knotts Island	\$0	\$0	\$0	\$0	\$0
Hatteras - Ocracoke	\$0	\$0	\$0	\$0	\$0
Southport - Fort Fisher	\$53,000	\$67,000	\$0	\$0	\$120,000
Swan Quarter - Ocracoke	\$20,000	\$95,000	\$0	\$0	\$115,000
Total	\$100,000	\$310,000	\$0	\$0	\$410,000
<i>Toll Increase Scenario</i>					
Bayview - Aurora	\$53,000	\$50,000	\$31,000	\$3,000	\$137,000
Cedar Island - Ocracoke	\$56,000	\$171,000	\$17,000	\$39,000	\$283,000
Cherry Branch - Minnesott Beach	\$221,000	\$64,000	\$107,000	\$12,000	\$404,000
Currituck - Knotts Island	\$0	\$0	\$0	\$0	\$0
Hatteras - Ocracoke	\$0	\$0	\$0	\$0	\$0
Southport - Fort Fisher	\$73,000	\$119,000	\$186,000	\$33,000	\$411,000
Swan Quarter - Ocracoke	\$44,000	\$117,000	\$12,000	\$26,000	\$199,000
Total	\$447,000	\$521,000	\$353,000	\$113,000	\$1,434,000

Source: CDM Smith

The figures in Table 6 were calculated using the methodology in CDM Smith's *North Carolina Ferry System Revenue Study*. The methodology is described below:

- Commuters with Commuter Pass – Baseline:** Calculated the composite (weighted average) commuter pass price for all classes of vehicles by multiplying the rate for each class by the percent vehicle classification for that class and summing the results. This assumes the vehicle-class profile is the same for commuters with passes, commuters without passes, and non-commuters. Revenue was calculated by multiplying the total number of commuter passes sold by the composite commuter pass price.

- **Commuters without Commuter Pass – Baseline:** Calculated the composite toll rate for all classes of vehicles by multiplying the rate for each class by the percent vehicle classification for that class and summing the results. Revenue was calculated by multiplying the commuters without commuter passes by the composite toll rate.
- **Commuters with Commuter Pass Passengers – Baseline:** No revenue is collected in the Baseline Scenario.
- **Commuters without Commuter Pass Passengers – Baseline:** No revenue is collected in the Baseline Scenario.
- **Commuters with Commuter Pass – Toll Increase:** Calculated a composite commuter pass price for all classes of vehicles using a system-wide pass, and a separate composite commuter pass price for all classes of vehicles using a site-specific pass, by multiplying the rate for each vehicle class by the percent vehicle classification for that class and summing the results. The number of commuter passes sold was calculated by dividing the number of commuters with commuter passes by the average number of commuter trips per person per year (obtained from CDM Smith’s *North Carolina Ferry System Revenue Study*). Revenue was calculated by multiplying the total number of commuter passes sold by an overall composite price derived from the system-wide and site-specific composite prices. This analysis assumes commuters will purchase site-specific passes given their specific commuting destination.
- **Commuters without Commuter Pass – Toll Increase:** Calculated the composite toll rate for all classes of vehicles by multiplying the rate for each class by the percent vehicle classification for that class and summing the results. Revenue was calculated by multiplying the commuters without commuter passes by the composite toll rate.
- **Commuters with Commuter Pass Passengers – Toll Increase:** Calculated by multiplying the site-specific toll for each additional passenger in any size vehicle by the commuters with commuter passes. The data for additional passengers in vehicles for commuter pass holders and for commuters without passes is based on information reported directly by the NC Ferry Division and include in the traffic report.
- **Commuters without Commuter Pass Passengers – Toll Increase:** Calculated by multiplying the site-specific toll for each additional passenger in any size vehicle by the commuters without commuter passes.

Table 7 details the revenues collected from non-commuters using the Ferry System in the Baseline and Toll Increase Scenarios. Total non-commuter revenue increases from more than \$1.5 million in the Baseline Scenario to more than \$3.9 million in the Toll Increase Scenario. In both the Baseline and Toll

Increase Scenarios, the largest portion of non-commuter revenue (\$696,000 and \$1.2 million, respectively) is collected on the Cedar Island-Ocracoke ferry route, which is used extensively by visitors to access vacation destinations in the Outer Banks.

Table 7
Total Non-Commuter Revenue
Nov. 2011 – Oct. 2012

Ferry Route	Non-Commuter Revenue	Non-Commuter Passenger Revenue	Total Non-Commuter Revenue
<i>Baseline Scenario</i>			
Bayview - Aurora	\$0	\$0	\$0
Cedar Island - Ocracoke	\$696,000	\$0	\$696,000
Cherry Branch - Minnesott Beach	\$0	\$0	\$0
Currituck - Knotts Island	\$0	\$0	\$0
Hatteras - Ocracoke	\$0	\$0	\$0
Southport - Fort Fisher	\$528,000	\$0	\$528,000
Swan Quarter - Ocracoke	\$310,000	\$0	\$310,000
Total	\$1,534,000	\$0	\$1,534,000
<i>Toll Increase Scenario</i>			
Bayview - Aurora	\$141,000	\$9,000	\$150,000
Cedar Island - Ocracoke	\$1,240,000	\$318,000	\$1,558,000
Cherry Branch - Minnesott Beach	\$200,000	\$39,000	\$239,000
Currituck - Knotts Island	\$0	\$0	\$0
Hatteras - Ocracoke	\$0	\$0	\$0
Southport - Fort Fisher	\$991,000	\$317,000	\$1,308,000
Swan Quarter - Ocracoke	\$551,000	\$133,000	\$684,000
Total	\$3,123,000	\$816,000	\$3,939,000

Source: CDM Smith

Table 7 also identifies revenue generated by a category of non-commuters that is applicable only in the Toll Increase Scenario: passengers riding in non-commuter vehicles. Passengers riding in these vehicles are required to pay a toll ranging from \$1 to \$5 per passenger, depending on the ferry route. Passengers in non-commuter vehicles generate \$816,000 in revenue in the Toll Increase Scenario.

The figures in Table 7 were calculated using the methodology in CDM Smith’s *North Carolina Ferry System Revenue Study*. The methodology is described below.

- **Non-Commuter Revenue – Baseline:** Calculated the composite toll rate for all classes of vehicles by multiplying the rate for each class by the percent vehicle classification for that class and summing the results. The vehicle classification is presumed to be the same for commuters and

for non-commuters. Revenue was calculated by multiplying the non-commuters by the composite toll rate.

- **Non-Commuter Passenger Revenue – Baseline:** No revenue is collected in the Baseline Scenario.
- **Non-Commuter Revenue – Toll Increase:** Calculated the composite toll rate for all classes of vehicles by multiplying the rate for each class by the percent vehicle classification for that class and summing the results. Revenue was calculated by multiplying the non-commuters by the composite toll rate.
- **Non-Commuter Passenger Revenue – Toll Increase:** Calculated by multiplying the site-specific toll for each additional passenger in any size vehicle by the non-commuters.⁸

VISITOR IMPACTS:

Direct visitor impacts generated by non-commuters using the Ferry System during the most recent 12 months are identified for the Baseline and Toll Increase Scenarios in Table 8 on the following page. These visitor impacts include in-state and out-of-state visitors. In the Baseline Scenario, the \$478.4 million in regional expenditures by non-commuters using the Ferry System directly supports the existence of 5,404 jobs in the coastal region. These jobs represent approximately 25% of the total hospitality-sector jobs in the counties that benefit from ferry services. These jobs have an annual payroll of nearly \$113.0 million. Due to toll increases and the resultant decrease in visitor spending at their destination, these impacts reduce employment by four employees (0.7%), \$84,000 in annual payroll, and \$280,000 in output (visitor expenditures) in the Toll Increase Scenario. It should be noted that the visitor impacts for the Baseline Scenario and Toll Increase Scenario presented in Table 8 do not include multiplier impacts.⁹

⁸ Additional passengers per vehicle were based on ridership data for the period November 2011 to October 2012 obtained from the NCDOT Ferry Division

⁹ Multiplier impacts consist of indirect and induced impacts. If they had been included in this analysis, indirect impacts would be related to the recirculation of monies spent locally by businesses in the hospitality sector (e.g. restaurants, hotels, and retail stores). Induced impacts would be the impacts resulting from the recirculation of hospitality sector employee payroll within the economy.

Table 8
Direct Visitor Impacts
Baseline and Post-Toll Increase
Nov. 2011 – Oct. 2012

Ferry Route	Employment	Payroll	Output
<i>Baseline Scenario</i>			
Bayview - Aurora	86	\$1,797,000	\$7,649,000
Cedar Island - Ocracoke	513	\$10,722,000	\$45,426,000
Cherry Branch - Minnesott Beach	414	\$8,653,000	\$36,598,000
Currituck - Knotts Island	86	\$1,797,000	\$7,565,000
Hatteras - Ocracoke	2,797	\$58,457,000	\$247,590,000
Southport - Fort Fisher	1,289	\$26,940,000	\$114,146,000
Swan Quarter - Ocracoke	219	\$4,577,000	\$19,457,000
Total	5,404	\$112,943,000	\$478,431,000
<i>Toll Increase Scenario</i>			
Bayview - Aurora	86	\$1,797,000	\$7,625,000
Cedar Island - Ocracoke	512	\$10,701,000	\$45,334,000
Cherry Branch - Minnesott Beach	413	\$8,632,000	\$36,568,000
Currituck - Knotts Island	86	\$1,797,000	\$7,565,000
Hatteras - Ocracoke	2,797	\$58,457,000	\$247,590,000
Southport - Fort Fisher	1,288	\$26,919,000	\$114,052,000
Swan Quarter - Ocracoke	218	\$4,556,000	\$19,417,000
Total	5,400	\$112,859,000	\$478,151,000
Difference	-4	-\$84,000	-\$280,000

Source: CDM Smith

The methodology for estimating visitor impacts is detailed below:

This analysis estimated the direct impacts generated by visitors to North Carolina’s Coastal Region. Additional indirect and included economic impacts are generated by visitors to this region; however, only the direct impacts are considered in this analysis. Direct impacts are generated by visitor spending. Visitor expenditures support employment and payroll in the hospitality sector, which includes lodging, food and beverage, retail, and entertainment. Three categories of direct impacts were measured in the analysis:

- **Employment:** Employment is based on the total of full-time jobs plus part-time jobs. In this analysis, two part-time positions are the equivalent of a single full-time position.

- **Payroll:** Payroll represents the annual salary, wages, and benefits paid to all employees.
- **Output:** Output equals total visitor spending.

Inputs to the model used to estimate direct visitor expenditures in the Baseline Scenario included:

- The average household trip expenditure for overnight visitors to North Carolina's Coastal Region (\$1,003), obtained from the *North Carolina Division of Tourism, Film, and Sports Development's 2011 North Carolina Regional Travel Summary* prepared in June 2012.
- Non-commuter (visitor) vehicle ridership by route.

Inputs to the model used to estimate direct visitor expenditures in the Toll Increase Scenario included:

- The average household trip expenditure for overnight visitors to North Carolina's Coastal Region (\$1,003), obtained from the *North Carolina Division of Tourism, Film, and Sports Development's 2011 North Carolina Regional Travel Summary* prepared in June 2012.
- Non-commuter (visitor) vehicle ridership by route.
- Percentage of cost-conscious visitors (retirees and empty nesters) using the NC DOT Ferry System (approximately 20% during summer months and 15% during other months).¹⁰ The assumption is that cost-conscious visitors are more sensitive to the ferry toll increases and will reduce their total expenditure per trip in the Toll Increase Scenario. The money spent on the higher toll results in a decrease in their expenditures in other categories, such as food and beverage and retail purchases. The less cost-conscious visitors simply pay the higher tolls without decreasing expenditures in another category. It is assumed their opportunity costs are realized when they return home from their vacation and choose to spend less in their monthly household budget.¹¹

Employment supported by visitor expenditures is generated primarily in the hospitality sector (lodging, food and beverage, retail, and entertainment). To estimate employment generated by visitor expenditures, employment ratios per million dollars of visitor output were developed.¹² It was estimated that approximately 11.3 persons are employed in North Carolina's Coastal Region as a result

¹⁰ Percentages were estimated based on visitor profile data obtained from "Outer Banks Visitors Bureau Visitor Research, Wave 4 – 2006" prepared by Strategic Marketing & Research, Inc., September 2006.

¹¹ Research related to incremental recreational cost increases indicates that fee increases do not present a major barrier to visitation to an area. For example, when state parks or national parks increase their entrance fees, visitors will pay the entrance fee rather than change their plans. Some state parks report attendance drops for a month or so after the recreational fee increase, but quickly rebounds.

¹² Ratios were developed based on "Benchmarking and Optimization of the North Carolina Ferry System Technical Report" conducted by the Institute for Transportation Research and Education at North Carolina State University for the North Carolina Department of Transportation Ferry Division, March 2010.

of every \$1 million in visitor expenditures. Payroll associated with visitor-supported employment was obtained from the U.S. Bureau of Labor Statistics.¹³

TAX IMPACTS:

In addition to generating economic benefits, visitors using the NC DOT Ferry System produce tax revenues for North Carolina as well as for local municipalities through their expenditures for food and beverage, lodging, retail, entertainment, rental cars, and fuel. Table 9 shows the annual visitor-related tax impacts generated in the Baseline and Toll Increase Scenarios. Total tax impacts produced in the Baseline Scenario amount to nearly \$42.9 million and decrease by \$24,000 in the Toll Increase Scenario. Half of the tax impacts in both scenarios are generated by lodging taxes, with nearly \$22.2 million produced.

Table 9
Annual Tax Impacts Generated by Visitor Expenditures
Nov. 2011 – Oct. 2012

Ferry Route	Retail Sales Tax ¹	Lodging Tax ²	Rental Car Tax ³	Fuel Tax ⁴	Total Taxes
<i>Baseline Scenario</i>					
Bayview - Aurora	\$181,000	\$311,000	\$44,000	\$103,000	\$639,000
Cedar Island - Ocracoke	\$1,076,000	\$2,035,000	\$261,000	\$614,000	\$3,986,000
Cherry Branch - Minnesott Beach	\$867,000	\$1,601,000	\$210,000	\$495,000	\$3,173,000
Currituck - Knotts Island	\$179,000	\$402,000	\$43,000	\$102,000	\$726,000
Hatteras - Ocracoke	\$5,984,000	\$11,436,000	\$1,422,000	\$3,347,000	\$22,189,000
Southport - Fort Fisher	\$2,704,000	\$5,494,000	\$656,000	\$1,543,000	\$10,397,000
Swan Quarter - Ocracoke	\$471,000	\$899,000	\$112,000	\$263,000	\$1,745,000
Total	\$11,462,000	\$22,178,000	\$2,748,000	\$6,467,000	\$42,855,000
<i>Toll Increase Scenario</i>					
Bayview - Aurora	\$181,000	\$310,000	\$44,000	\$103,000	\$638,000
Cedar Island - Ocracoke	\$1,074,000	\$2,031,000	\$260,000	\$613,000	\$3,978,000
Cherry Branch - Minnesott Beach	\$866,000	\$1,600,000	\$210,000	\$494,000	\$3,170,000
Currituck - Knotts Island	\$179,000	\$402,000	\$43,000	\$102,000	\$726,000
Hatteras - Ocracoke	\$5,984,000	\$11,436,000	\$1,422,000	\$3,347,000	\$22,189,000
Southport - Fort Fisher	\$2,702,000	\$5,490,000	\$655,000	\$1,542,000	\$10,389,000
Swan Quarter - Ocracoke	\$470,000	\$897,000	\$112,000	\$262,000	\$1,741,000
Total	\$11,456,000	\$22,166,000	\$2,746,000	\$6,463,000	\$42,831,000
Difference	-\$6,000	-\$12,000	-\$2,000	-\$4,000	-\$24,000

¹³ Payroll was estimated using data obtained from the following link: <http://www.bls.gov/oes/current/oes3700001.htm>. The average of the annual mean wages of a cashier and retail sales person in the northeastern North Carolina nonmetropolitan area in May 2011 was used.

¹ Retail Sales Tax rate is 4.75 percent state tax and 2 percent local tax. ² Lodging tax rate ranges from 2 percent to 6 percent, depending on the county and municipality. ³ Rental car tax rate is 8 percent. ⁴ Fuel tax rate is \$0.371 per gallon, which is the average tax rate for the period 7/1/11 to 12/31/12. Source: CDM Smith

The methodology for estimating the tax revenues in Table 9 is described below:

- Total annual visitor expenditures for each ferry route in both scenarios were categorized by industry sector according to data on average overnight visitor party spending in North Carolina’s Coastal Region obtained from the *North Carolina Division of Tourism, Film, and Sports Development’s 2011 North Carolina Regional Travel Summary*, prepared in June 2012.
- Tax rates were obtained from the North Carolina Department of Revenue.
- Tax rates were applied to each applicable category of visitor expenditures to estimate taxes generated in each category.¹⁴

An additional analysis of tax impacts was conducted to estimate the annual income and sales taxes paid by employees supported by expenditures of visitors using the NC DOT Ferry System. These tax impacts are identified in Table 10. As shown, income taxes paid by visitor-related employees are estimated at nearly \$7.1 million in the Baseline Scenario and decrease by \$5,000 in the Toll Increase Scenario. Sales taxes paid by visitor-related employees are estimated at more than \$1.8 million in the Baseline Scenario and decrease by \$3,000 in the Toll Increase Scenario. Total sales and income taxes paid by visitor-related employees are estimated at nearly \$8.9 million in the Baseline Scenario and decrease by \$8,000 in the Toll Increase Scenario.

Table 10
Annual Visitor-Related Employment Tax Impacts
Nov. 2011 – Oct. 2012

Ferry Route	Income Taxes Paid by Visitor-Related Employees	Sales Taxes Paid by Visitor-Related Employees	Total Taxes Paid by Visitor-Related Employees
<i>Baseline Scenario</i>			
Bayview - Aurora	\$113,000	\$29,000	\$142,000
Cedar Island - Ocracoke	\$672,000	\$173,000	\$845,000
Cherry Branch - Minnesott Beach	\$542,000	\$139,000	\$681,000
Currituck - Knotts Island	\$113,000	\$29,000	\$142,000
Hatteras - Ocracoke	\$3,664,000	\$941,000	\$4,605,000
Southport - Fort Fisher	\$1,689,000	\$434,000	\$2,123,000
Swan Quarter - Ocracoke	\$287,000	\$74,000	\$361,000
Total	\$7,080,000	\$1,819,000	\$8,899,000
<i>Toll Increase Scenario</i>			
Bayview - Aurora	\$113,000	\$29,000	\$142,000
Cedar Island - Ocracoke	\$671,000	\$172,000	\$843,000

¹⁴ To estimate fuel taxes, the average price of a gallon of regular unleaded gasoline in North Carolina for the period December 2011 to November 2012 was obtained from www.AAA.com.

Cherry Branch - Minnesott Beach	\$541,000	\$139,000	\$680,000
Currituck - Knotts Island	\$113,000	\$29,000	\$142,000
Hatteras - Ocracoke	\$3,664,000	\$941,000	\$4,605,000
Southport - Fort Fisher	\$1,687,000	\$433,000	\$2,120,000
Swan Quarter - Ocracoke	\$286,000	\$73,000	\$359,000
Total	\$7,075,000	\$1,816,000	\$8,891,000
Difference	-5,000	-\$3,000	-\$8,000

Source: CDM Smith

The income tax revenues for both scenarios in Table 10 were estimated using the following methodology:

- An average state income tax rate was calculated for the average salary of an employee in the hospitality sector in North Carolina (\$20,900) using wage and salary income only, based on tax rate schedules obtained from the North Carolina Department of Revenue.
- The average state income tax rate was applied to the estimated number of visitor-related employees supported by visitor expenditures for each ferry route.

The sales tax revenues in Table 10 were estimated using the following methodology:

- Total average annual sales taxes paid by an individual with the average salary of an employee in the hospitality sector in North Carolina were calculated based on *Internal Revenue Service Publication 600*.
- Total average annual sales taxes per employee were applied to the estimated number of visitor-related employees supported by visitor expenditures for each ferry route.

A final tax impact calculated in this analysis is the fuel taxes generated by commuters who no longer use the NC DOT Ferry System in the Toll Increase Scenario due to toll increases. Commuter ridership in this analysis is elastic with respect to tolls, based on the passenger surveys conducted for CDM Smith's *North Carolina Ferry System Revenue Study*. It is assumed that some commuters who use each ferry route in the Baseline Scenario to travel to and from work will prefer to drive a longer distance to avoid paying higher tolls in the Toll Increase Scenario.¹⁵ Table 11 presents the fuel taxes generated in the Toll Increase Scenario as a result of this commuter diversion. Note that the Currituck-Knotts Island and Hatteras-Ocracoke ferry routes are not included in Table 11, since tolls are not increased on these routes.

¹⁵ Estimates of commuter diversion were based on data obtained from the *North Carolina Ferry System Revenue Study*, prepared for the North Carolina Department of Transportation Ferry Division, January 2012.

Table 11
Annual Fuel Tax Impacts Due to Commuter Diversion
Toll Increase Scenario
Nov. 2011 – Oct. 2012

Ferry Route	Annual Commuter Vehicle Diversions	Alternate Driving Distance (Miles)	Annual Gallons of Fuel Used by Commuter Vehicles	Annual Fuel Cost for Commuter Vehicles	Annual Fuel Taxes
Bayview - Aurora	5,527	48.0	15,606	\$56,000	\$6,000
Cedar Island - Ocracoke	4,858	237.0	67,728	\$241,000	\$25,000
Cherry Branch - Minnesott Beach	22,763	35.7	47,802	\$170,000	\$18,000
Southport - Fort Fisher	9,140	26.5	14,247	\$51,000	\$5,000
Swan Quarter - Ocracoke	2,772	121.0	19,733	\$70,000	\$7,000
Total	45,060	468.2	165,116	\$588,000	\$61,000

Source: CDM Smith and *Benchmarking and Optimization of the North Carolina Ferry System* by the Institute for Transportation Research and Education at North Carolina State University

As shown in Table 11, approximately 45,000 annual commuter vehicles would drive the entire portion of their daily trip to and from work instead of using the NC DOT Ferry System in the Toll Increase Scenario. These vehicles would use approximately 165,000 gallons of fuel at an estimated total annual cost of \$588,000 as a result of driving longer distances to avoid paying higher tolls on the ferry routes. Annual fuel taxes generated by these fuel purchases are estimated to be \$61,000. The Cedar Island-Ocracoke ferry route would generate the most fuel taxes (\$25,000) due to the farthest alternate driving distance (237 miles). The Cherry Branch-Minnesott Beach ferry route would experience the most commuter vehicle diversions (22,763), which would generate \$18,000 in fuel taxes.

The figures in Table 11 were calculated based on the following methodology:

- **Annual Commuter Vehicle Diversions** – Calculated by subtracting commuter ridership in the Toll Increase Scenario from the commuter ridership in the Baseline Scenario in Table 3.
- **Alternate Driving Distance (Miles)** – Obtained from the *Benchmarking and Optimization of the North Carolina Ferry System Technical Report* conducted by the Institute for Transportation Research and Education (ITRE) at North Carolina State University.¹⁶ The alternative driving distances were calculated for each ferry route and assumed the utilization of no other ferries to reach a designated point closest to the terminal.

¹⁶ “Benchmarking and Optimization of the North Carolina Ferry System Technical Report, March 29, 2010, prepared by the Institute for Transportation Research and Education, North Carolina State University.

- **Annual Gallons of Fuel Used by Commuter Vehicles** – Calculated by dividing the alternate driving distance by 17 miles per gallon, which is the average fuel efficiency of the U.S. fleet,¹⁷ and then multiplying by the annual commuter vehicle diversions.
- **Annual Fuel Cost for Commuter Vehicles** – Calculated by multiplying the annual gallons of fuel used by commuter vehicles by the average price of a gallon of regular unleaded gasoline in North Carolina for the period December 2011 to November 2012 (\$3.56), obtained from www.AAA.com.
- **Annual Fuel Taxes** – Calculated by dividing the annual gallons of fuel used by commuter vehicles by the average motor fuels tax rate for the period July 2011 to December 2012 (\$0.371/gallon), obtained from the North Carolina Department of Revenue.

As stated previously, this analysis assumed that non-commuter ridership is inelastic with respect to tolls, except on the Southport-Fort Fisher ferry route. For this route, survey data collected for the *North Carolina Ferry System Revenue Study* conducted by CDM Smith indicated that some non-commuters would prefer to drive an alternate distance through Wilmington, North Carolina to avoid paying the higher tolls in the Toll Increase Scenario. The fuel taxes generated from this non-commuter diversion on the Southport-Fort Fisher route in the Toll Increase Scenario are identified in Table 12.

Table 12
Annual Fuel Tax Impacts Due to Non-Commuter Diversion
Toll Increase Scenario for Southport - Fort Fisher Ferry Route
Nov. 2011 – Oct. 2012

Ferry Route	Annual Non-Commuter Vehicle Diversions	Alternate Driving Distance (Miles)	Annual Gallons of Fuel Used by Non-Commuter Vehicles	Annual Fuel Cost for Non-Commuter Vehicles	Annual Fuel Taxes
Southport - Fort Fisher	5,957	26.5	9,232	\$33,000	\$3,000

Source: CDM Smith and *Benchmarking and Optimization of the North Carolina Ferry System* by the Institute for Transportation Research and Education at North Carolina State University

The figures in Table 12 were calculated using the same methodology used to calculate the figures in Table 11. The only difference was that in order to calculate annual non-commuter vehicle diversions, non-commuter ridership in the Toll Increase Scenario was subtracted from the non-commuter ridership in the Baseline Scenario in Table 3.

¹⁷ <http://www.energyxxi.org/sites/default/files/MetricoftheMonth-NOV11MotorVehicleMPG.pdf> From the Institute for 21st Century Energy, U.S. Chamber of Commerce, November 2011 Motor Vehicle Average miles per Gallon.

Tables 11 and 12 indicate that approximately \$621,000 in total annual fuel purchases are made by commuters and non-commuters as a result of diversion due to toll increases in the Toll Increase Scenario.

SENSITIVITY ANALYSIS:

Alternative Ridership

An analysis was performed to determine the effect that different annual vehicle volumes would have on the ridership, revenue, visitor impacts, and tax impacts presented above. For this analysis, annual vehicle volume data by ferry route for the period November 2008 through October 2011 was obtained from NC DOT Ferry Division. Average vehicle volumes by month for this time period were calculated. Table 14 presents vehicle ridership data by ferry route based on this methodology.

Table 13
Total Average Vehicle Volumes
Nov. 2008 – Oct. 2011

Ferry Route	Total Average Vehicles
Bayview - Aurora	69,070
Cedar Island - Ocracoke	65,124
Cherry Branch - Minnesott Beach	236,635
Currituck - Knotts Island	23,692
Hatteras - Ocracoke	315,599
Southport - Fort Fisher	169,835
Swan Quarter - Ocracoke	27,511
Total	907,466

Source: NC DOT Ferry Division

During this period the NC DOT Ferry System transported an average of nearly 907,500 total vehicles, approximately 14,000 more vehicles than those transported during the November 2011 to October 2012 period. As shown in Table 13, the Hatteras-Ocracoke route is the busiest route, transporting an average of nearly 315,600 vehicles. The Currituck-Knotts Island route is the least busy, transporting an average of nearly 23,700 vehicles.

Average annual ridership by commuters and non-commuters for the November 2008 to October 2011 period is presented in Table 15. Total average ridership decreases from nearly 907,500 vehicles in the Baseline Scenario to nearly 858,700 vehicles in the Toll Increase Scenario, a difference of 48,800 vehicles. For the period November 2011 to October 2012, total vehicle ridership decreases by approximately 51,000 vehicles in the Toll Increase Scenario.

Table 14
Average Annual Ridership by Commuters and Non-Commuters
Nov. 2008 – Oct. 2011

Ferry Route	Average Ridership Commuters	Average Ridership Non-Commuters	Total Average Ridership
<i>Baseline Scenario</i>			
Bayview - Aurora	54,187	14,883	69,070
Cedar Island - Ocracoke	16,803	48,320	65,124
Cherry Branch - Minnesott Beach	169,014	67,621	236,635
Currituck - Knotts Island	14,519	9,173	23,692
Hatteras - Ocracoke	87,325	228,274	315,599
Southport - Fort Fisher	75,631	94,204	169,835
Swan Quarter - Ocracoke	8,204	19,307	27,511
Total	425,684	481,782	907,466
<i>Toll Increase Scenario</i>			
Bayview - Aurora	48,663	14,883	63,546
Cedar Island - Ocracoke	10,904	48,320	59,224
Cherry Branch - Minnesott Beach	147,389	67,621	215,010
Currituck - Knotts Island	14,519	9,173	23,692
Hatteras - Ocracoke	87,325	228,274	315,599
Southport - Fort Fisher	67,804	88,834	156,638
Swan Quarter - Ocracoke	5,651	19,307	24,958
Total	382,255	476,412	858,666

Source: CDM Smith

Table 16 identifies total average annual revenue generated in the Baseline and Toll Increase Scenarios based on average annual ridership for the November 2008 to October 2011 period. Revenue increases from more than \$1.9 million in the Baseline Scenario to more than \$5.4 million in the Toll Increase Scenario. This is similar to the revenue generated based on data from the November 2011 to October 2012 period, where more than \$1.9 million is generated in the Baseline Scenario and more than \$5.4 million is generated in the Toll Increase Scenario.

Table 15
Total Average Annual Revenue
Nov. 2008 – Oct. 2011

Ferry Route	Total Average Revenue	
	Baseline	Toll Increase
Bayview - Aurora	\$0	\$301,000
Cedar Island - Ocracoke	\$963,000	\$2,021,000
Cherry Branch - Minnesott Beach	\$0	\$720,000
Currituck - Knotts Island	\$0	\$0
Hatteras - Ocracoke	\$0	\$0
Southport - Fort Fisher	\$579,000	\$1,533,000
Swan Quarter - Ocracoke	\$406,000	\$841,000
Total	\$1,948,000	\$5,416,000

Source: CDM Smith

Direct visitor impacts generated by non-commuters using the Ferry System during the November 2008 to October 2011 period are identified for the Baseline and Toll Increase Scenarios in Table 17. In the Baseline Scenario, 5,726 jobs are generated by nearly \$506.9 million in expenditures made by non-commuters using the Ferry System. These jobs have an annual payroll of nearly \$119.7 million. Due to toll increases and the resultant decrease in visitor spending at their destination, these impacts reduce employment by four jobs (0.7%), annual payroll by \$84,000, and output (visitor expenditures) by \$289,000 in the Toll Increase Scenario. This is similar to the reduction in direct visitor impacts for the November 2011 to October 2012 period (four jobs with an annual payroll of \$84,000 and \$280,000 in output).

Table 16
Direct Visitor Impacts
Baseline and Post-Toll Increase
Nov 2008 - Oct 2011

Ferry Route	Employment	Payroll	Output
<i>Baseline Scenario</i>			
Bayview - Aurora	97	\$2,027,000	\$8,580,000
Cedar Island - Ocracoke	552	\$11,537,000	\$48,795,000
Cherry Branch - Minnesott Beach	581	\$12,143,000	\$51,396,000
Currituck - Knotts Island	131	\$2,738,000	\$11,524,000
Hatteras - Ocracoke	2,995	\$62,596,000	\$265,108,000
Southport - Fort Fisher	1,162	\$24,286,000	\$102,915,000
Swan Quarter - Ocracoke	208	\$4,347,000	\$18,540,000
Total	5,726	\$119,674,000	\$506,858,000
<i>Toll Increase Scenario</i>			
Bayview - Aurora	97	\$2,027,000	\$8,552,000
Cedar Island - Ocracoke	550	\$11,495,000	\$48,696,000

Cherry Branch - Minnesott Beach	580	\$12,122,000	\$51,355,000
Currituck - Knotts Island	131	\$2,738,000	\$11,524,000
Hatteras - Ocracoke	2,995	\$62,596,000	\$265,108,000
Southport - Fort Fisher	1,161	\$24,265,000	\$102,831,000
Swan Quarter - Ocracoke	208	\$4,347,000	\$18,503,000
Total	5,722	\$119,590,000	\$506,569,000
Difference	-4	-\$84,000	-\$289,000

Source: CDM Smith

Table 18 shows the annual tax impacts generated by visitor expenditures for the November 2008 to October 2011 period. Total tax revenue decreases by \$23,000 between the Baseline and Toll Increase Scenarios. This is essentially the same decrease in tax revenue as the November 2011 to October 2012 period (\$24,000).

Table 17
Annual Tax Impacts Generated by Visitor Expenditures
Nov. 2008 – Oct. 2011

Ferry Route	Retail Sales Tax	Lodging Tax	Rental Car Tax	Fuel Tax	Total Taxes
<i>Baseline Scenario</i>					
Bayview - Aurora	\$204,000	\$349,000	\$49,000	\$116,000	\$718,000
Cedar Island - Ocracoke	\$1,156,000	\$2,186,000	\$280,000	\$660,000	\$4,282,000
Cherry Branch - Minnesott Beach	\$1,218,000	\$2,249,000	\$295,000	\$695,000	\$4,457,000
Currituck - Knotts Island	\$273,000	\$612,000	\$66,000	\$156,000	\$1,107,000
Hatteras - Ocracoke	\$6,406,000	\$12,245,000	\$1,522,000	\$3,583,000	\$23,756,000
Southport - Fort Fisher	\$2,437,000	\$4,954,000	\$591,000	\$1,391,000	\$9,373,000
Swan Quarter - Ocracoke	\$449,000	\$856,000	\$106,000	\$251,000	\$1,662,000
Total	\$12,143,000	\$23,451,000	\$2,909,000	\$6,852,000	\$45,355,000
<i>Toll Increase Scenario</i>					
Bayview - Aurora	\$203,000	\$347,000	\$49,000	\$116,000	\$715,000
Cedar Island - Ocracoke	\$1,155,000	\$2,182,000	\$280,000	\$658,000	\$4,275,000
Cherry Branch - Minnesott Beach	\$1,217,000	\$2,247,000	\$295,000	\$694,000	\$4,453,000
Currituck - Knotts Island	\$273,000	\$612,000	\$66,000	\$156,000	\$1,107,000
Hatteras - Ocracoke	\$6,406,000	\$12,245,000	\$1,522,000	\$3,583,000	\$23,756,000
Southport - Fort Fisher	\$2,437,000	\$4,950,000	\$591,000	\$1,390,000	\$9,368,000
Swan Quarter - Ocracoke	\$447,000	\$855,000	\$106,000	\$250,000	\$1,658,000
Total	\$12,138,000	\$23,438,000	\$2,909,000	\$6,847,000	\$45,332,000
Difference	-\$5,000	-\$13,000	\$0	-\$5,000	-\$23,000

Source: CDM Smith

Annual visitor-related employment tax impacts decrease by \$6,000 between the Baseline and Toll Increase Scenarios for the November 2008 to October 2011 period (see Table 19). This is similar to the \$8,000 decrease between the two scenarios for the November 2011 to October 2012 period.

Table 18
Annual Visitor-Related Employment Tax Impacts
Nov. 2008 – Oct. 2011

Ferry Route	Income Taxes Paid by Visitor-Related Employees	Sales Taxes Paid by Visitor-Related Employees	Total Taxes Paid by Visitor-Related Employees
<i>Baseline Scenario</i>			
Bayview - Aurora	\$127,000	\$33,000	\$160,000
Cedar Island - Ocracoke	\$723,000	\$186,000	\$909,000
Cherry Branch - Minnesott Beach	\$761,000	\$196,000	\$957,000
Currituck - Knotts Island	\$172,000	\$44,000	\$216,000
Hatteras - Ocracoke	\$3,923,000	\$1,008,000	\$4,931,000
Southport - Fort Fisher	\$1,522,000	\$391,000	\$1,913,000
Swan Quarter - Ocracoke	\$272,000	\$70,000	\$342,000
Total	\$7,500,000	\$1,928,000	\$9,428,000
<i>Toll Increase Scenario</i>			
Bayview - Aurora	\$127,000	\$33,000	\$160,000
Cedar Island - Ocracoke	\$721,000	\$185,000	\$906,000
Cherry Branch - Minnesott Beach	\$760,000	\$195,000	\$955,000
Currituck - Knotts Island	\$172,000	\$44,000	\$216,000
Hatteras - Ocracoke	\$3,923,000	\$1,008,000	\$4,931,000
Southport - Fort Fisher	\$1,521,000	\$391,000	\$1,912,000
Swan Quarter - Ocracoke	\$272,000	\$70,000	\$342,000
Total	\$7,496,000	\$1,926,000	\$9,422,000
Difference	-4,000	-\$2,000	-\$6,000

Source: CDM Smith

Alternative Pricing

Two additional analyses were performed to determine the effect that different toll structures would have on the ridership, revenue, visitor impacts, and tax impacts previously presented. For these analyses, ridership data for the most recent 12 months (see Table 2) and alternative pricing options from the *North Carolina Ferry System Revenue Study* were used. Specifically, Pricing Options 3 and 4 within Pricing Scheme 3 – The Directive Model from the *North Carolina Ferry System Revenue Study* were

used.¹⁸ These pricing options are consistent with the options presented at a series of public meetings in January and February 2012. Table 20 presents the alternative pricing options.

Pricing Option 3 was not selected because this option did not provide a system-wide commuter pass as well as a route-specific commuter pass. The system-wide commuter pass was very important based on information received at a series of public meetings where many individuals, particularly those who travel frequently to and from Ocracoke Island, expressed a desire to be able to use multiple routes and not be required to purchase a separate route-specific pass for each individual ferry route. Pricing Option 4 was not selected due to a desire to be consistent with other ferry systems across the U.S., the majority of ferry system's charge a fee for the driver and vehicle and also charge a fee for each additional passenger in the vehicle. The Option 4 pricing option had lower commuter pass prices but higher single-vehicle rates that approached or exceeded the point at which revenues began to decline due to the decline of users due to the high fare prices.

Table 19
Alternative Pricing Options
Nov. 2011 – Oct. 2012

Class Fare	Bayview - Aurora	Cedar Island - Ocracoke	Cherry Branch - Minnesott Beach	Southport	Swan Quarter
<i>Pricing Option 3</i>					
Pedestrian	\$2	\$5	\$1	\$2	\$5
Passenger	\$2	\$5	\$1	\$2	\$5
Bicycle	\$3	\$10	\$2	\$3	\$10
Motorcycle	\$5	\$15	\$2.50	\$5	\$15
< 20 Feet	\$10	\$27	\$4	\$10	\$27
20 Feet - < 40 Feet	\$20	\$50	\$8	\$20	\$50
> 40 Feet	\$30	\$75	\$12	\$30	\$75
Commuter	\$200	\$300	\$150	\$200	\$300
<i>Pricing Option 4</i>					
Pedestrian	\$2	\$5	\$1	\$2	\$5
Passenger	\$0	\$0	\$0	\$0	\$0
Bicycle	\$3	\$10	\$2	\$3	\$10
Motorcycle	\$5	\$15	\$3	\$5	\$15
< 20 Feet	\$12	\$33	\$7	\$12	\$33
20 Feet - < 40 Feet	\$25	\$60	\$15	\$25	\$60
> 40 Feet	\$50	\$90	\$25	\$50	\$90
Commuter	\$200	\$300	\$150	\$200	\$300

Source: North Carolina Ferry System Revenue Study, Prepared for: NC DOT Ferry Division, by CDM Smith, January 2012

¹⁸ North Carolina Ferry System Revenue Study, January 2012, prepared for the North Carolina Department of Transportation Ferry Division.

Similar to the toll structure used in this analysis, Pricing Option 3 charges for each additional passenger in a vehicle. However, a lower commuter pass price is used, and the commuter pass is not a system-wide pass. Pricing Option 4 charges only a flat rate per vehicle, but uses the same commuter pass price as Pricing Option 3.

Average annual ridership by commuters and non-commuters for the November 2008 to October 2011 period using Pricing Options 3 and 4 are presented in Tables 21 and 22, respectively. Using Pricing Option 3, total average ridership decreases from more than 893,400 vehicles in the Baseline Scenario to more than 864,200 vehicles in the Toll Increase Scenario, a difference of 29,200 vehicles. Using Pricing Option 4, total average ridership decreases from more than 893,400 vehicles in the Baseline Scenario to nearly 859,800 vehicles in the Toll Increase Scenario, a difference of 33,600 vehicles. For the toll structure in the Legislative Directive, total vehicle ridership decreases by approximately 51,000 vehicles in the Toll Increase Scenario.

Table 20
Annual Ridership by Commuters and Non-Commuters, Pricing Option 3
Nov. 2011 – Oct. 2012

Ferry Route	Ridership Commuters	Ridership Non-Commuters	Total Ridership
<i>Baseline Scenario</i>			
Bayview - Aurora	54,214	13,774	67,988
Cedar Island - Ocracoke	13,838	44,819	58,657
Cherry Branch - Minnesott Beach	177,905	48,192	226,097
Currituck - Knotts Island	17,199	6,085	23,284
Hatteras - Ocracoke	82,899	212,864	295,763
Southport - Fort Fisher	88,312	104,501	192,813
Swan Quarter - Ocracoke	8,909	19,932	28,841
Total	443,274	450,169	893,443
<i>Toll Increase Scenario</i>			
Bayview - Aurora	51,796	13,774	65,570
Cedar Island - Ocracoke	10,680	44,819	55,499
Cherry Branch - Minnesott Beach	170,362	48,192	218,554
Currituck - Knotts Island	17,199	6,085	23,284
Hatteras - Ocracoke	82,899	212,864	295,763
Southport - Fort Fisher	80,262	98,544	178,807
Swan Quarter - Ocracoke	6,837	19,932	26,769
Total	420,034	444,211	864,246

Source: CDM Smith

Table 21
Annual Ridership by Commuters and Non-Commuters, Pricing Option 4
Nov. 2011 – Oct. 2012

Ferry Route	Ridership Commuters	Ridership Non-Commuters	Total Ridership
<i>Baseline Scenario</i>			
Bayview - Aurora	54,214	13,774	67,988
Cedar Island - Ocracoke	13,838	44,819	58,657
Cherry Branch - Minnesott Beach	177,905	48,192	226,097
Currituck - Knotts Island	17,199	6,085	23,284
Hatteras - Ocracoke	82,899	212,864	295,763
Southport - Fort Fisher	88,312	104,501	192,813
Swan Quarter - Ocracoke	8,909	19,932	28,841
Total	443,274	450,169	893,443
<i>Toll Increase Scenario</i>			
Bayview - Aurora	51,841	13,774	65,615
Cedar Island - Ocracoke	10,680	44,819	55,499
Cherry Branch - Minnesott Beach	170,434	48,192	218,627
Currituck - Knotts Island	17,199	6,085	23,284
Hatteras - Ocracoke	82,899	212,864	295,763
Southport - Fort Fisher	80,262	93,949	174,211
Swan Quarter - Ocracoke	6,837	19,932	26,769
Total	420,152	439,616	859,768

Source: CDM Smith

Tables 23 and 24 identify total average annual revenue generated in the Baseline and Toll Increase Scenarios using Pricing Options 3 and 4, respectively. For Pricing Option 3, revenue increases from more than \$1.9 million in the Baseline Scenario to nearly \$5.3 million in the Toll Increase Scenario. Using Pricing Option 4, revenue increases from more than \$1.9 million in the Baseline Scenario to more than \$4.8 million in the Toll Increase Scenario. Both of these pricing options generate less revenue in the Toll Increase Scenario than the toll structure in the Legislative Directive, where nearly \$5.4 million is generated in the Toll Increase Scenario.

Table 22
Total Annual Revenue, Pricing Option 3
Nov. 2011 – Oct. 2012

Ferry Route	Total Revenue Baseline	Total Revenue Toll Increase
Bayview - Aurora	\$0	\$264,000
Cedar Island - Ocracoke	\$871,000	\$1,874,000
Cherry Branch - Minnesott Beach	\$0	\$518,000
Currituck - Knotts Island	\$0	\$0
Hatteras - Ocracoke	\$0	\$0
Southport - Fort Fisher	\$648,000	\$1,715,000
Swan Quarter - Ocracoke	\$425,000	\$889,000
Total	\$1,944,000	\$5,260,000

Source: CDM Smith

Table 23
Total Annual Revenue, Pricing Option 4
Nov. 2011 – Oct. 2012

Ferry Route	Total Revenue	Total Revenue
	Baseline	Toll Increase
Bayview - Aurora	\$0	\$259,000
Cedar Island - Ocracoke	\$871,000	\$1,804,000
Cherry Branch - Minnesott Beach	\$0	\$554,000
Currituck - Knotts Island	\$0	\$0
Hatteras - Ocracoke	\$0	\$0
Southport - Fort Fisher	\$648,000	\$1,343,000
Swan Quarter - Ocracoke	\$425,000	\$863,000
Total	\$1,944,000	\$4,823,000

Source: CDM Smith

Direct visitor impacts generated by non-commuters using the Ferry System based on Pricing Options 3 and 4 are identified for the Baseline and Toll Increase Scenarios in Tables 25 and 26, respectively. For Pricing Option 3, 5,404 jobs are generated by more than \$478.4 million in expenditures made by non-commuters using the Ferry System in the Baseline Scenario (see Table 25). These jobs have an annual payroll of more than \$112.9 million. Due to toll increases and the resultant decrease in visitor spending at their destinations, these impacts reduce employment by four jobs (0.7%), annual payroll by \$84,000, and output (visitor expenditures) by \$280,000 in the Toll Increase Scenario. This is the same reduction in direct visitor impacts for the toll structure in the Legislative Directive (four jobs with an annual payroll of \$84,000 and \$280,000 in output).

Table 24
Direct Visitor Impacts, Pricing Option 3
Baseline and Post-Toll Increase
Nov. 2011 – Oct. 2012

Ferry Route	Employment	Payroll	Output
<i>Baseline Scenario</i>			
Bayview - Aurora	86	\$1,797,000	\$7,649,000
Cedar Island - Ocracoke	513	\$10,722,000	\$45,426,000
Cherry Branch - Minnesott Beach	414	\$8,653,000	\$36,598,000
Currituck - Knotts Island	86	\$1,797,000	\$7,565,000
Hatteras - Ocracoke	2,797	\$58,457,000	\$247,590,000
Southport - Fort Fisher	1,289	\$26,940,000	\$114,146,000
Swan Quarter - Ocracoke	219	\$4,577,000	\$19,457,000
Total	5,404	\$112,943,000	\$478,431,000
<i>Toll Increase Scenario</i>			
Bayview - Aurora	86	\$1,797,000	\$7,625,000
Cedar Island - Ocracoke	512	\$10,701,000	\$45,334,000

Cherry Branch - Minnesott Beach	413	\$8,632,000	\$36,568,000
Currituck - Knotts Island	86	\$1,797,000	\$7,565,000
Hatteras - Ocracoke	2,797	\$58,457,000	\$247,590,000
Southport - Fort Fisher	1,288	\$26,919,000	\$114,052,000
Swan Quarter - Ocracoke	218	\$4,556,000	\$19,417,000
Total	5,400	\$112,859,000	\$478,151,000
Difference	-4	-\$84,000	-\$280,000

Source: CDM Smith

For Pricing Option 4, toll increases and the resultant decrease in visitor spending reduce visitor-related employment by five jobs (0.9%), annual payroll by \$105,000, and output (visitor expenditures) by \$438,000 in the Toll Increase Scenario (see Table 26). These impacts represent differences of one additional employee, \$21,000 more in annual payroll, and an additional \$158,000 in output compared to the reduction in direct visitor impacts for the toll structure in the Legislative Directive (four jobs with an annual payroll of \$84,000 and \$280,000 in output).

Table 25
Direct Visitor Impacts, Pricing Option 4
Baseline and Post-Toll Increase
Nov. 2011 – Oct. 2012

Ferry Route	Employment	Payroll	Output
<i>Baseline Scenario</i>			
Bayview - Aurora	86	\$1,797,000	\$7,649,000
Cedar Island - Ocracoke	513	\$10,722,000	\$45,426,000
Cherry Branch - Minnesott Beach	414	\$8,653,000	\$36,598,000
Currituck - Knotts Island	86	\$1,797,000	\$7,565,000
Hatteras - Ocracoke	2,797	\$58,457,000	\$247,590,000
Southport - Fort Fisher	1,289	\$26,940,000	\$114,146,000
Swan Quarter - Ocracoke	219	\$4,577,000	\$19,457,000
Total	5,404	\$112,943,000	\$478,431,000
<i>Toll Increase Scenario</i>			
Bayview - Aurora	86	\$1,797,000	\$7,622,000
Cedar Island - Ocracoke	512	\$10,701,000	\$45,279,000
Cherry Branch - Minnesott Beach	413	\$8,632,000	\$36,539,000
Currituck - Knotts Island	86	\$1,797,000	\$7,565,000
Hatteras - Ocracoke	2,797	\$58,457,000	\$247,590,000
Southport - Fort Fisher	1,287	\$26,898,000	\$114,005,000
Swan Quarter - Ocracoke	218	\$4,556,000	\$19,393,000
Total	5,399	\$112,838,000	\$477,993,000
Difference	-5	-\$105,000	-\$438,000

Source: CDM Smith

Tables 27 and 28 on the following page show the annual tax impacts generated by visitor expenditures for Pricing Options 3 and 4, respectively. Total tax revenue decreases by \$24,000 between the Baseline and Toll Increase Scenarios for Pricing Option 3 (see Table 27) and decreases by \$36,000 for Pricing Option 4 (see Table 28). For the toll structure in the Legislative Directive, tax revenue decreases by \$24,000 between the Baseline and Toll Increase Scenarios.

Table 26
Annual Tax Impacts Generated by Visitor Expenditures, Pricing Option 3
Nov. 2011 – Oct. 2012

Ferry Route	Retail Sales Tax	Lodging Tax	Rental Car Tax	Fuel Tax	Total Taxes
<i>Baseline Scenario</i>					
Bayview - Aurora	\$181,000	\$311,000	\$44,000	\$103,000	\$639,000
Cedar Island - Ocracoke	\$1,076,000	\$2,035,000	\$261,000	\$614,000	\$3,986,000
Cherry Branch - Minnesott Beach	\$867,000	\$1,601,000	\$210,000	\$495,000	\$3,173,000
Currituck - Knotts Island	\$179,000	\$402,000	\$43,000	\$102,000	\$726,000
Hatteras - Ocracoke	\$5,984,000	\$11,436,000	\$1,422,000	\$3,347,000	\$22,189,000
Southport - Fort Fisher	\$2,704,000	\$5,494,000	\$656,000	\$1,543,000	\$10,397,000
Swan Quarter - Ocracoke	\$471,000	\$899,000	\$112,000	\$263,000	\$1,745,000
Total	\$11,462,000	\$22,178,000	\$2,748,000	\$6,467,000	\$42,855,000
<i>Toll Increase Scenario</i>					
Bayview - Aurora	\$181,000	\$310,000	\$44,000	\$103,000	\$638,000
Cedar Island - Ocracoke	\$1,074,000	\$2,031,000	\$260,000	\$613,000	\$3,978,000
Cherry Branch - Minnesott Beach	\$866,000	\$1,600,000	\$210,000	\$494,000	\$3,170,000
Currituck - Knotts Island	\$179,000	\$402,000	\$43,000	\$102,000	\$726,000
Hatteras - Ocracoke	\$5,984,000	\$11,436,000	\$1,422,000	\$3,347,000	\$22,189,000
Southport - Fort Fisher	\$2,702,000	\$5,490,000	\$655,000	\$1,542,000	\$10,389,000
Swan Quarter - Ocracoke	\$470,000	\$897,000	\$112,000	\$262,000	\$1,741,000
Total	\$11,456,000	\$22,166,000	\$2,746,000	\$6,463,000	\$42,831,000
Difference	-\$6,000	-\$12,000	-\$2,000	-\$4,000	-\$24,000

Source: CDM Smith

Table 27
Annual Tax Impacts Generated by Visitor Expenditures, Pricing Option 4
Nov. 2011 – Oct. 2012

Ferry Route	Retail Sales Tax	Lodging Tax	Rental Car Tax	Fuel Tax	Total Taxes
<i>Baseline Scenario</i>					
Bayview - Aurora	\$181,000	\$311,000	\$44,000	\$103,000	\$639,000
Cedar Island - Ocracoke	\$1,076,000	\$2,035,000	\$261,000	\$614,000	\$3,986,000
Cherry Branch - Minnesott Beach	\$867,000	\$1,601,000	\$210,000	\$495,000	\$3,173,000
Currituck - Knotts Island	\$179,000	\$402,000	\$43,000	\$102,000	\$726,000
Hatteras - Ocracoke	\$5,984,000	\$11,436,000	\$1,422,000	\$3,347,000	\$22,189,000
Southport - Fort Fisher	\$2,704,000	\$5,494,000	\$656,000	\$1,543,000	\$10,397,000
Swan Quarter - Ocracoke	\$471,000	\$899,000	\$112,000	\$263,000	\$1,745,000
Total	\$11,462,000	\$22,178,000	\$2,748,000	\$6,467,000	\$42,855,000
<i>Toll Increase Scenario</i>					
Bayview - Aurora	\$181,000	\$310,000	\$44,000	\$103,000	\$638,000
Cedar Island - Ocracoke	\$1,073,000	\$2,029,000	\$260,000	\$612,000	\$3,974,000
Cherry Branch - Minnesott Beach	\$866,000	\$1,599,000	\$210,000	\$494,000	\$3,169,000
Currituck - Knotts Island	\$179,000	\$402,000	\$43,000	\$102,000	\$726,000
Hatteras - Ocracoke	\$5,984,000	\$11,436,000	\$1,422,000	\$3,347,000	\$22,189,000
Southport - Fort Fisher	\$2,702,000	\$5,488,000	\$655,000	\$1,541,000	\$10,386,000
Swan Quarter - Ocracoke	\$468,000	\$896,000	\$111,000	\$262,000	\$1,737,000
Total	\$11,453,000	\$22,160,000	\$2,745,000	\$6,461,000	\$42,819,000
Difference	-\$9,000	-\$18,000	-\$3,000	-\$6,000	-\$36,000

Source: CDM Smith

Annual visitor-related employment tax impacts decrease by \$8,000 and \$9,000 between the Baseline and Toll Increase Scenarios for Pricing Options 3 and 4, respectively (see Tables 29 and 30). Similarly, these tax impacts decrease by \$8,000 between the Baseline and Toll Increase Scenarios for the toll structure in the Legislative Directive.

Table 28
Annual Visitor-Related Employment Tax Impacts, Pricing Option 3
Nov. 2011 – Oct. 2012

Ferry Route	Income Taxes Paid by Visitor-Related Employees	Sales Taxes Paid by Visitor-Related Employees	Total Taxes Paid by Visitor-Related Employees
<i>Baseline Scenario</i>			
Bayview - Aurora	\$113,000	\$29,000	\$142,000
Cedar Island - Ocracoke	\$672,000	\$173,000	\$845,000
Cherry Branch - Minnesott Beach	\$542,000	\$139,000	\$681,000
Currituck - Knotts Island	\$113,000	\$29,000	\$142,000
Hatteras - Ocracoke	\$3,664,000	\$941,000	\$4,605,000
Southport - Fort Fisher	\$1,689,000	\$434,000	\$2,123,000
Swan Quarter - Ocracoke	\$287,000	\$74,000	\$361,000
Total	\$7,080,000	\$1,819,000	\$8,899,000
<i>Toll Increase Scenario</i>			
Bayview - Aurora	\$113,000	\$29,000	\$142,000
Cedar Island - Ocracoke	\$671,000	\$172,000	\$843,000
Cherry Branch - Minnesott Beach	\$541,000	\$139,000	\$680,000
Currituck - Knotts Island	\$113,000	\$29,000	\$142,000
Hatteras - Ocracoke	\$3,664,000	\$941,000	\$4,605,000
Southport - Fort Fisher	\$1,687,000	\$433,000	\$2,120,000
Swan Quarter - Ocracoke	\$286,000	\$73,000	\$359,000
Total	\$7,075,000	\$1,816,000	\$8,891,000
Difference	-5,000	-\$3,000	-\$8,000

Source: CDM Smith

Table 29
Annual Visitor-Related Employment Tax Impacts, Pricing Option 4
Nov. 2011 – Oct. 2012

Ferry Route	Income Taxes Paid by Visitor-Related Employees	Sales Taxes Paid by Visitor-Related Employees	Total Taxes Paid by Visitor-Related Employees
<i>Baseline Scenario</i>			
Bayview - Aurora	\$113,000	\$29,000	\$142,000
Cedar Island - Ocracoke	\$672,000	\$173,000	\$845,000
Cherry Branch - Minnesott Beach	\$542,000	\$139,000	\$681,000
Currituck - Knotts Island	\$113,000	\$29,000	\$142,000
Hatteras - Ocracoke	\$3,664,000	\$941,000	\$4,605,000
Southport - Fort Fisher	\$1,689,000	\$434,000	\$2,123,000
Swan Quarter - Ocracoke	\$287,000	\$74,000	\$361,000
Total	\$7,080,000	\$1,819,000	\$8,899,000
<i>Toll Increase Scenario</i>			
Bayview - Aurora	\$113,000	\$29,000	\$142,000
Cedar Island - Ocracoke	\$671,000	\$172,000	\$843,000
Cherry Branch - Minnesott Beach	\$541,000	\$139,000	\$680,000
Currituck - Knotts Island	\$113,000	\$29,000	\$142,000
Hatteras - Ocracoke	\$3,664,000	\$941,000	\$4,605,000
Southport - Fort Fisher	\$1,686,000	\$433,000	\$2,119,000
Swan Quarter - Ocracoke	\$286,000	\$73,000	\$359,000
Total	\$7,074,000	\$1,816,000	\$8,890,000
Difference	-6,000	-\$3,000	-\$9,000

Source: CDM Smith

1 19A NCAC 02D.0531 is amended under temporary procedures as follows:

2

3 **19A NCAC 02D .0531 FREE OPERATIONS**

4 The Currituck Sound to Knotts Island and ~~(Knotts Island)~~, Ocracoke to Hatteras Inlet, Pamlico River, and Cherry
5 Branch Minnesott Beach operations are toll free.

6

7 *History Note: Authority G.S. 136-82; 143B-10(j);*

8 *Eff. July 1, 1978.*

9 *Amendment Eff. July 1, 2013*

10

11

12

1 19A NCAC 02D.0532 is amended under temporary procedures as follows:
2

3 **19A NCAC 02D .0532 TOLL OPERATIONS**

4 (a) The Cedar Island-Ocracoke, ~~Currituck Corolla, Swan Quarter-Ocracoke and Southport Ft. Fisher~~ Swan
5 Quarter-Ocracoke, Southport-Fort Fisher, Pamlico River, and Cherry Branch-Minnesott Beach ferry operations are toll
6 operations. There is no charge for children 12 and under. People age 65 and older receive a 10 percent discount.

7 (b) Only emergency vehicles in emergency status are toll exempt.

8 (c) One-way fares ~~Fares~~ and rates applicable to each operation are as ~~listed in this Rule:~~ follows:

9	(1)	Cedar Island-Ocracoke and Swan Quarter-Ocracoke	
10	(a)	pedestrian	\$ 1.00 <u>5.00</u>
11	(b)	bicycle and rider	\$ 3.00 <u>10.00</u>
12	(c)	motorcycle and rider	\$10.00 <u>15.00</u>
13	(d)	single vehicle or combination 20 feet or less in length	\$15.00 <u>27.00</u>
14		(minimum fare for licensed vehicle)	
15	(e)	vehicle or combination over 20 feet up to and including 40 feet	\$30.00 <u>50.00</u>
16	(f)	vehicle or combination over 40 feet to 65 feet	
17		(maximum length)	\$45.00 <u>65.00</u>
18	(g)	vehicle or combination over 65 feet Special Permit @	\$1.00 <u>Per Foot</u>
19	(g)	each passenger in any size vehicle	\$5.00
20	(2)	Currituck Corolla (pedestrian only)	\$ 2.00
21		(no toll charge for Currituck County school children and staff)	
22			
23	(3)	Southport Ft. Fisher <u>Southport-Fort Fisher</u>	
24	(a)	pedestrian	\$ 1.00 <u>2.00</u>
25	(b)	bicycle and rider	\$ 2.00 <u>3.00</u>
26	(c)	motorcycle and rider	\$ 3.00 <u>5.00</u>
27	(d)	single vehicle or combination 20 feet or less in length	\$ 5.00 <u>10.00</u>
28		(minimum fare for licensed vehicle)	
29	(e)	vehicle or combination over 20 feet up to and including 40 feet	\$10.00 <u>20.00</u>
30	(f)	vehicle or combination over 40 feet to 65 feet	\$15.00 <u>30.00</u>
31	(g)	vehicle or combination over 65 feet Special Permit @	\$1.00 <u>Per Foot</u>
32	(g)	each passenger in any size vehicle	\$2.00
33	(3)	<u>Pamlico River</u>	
34	(a)	pedestrian	\$ 2.00
35	(b)	bicycle and rider	\$ 3.00
36	(c)	motorcycle and rider	\$ 5.00
37	(d)	single vehicle or combination 20 feet or less in length	\$ 10.00
38		(minimum fare for licensed vehicle)	
39	(e)	vehicle or combination over 20 feet up to and including 40 feet	\$ 20.00
40	(f)	vehicle or combination over 40 feet to 65 feet	\$ 30.00
41	(g)	each passenger in any size vehicle	\$ 2.00
42	(4)	<u>Cherry Branch-Minnesott Beach</u>	
43	(a)	pedestrian	\$ 1.00
44	(b)	bicycle and rider	\$ 2.00
45	(c)	motorcycle and rider	\$ 3.00
46	(d)	single vehicle or combination 20 feet or less in length	\$ 4.00
47		(minimum fare for licensed vehicle)	
48	(e)	vehicle or combination over 20 feet up to and including 40 feet	\$ 8.00
49	(f)	vehicle or combination over 40 feet to 65 feet	\$12.00
50	(g)	each passenger in any size vehicle	\$ 1.00

51 (d) (4) Commuter Passes are valid for one year. ~~year from date of purchases.~~ Passes are available to anyone. Passes
52 are valid for pass owner only as follows:

53	Type	System Wide Pass	Site Specific Pass
54	Vehicles up to 20 feet	\$150.00	\$100.00
55	Vehicles over 20 feet to 40 feet	\$200.00	\$125.00

