



REPORT



The Economic Development Impact of Renovating Mattamuskeet Lodge

Report to Hyde County, North Carolina and
North Carolina Wildlife Resources Commission

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Preface

The University of North Carolina School of Government was commissioned by Hyde County, North Carolina in partnership with the North Carolina Wildlife Resources Commission to prepare a report on the likely short- and longer-term impacts of the renovation of Mattamuskeet Lodge on the economy of Hyde County and the broader region.

It is important to note at the outset that the actual impact of the renovation will be determined by a host of policy, operational, and individual choices. As such, there can be no definitive quantifiable return on public investment. What this report provides is data and analysis to describe the economic context for the Lodge and to guide strategies and decisions that have the potential to increase the return on investment.

The report has three sections:

1. The Economic Development Impact of Renovating Mattamuskeet Lodge: Conclusions
2. Analysis of Data and Research: Narrative
This section is organized into four parts:
 - The history and potential of the Mattamuskeet Lodge
 - The local and regional context
 - The visitor attraction context
 - The economic and business development context
3. Data Sources and Additional Information

The report was prepared in October 2016 based upon the compilation and analysis of secondary source materials, and a series of interviews conducted during a site visit to Hyde County on October 25-27, 2016. Much appreciation for their time and insights are due to Kristen Noble (Hyde County) and Ashton Godwin (NC Wildlife Resources Commission) together with Mark Williard (Williard Stewart Caliendo Architects), John Mullins, Janet Russ, and Averi Simmons (Hyde County Chamber of Commerce), Judy Mclawhorn (Mattie Arts), Cathy Davison and Sandra Powers (Albemarle Commission), Jan Moore (Senior Tar Heel Legislature), Peter Campbell (U.S. Fish & Wildlife Service, Mattamuskeet NWR), Brandon Martelle (Martelle's Feed House Restaurant), Chris Williams (Chris's Grocery), Jamin Simmons and Rob Orr (Mattamuskeet Management & Consulting/Dare To Hyde), Dawson Pugh (Pamlico Shores Produce), Bill Rich (Hyde County Manager), and Earl Pugh (Hyde County Commission).

THE ECONOMIC DEVELOPMENT IMPACT OF RENOVATING MATTAMUSKEET LODGE: CONCLUSIONS

1. **The historical and cultural importance of Mattamuskeet Lodge to the State of North Carolina may be justification in of itself for completing the renovation.**

Mattamuskeet Lodge is an iconic building with great historical and cultural significance nationally, for the state of North Carolina, and for the community of Hyde County. It is a potent symbol for generations of Hyde County families. Further state investment in completing the renovation of the Lodge might be justified on those grounds alone. The state has already spent almost \$6 million on safeguarding the structure of the building, and has committed to restoring and maintaining the Lodge as a public facility dedicated to the conservation of natural and cultural resources of North Carolina.

2. **State investment to complete the renovation will bring short-term construction jobs and longer-term local economic benefits from Lodge operations.**

Investing \$7.5 million in completing the renovation of the Lodge would create 64 construction-related jobs in the short-term and a further 20 jobs in the economy. This would equate to \$2.2 million in direct wages, \$323,000 in the supply chain, and \$223,000 in additional household spending. Overall, the investment would have a \$9.9 million impact on the local economy, a multiplier of 1.32. In addition, after three years, the proposed accommodation in the Lodge would create 20 direct jobs and generate over \$2 million in revenues providing an additional boost of \$900,000 into the economy.

3. **The more the Lodge renovation can catalyze (a) an increase in the number of visitors to the Lake Mattamuskeet National Wildlife Refuge, particularly those from out of state who wish to observe and photograph wildlife, and (b) the continued attraction of high value non-resident hunters, the greater the longer-term economic benefit.**

The Lodge is an integral part of the Lake Mattamuskeet National Wildlife Refuge, which already attracts around 30,000 to 50,000 visitors per year. One study showed that each visitor on average spends \$76.62 directly related to the visit to Lake Mattamuskeet and a further \$49.15 on other spending in the area. This amounts to total annual spending of over \$11.5 million in the local economy.

Another study on a nearby refuge showed that over 90 percent of resident visitors and over 83 percent of non-resident visitors were there to observe and photograph wildlife. Hunting (including for big game) accounted for nearly 17 percent and fishing 0.5 percent of non-resident visitors. Of note, is that non-residents as compared to residents, spent over five times more on observing and photographing wildlife, over three times more on hunting, and over twice more on fishing. Spending per non-resident visitor was highest for hunting at \$84.85, with observing and photographing \$32.88 and fishing \$22.86. These data are consistent with national trends.

4. The renovation of the Lodge will create a new destination or anchor for tourists, particularly for those visiting or staying on the Outer Banks.

An important component of visitor attraction will be the ability to reach the large numbers of people who stay on the Outer Banks and who seek experiences away from the crowds. The County Manager talks about “completing the loop” where travelers along the Outer Banks to Ocracoke catch a ferry to Swan Quarter and then proceed back to Manteo via Mattamuskeet (as well as Swan Quarter and Engelhard). The Lodge in this scenario assumes the role as a destination or anchor along the “Road Less Travelled.”

5. Increased levels of visitors will only generate positive economic impacts on Hyde County if there are opportunities for spending money locally.

Visitors expect to spend money on food and drinks, lodging, shopping, transportation, and recreation. The higher the quality of the visitor experience, the more they will spend. Data on tourism spending in 13 counties in northeastern coastal Carolina shows that Hyde County has already the second highest spending per capita of resident population, second only to Dare County. This indicates both current tourism orientation and potential for growth.

The peak visitor seasons for Hyde County are January-February for hunting, and July-August for summer fishing. Analysis of the 10 lodging properties shows that they are in total operating at only 32 percent of theoretical capacity, suggesting they can accommodate substantially more guests if they can offer the quality and type of lodging for out-of-season visitors. Investment in new tourism infrastructure, such as a mid-price hotel, although desirable, may be a long-term prospect, so a priority should be to support the incremental upgrading of existing accommodation and the development and marketing of additional bed & breakfast and self-catering options.

For every ten percent increase in tourism, spending \$600,000 could be injected into the county’s economy creating 40 jobs, and increasing local taxes by \$167,000 and state taxes by \$147,000.

6. The renovation of the Lodge could be a catalyst for a variety of complementary entrepreneurial opportunities associated with increased visitation.

An important idea currently being developed is the use of Mattamuskeet Lodge as a brand for an entrepreneurial network that would assure quality standards and customer satisfaction for products and services offered by Hyde County businesses and entrepreneurs.

Possible entrepreneurial activities that would reinforce the purpose of the Lodge as a catalyst for the enjoyment and conservation of the region’s natural and cultural resources might include guiding services, fishing and hunting equipment and supplies, recreation equipment rental (bicycles, kayaks, paddleboards), branded local foods (fresh and processed), lodging, campgrounds, convenience and gift shops, game processors, dog kennels, and laundry services.

There is already in place a system of business support centered on the County Office of Planning & Economic Development that extends to a network of local, regional, state and federal resources. Existing and emerging business ventures offer encouragement to the possibility of a strong entrepreneurial response to these opportunities.

ANALYSIS OF DATA AND RESEARCH: NARRATIVE

The History and Potential of the Mattamuskeet Lodge

The Lodge has a long and varied history¹ which makes it an important cultural asset for Hyde County, the region, and North Carolina. Interest in draining Lake Mattamuskeet went back almost 250 years with the aim of reclaiming land for farming — an early attempt to boost the economy of Hyde County. In the early twentieth century, plans were advanced to dredge 87 miles of navigable canals and build a steam-powered pumping plant to drain the lake to the Pamlico Sound. The pumping station was designed to move 1.2 million gallons per minute making it the largest capacity pumping station in the world. Although the lake was drained – on three occasions – the project was abandoned in 1932, and subsequently bought by the U.S. Government as a migratory waterfowl refuge.

After renovation and adaptation by the Civilian Conservation Corps, the pumping station reopened as the Mattamuskeet Lodge in 1937. For 35 years, Mattamuskeet was nationally renowned for Canada goose-hunting until this was banned by the U.S. Fish & Wildlife Service as the winter migratory goose population sharply fell. The Lodge closed in 1974 and remained so for 20 years. It was designated as an historic structure by the National Register of Historic Places in 1980, and over the next 36 years the Lodge was the object of much attention to raise funds for its restoration and to consider a range of potential futures. It was in use for a variety of accommodation, recreational, and educational activities until 2000 when it was condemned and declared unsafe for public use.

The ownership of the Lodge was transferred in 2006 from the Federal government to the State of North Carolina², which committed incremental funding to allow two phases of work to stabilize and repair the structure under the supervision of the North Carolina Division of Cultural Resources. Unfortunately, budgetary pressures led to a cessation of state funding and the planned renovation was not completed.

It is important, however, to recognize that for decades, volunteers have devoted many thousands of hours to raising funds, carrying out repairs, and maintaining interest in the future of the lodge. This sweat equity arguably gives the local community, and nonprofits such as the Mattamuskeet Foundation, the Friends of Mattamuskeet Lodge, and Partnership for the Sounds, a voice in what happens next.

A business management and tourism study was prepared for the North Carolina Wildlife Resources Commission in 2009³ when it was anticipated that the Commission would be the operator of the Lodge after full refurbishment. The Lodge was seen as a potential center for a wide range of recreational, educational, and tourism activities serving niche markets complementary to the aims of the National Wildlife Refuge, particularly in relation to fishing and hunting. Special attention was given to seeking the support and engagement of the local community.

Since then the emphasis has shifted somewhat with encouragement from state legislators to pursue a public-private partnership to complete the Lodge renovation and establish financially viable operations. The legal and financial structures required to achieve such a partnership are still being developed, but the essence will likely be state investment of about \$7.5 million for renovation works and an agreement with a private company to operate the Lodge as an ongoing business. Current proposals⁴ anticipate up to 14 en suite bedrooms, a commercial kitchen, a 110-seat restaurant and adjacent lounge, an exhibit area, an educational lab, and facilities for hunters, fishermen, and birdwatchers.

One vision for the Lodge is to emulate Honey Brake Lodge in Jonesville, Louisiana⁵, which is a high-end hunting, fishing, and outdoor recreation facility with an international reputation, where guests pay \$975 per day for lodging, meals, and access. A distinctive feature at Mattamuskeet would be to develop the Lodge as the hub of an entrepreneurial network, where local businesses and individuals could be accredited partners in the Mattamuskeet Brand, providing a range of complementary products and services⁶. There are no data on the local economic impact of the Honey Brake Lodge, but a 2013 study on wildlife tourism and the Gulf Coast economy⁷ pointed to the importance of guides and outfitters and their mutually beneficial relationships with lodging and dining establishments, and their combined impact on employment and visitor attraction.

An economic impact study of renovating the Mattamuskeet Lodge was conducted in 2015 by East Carolina University's Bureau of Business Research⁸. An investment of \$7.5 million in construction works, it was estimated, would create directly nearly 64 jobs in the short-term and a further 20 jobs through indirect and induced effects in the local economy. This would mean labor income of nearly \$2.2 million in direct wages, over \$323,000 in the supply chain, and nearly \$223,000 in additional household spending. Overall, the study estimated that the investment would lead to a \$9.9 million impact on the local economy, a multiplier of 1.32. Similar calculations were made for \$800,000 in furnishings, of which \$187,200 was assumed to be sourced locally. This would generate a further \$110,000 into the economy. In addition, the impact of lodging based on certain assumptions about occupancy rates over three years, would eventually create 20 direct jobs, and generate revenues of over \$2 million and a further boost of over \$900,000 into the economy.

The Local and Regional Context

Mattamuskeet Lodge is in Hyde County, one of the least populated⁹ and one of seven “completely rural” counties¹⁰ in North Carolina. Its 2015 population was 5,526, which was a decrease of 5.1 percent from 2000 — the state's population in the same period increased by 24.8 percent.

Hyde County is designated by the North Carolina Department of Commerce as a Tier One county, meaning “most distressed”¹¹ reflecting the county's high poverty rate of 23.4 percent (NC: 17.2 percent)¹², a low median household income of \$36,891, 79.2 percent of the state level¹³ and high unemployment of 8.9 percent (NC: 6.1 percent)¹⁴.

Although Hyde County is one of eight counties forming a commuting zone (298)¹⁵ with Greenville/Pitt County at its core, commuting flow data¹⁶ show that Hyde County has the closest economic connections with Beaufort County and Dare County (which is in a neighboring commuting zone (147)). Of those who are employed in Hyde County, half live outside the county — primarily in Washington and Belhaven in Beaufort County and Manteo in Dare County. Of the workforce who live in Hyde County, nearly 70 percent work in the county, while the other 30 percent work in Raleigh (Wake County), Greenville (Pitt County), Belhaven (Beaufort County), Manteo (Dare County), and Washington (Beaufort County). Work destinations in Hyde County are Swan Quarter, Ocracoke, Engelhard, and Fairfield.

Hyde County is one of 14 counties in the Northeast Coastal nonmetropolitan area as designated by the Bureau of Labor Statistics¹⁷. As of May 2015, this area had 96,460 employees across all occupations with an annual mean wage of \$35,210, just under 80 percent of the mean for North Carolina and 73 percent of the national mean. These relatively low wage levels are largely determined by the region's occupational structure, where four of the five top occupations, which together account for 45 percent of total employees, have annual mean wages substantially below the overall regional and statewide means and below their respective occupation annual means.

A 2016 analysis for the Northeastern Workforce Development Board¹⁸ estimated that ten industries provided 1,573 jobs in Hyde County, including 639 in state and local government, including elementary and secondary education. Agriculture (animal and crop production, including contract laborers) accounted for 553 jobs, seafood processing 88 jobs, and restaurants 154 jobs, with wholesale trade agents/brokers and real estate agent/brokers providing a further 139 jobs. In these estimates, total earnings amounted to over \$57.9 million, \$30.3 million from government jobs and \$27.6 million from private sector jobs.

A different perspective is provided by the U.S. Census County Business Patterns which showed in 2014 that there were 164 business establishments in Hyde County with a total of 858 employees and an annual payroll of \$25.7 million¹⁹. The top five business sectors (by annual payroll) were accommodation and food services (28 establishments and 157 employees), retail trade (37 establishments and 115 employees), wholesale trade (11 establishments and 72 employees), construction (22 establishments and 86 employees) and manufacturing (5 establishments and 64 employees). These five sectors accounted for 63 percent of establishments, 58 percent of employees, and 61 percent of annual payroll.

Tourism is an important but relatively undeveloped part of the Hyde County economy, compared with the main economic driver of agriculture with \$133.4 million in 2012 in crop and livestock sales²⁰, and with its neighbor Dare County. In 2015 tourism in Hyde County generated \$33.54 million in spending (73rd in the state) up by 1.1 percent from 2014, 380 jobs, \$6.61 million in payroll, \$1.59 million in state taxes, and \$1.82 million in local taxes²¹. Dare County which ranks fourth in the state for tourism spending at \$1.05 billion (up by 3.3 percent from 2014), generated 12,710 jobs, \$223 million in payroll, \$50.48 million in state taxes, and \$47.03 million in local taxes. A comparison of tourism spending per capita of the resident population in 13 northeastern coastal North Carolina counties shows that Hyde County ranks second, indicating a strong competitive tourism orientation.

A 2014 report by Western Carolina University estimated that “As a result of taxes generated by tourist spending in Hyde County, each of the 3,353 Hyde County households pay \$984 less in local and state taxes.”²²

The Visitor Attraction Context

A 2014 survey by the North Carolina Wildlife Resources Commission²³ of over 2,000 anglers at Lake Mattamuskeet found that 47 percent came from Hyde County and neighboring four counties (Dare, Beaufort, Tyrell, and Washington) and 53 percent from a total of 54 North Carolina counties and from 17 states outside North Carolina, primarily Virginia, but also Nebraska, West Virginia, Maryland, Pennsylvania and New York. Three-quarters (77.3 percent) of the out-of-state visits were in the summer months May through August, whereas in-state visits were concentrated in April and May.

Further data on Lake Mattamuskeet’s attractiveness comes from a 2006 survey by East Carolina University²⁴ of visitors to eight National Wildlife Refuge in North Carolina and Virginia, including Mattamuskeet, as well as Pocosin Lakes (Hyde, Tyrell, and Washington Counties) and Alligator River (Dare and Hyde Counties). Two-thirds (65.9 percent) of visitors to Mattamuskeet described themselves as tourists, for which nearly all (91.6 percent) visiting the refuge was the primary purpose of being in the region. The average travel distance from home was 174 miles, with 43 percent traveling over 100 miles. Average visitor spending at Mattamuskeet was \$76.62.

Calculations of economic impact of an estimated 86,000 visitors showed total expenditures directly related to the refuge visits of \$7.03 million and a further \$4.51 million in other expenditures while in the region.

In addition, the survey revealed that visitors to Mattamuskeet also visited Alligator River (60.2 percent), Pea Island (55.8 percent), Swan Quarter (50.4 percent), and Great Dismal Swamp (41.6 percent). Visitors to Roanoke River (69.6 percent), Pocosin Lakes (44.2 percent), Pea Island (30.9 percent), Mackay Island (26 percent) and Alligator River (25.7 percent) also visited Mattamuskeet. These combination visits indicate the potential for cross-marketing among the region's refuges.

A major 2015 report from the U.S. Fish & Wildlife Service calculated economic benefits to local communities of National Wildlife Refuges²⁵. A sample of 92 refuges across the United States were analyzed including 16 from the Southeast (Region 4), of which two are close to Mattamuskeet (which was not in the sample): Alligator River and Pocosin Lakes. This study is particularly helpful in distinguishing between three different types of visitor purpose: non-consumptive (photography, bird-watching), hunting, and fishing. The key findings are that for both refuges non-consumptive visits accounted for the clear majority of both residents and non-residents, and that expenditures per non-resident visitor were up to five or six times greater than for a resident visitor. Although expenditure per head was highest for hunting visits, particularly in Pocosin Lakes where big game accounted for 16.8 percent of visits, the relatively smaller numbers mean a much smaller economic impact than for non-consumptive visits.

The 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation²⁶ indicated that in North Carolina there was a modest growth in the number of anglers and wildlife watchers and their expenditures over the period 2001-2011 but a small decline in the number of hunters and their expenditures. 1.2 million resident anglers and 329,000 out-of-state anglers fished in North Carolina spending a total of \$1.5 billion in trip-related and equipment expenses equivalent to \$43 per day. 1.9 million residents and non-residents observed and photographed wildlife in the state spending \$930 million or \$40 per day. 259,000 in-state and 76,000 out-of-state hunters spent \$525 million or \$30 per day.

An indicator of the seasonal flows of visitors is provided by an analysis of occupancy rental income in Hyde County²⁷. Peak months are in January and February for the hunting season and in July and August for summer fishing.

There have been no forecasts of the additional visitation levels over and above the current levels estimated to be between 32,750 and 58,000 refuge visitors²⁸ that might be generated by a refurbished lodge. The 2009 study²⁹ referred to an annual average of 8,856 visitors to the Lodge over the five-year period 1996-2000 just before it was closed, but visitation levels to other eastern North Carolina tourism landmarks suggest considerable scope for growth. For instance, in 2015, 106,549 people climbed the Cape Hatteras lighthouse and 48,271 climbed the Bodie Island lighthouse³⁰; National Park Service counts³¹ showed 289,885 visitors to the Fort Raleigh National Historic Site and 437,184 to the Wright Brothers National Memorial.

The Economic and Business Development Context

Economic Development

As described earlier, Hyde County is characterized by many indicators of economic distress, which means that the retention and growth of businesses and jobs is a high priority at the County, Regional, State, and Federal levels. Of concern is the continuing loss of young people who leave and do not return because there are insufficient job and career opportunities.

There is a local infrastructure of economic development support, the effectiveness of which will be vital for maximizing the economic impact of the Lodge renovation. The main elements are:

Hyde County The County's Office of Planning & Economic Development provides local leadership in supporting business start-ups and expansions, and in highlighting emerging business opportunities in Hyde County. Following initial interviews with potential businesses, referrals are made to counsellors either at the Small Business and Technology Development Center (SBTDC) at Elizabeth City State University in Pasquotank County or at Beaufort County Community College in Washington. The County also provides funding for business investment up to \$300,000 through its Golden Leaf Foundation-supported revolving loan fund. The Office is well-networked with other economic development organizations and resources that can support Hyde County businesses and projects.

Hyde County Chamber of Commerce The Chamber, with approximately 100 members, promotes the commercial and civic interests of Hyde County, and organizes activities and events to showcase the County's visitor attractions.

Albemarle Commission The Albemarle Commission is a council of governments serving ten counties, including Hyde County, in northeast coastal North Carolina. Its functions include being the Area Agency on Aging, Rural Planning, Workforce Development (through the Northeastern Workforce Development Board), Economic Development, and Senior Nutrition.

The Commission has been recognized as an Economic Development District by the U.S. Economic Development Administration (EDA) and as such is responsible for coordinating the region's Comprehensive Economic Development Strategy (CEDS). It operates a revolving loan fund for the region's businesses supported by EDA, making loans of \$10,000 to \$100,000. The Commission is the lead organization for the *Balancing Nature and Commerce in Northeastern North Carolina* initiative to develop a regional ecotourism strategy in conjunction with the U.S. Fish & Wildlife Service, the National Park Service, and a number of public and nonprofit organizations and local community leaders.

There is also an array of regional, state and federal resources that can be accessed to support economic development in Hyde County³².

Business Development

There are several businesses that support both residents and visitors, such as restaurants, grocery stores, and lodging accommodations. Any expansion of visitation should be beneficial in sustaining and increasing their profitability. However, improving the quality and diversity of visitor experiences may help to raise overall economic performance of the County in terms of jobs, incomes, and investment. The following examples show the way.

- **Dare To Hyde Adventures** provides outdoor experiences for visitors to Hyde and Dare Counties. Wildlife viewing tours, hunting for black bear, deer, waterfowl, and turkeys, tours of historic sites, birding, photography, and charter fishing are part of the adventure menu. The company offers experienced guides, and has opened a motel and dining facility, Mattamuskeet Outpost, near the entrance to the lodge.

- **Mattie Arts** is a four-year old nonprofit that helps emerging artists in Hyde County. Its economic development contribution is the provision of arts and craft courses to both residents and visitors³³ and in the sale of art work. Mattie Arts' prominent location in the old Courthouse in Swan Quarter has made it a significant addition to tourism and cultural offerings in the county.
- **Pamlico Shores Produce** grows, packs, and ships potatoes, sweet Mattamuskeet onions, and green beans from its 20,000 sq. ft. processing and packing area in Swan Quarter³⁴. The rapid growth of the Farm-to-Table movement provides an incentive to diversify from large scale commodity growing and out-of-state shipping to supplying restaurants and high-end grocery stores across the state, an opportunity that the company is currently exploring. Connecting Hyde County in this way to markets in Charlotte and the Triangle will also raise the profile of the county and Mattamuskeet as a place to visit and explore.

DATA SOURCES AND ADDITIONAL INFORMATION

The Future of the Mattamuskeet Lodge

1. History of the Mattamuskeet Lodge

For a full description of the Lodge's history see:

- Forrest, L.C. (1999, 2000), *Lake Mattamuskeet: New Holland and Hyde County*. Charleston SC: Arcadia Publishing
- Appendices B and C to Anderson C.J., J. Carr & C. Kline (2008, rev. 2009), *Mattamuskeet Lodge: Business Management and Tourism Study*. NC State University Tourism Extension and NC Central University for North Carolina Wildlife Resources Commission.
- Powers, J.A. (1999), *Reviving the Past Glories of Mattamuskeet Lodge*, <http://www.ncgenweb.us/hyde/misc/JPOWERS1.HTM>
- U.S Department of the Interior, National Park Service, National Register of Historic Places, *Lake Mattamuskeet Pumping Station/Mattamuskeet Lodge*. Nomination Form. www.hpo.ncdcr.gov/nr/HY0003.pf (July 1979).

2. Lake Mattamuskeet Lodge Preservation Act

The Lodge and 6.5 acres of land were conveyed to the State of North Carolina by the Lake Mattamuskeet Lodge Preservation Act of 2006. This conveyance was for the purpose of "permitting the State to use the property as a public facility dedicated to the conservation of the natural and cultural resources of North Carolina." A condition of the conveyance was that the State would agree to restore and maintain the Lodge in accordance with the terms of the National Historic Protection Act.

3. **Business Management and Tourism Study**

Anderson C.J., J. Carr & C. Kline (2008, rev. 2009), *Mattamuskeet Lodge: Business Management and Tourism Study*. NC State University Tourism Extension and NC Central University for North Carolina Wildlife Resources Commission.

4. **Current Proposals for the Lodge**

Based on conversation with Mark Williard, Project Architect for the Lodge renovation, October 13, 2016.

5. **Honey Brake Lodge**

See www.honeybrake.com

6. **Complementary Products and Services**

There are potentially many products and services that could be provided that would be complementary to the development of the Lodge. These might include guiding services, fishing and hunting equipment and supplies, recreation equipment rental (bicycles, kayaks, paddleboards), food and lodging, campgrounds, convenience and gift shops, game processors, branded local foods (fresh and processed), dog kennels, and laundry services.

7. **Wildlife Tourism**

Stokes S. & Lowe M. (2013), *Wildlife Tourism and the Gulf Coast Economy*. Datu Research for Environmental Defense Fund. This study identified 1,104 businesses in Alabama, Florida, Louisiana, Mississippi, and Texas, which provided guide and outfitter services for fishing, wildlife watching, and hunting. From a sample survey of 100 of these businesses showed that 86 percent were small businesses with five employees or fewer, and over half (58 percent) had over 200 clients. The survey revealed a network of over 12,000 guide, lodging and dining establishments working together to generate business for one another.

8. **Lodge Economic Impact**

East Carolina University's Bureau of Business Research, *Mattamuskeet Lodge Impact Study*, March 15, 2016. This was commissioned by Hyde County NC. The local economy for the purposes of this analysis was defined as Hyde County together with the neighboring counties of Beaufort, Dare, Tyrell, and Washington.

The Local and Regional Economic Context

9. **Population**

According to the U.S. Census, Hyde County in 2015 had a population of 5,526, the second least populated county in North Carolina (the least being its neighbor to the north, Tyrell County) and has the lowest density of population in the state. The 2000 population was 5,826 and has since fallen by 5.1 percent as the population of the state grew by 24.8 percent in the same period. (www.census.gov)

10. Rurality

Hyde County, along with Tyrell County, is classified by the Economic Research Service (U.S. Department of Agriculture) in its Rural-Urban Continuum Code as level 9, “completely rural or less than 2,500 urban population and not adjacent to a metropolitan area”. Hyde County is one of seven so classified in North Carolina. (www.ers.usda.gov)

11. Tiers

Hyde County is designated by the North Carolina Department of Commerce as a Tier 1 County. The department annually ranks the state’s 100 counties based on economic well-being and assigns each a Tier designation. The 40 most distressed counties are designated as Tier 1, based on average unemployment rate, median household income, percentage growth in population, and adjusted property tax base per capita. (www.nccommerce.com)

12. Poverty

According to the Economic Research Service, the 2014 poverty level in Hyde County was 23.4 percent compared with the level in North Carolina of 17.2 percent. (www.ers.usda.gov)

13. Household Income

The median household income for Hyde County in 2014 was \$36,891 compared with \$46,596 for the state and \$53,482 for the United States, per the U.S. Census Bureau’s Small Area Income & Poverty Estimates. (www.census.gov)

14. Unemployment

The unemployment level in Hyde County in 2014 was 8.9 percent compared with 6.1 percent for the state per the Bureau of Labor Statistics’ Local Area Unemployment Statistics. (www.bls.gov)

15. Commuting Zones

Hyde County is one of eight counties in Commuting Zone 298 as defined by the Economic Research Service – the others being Beaufort, Greene, Lenoir, Martin, Pitt, Tyrell, and Washington. This implies an economic connection within a region centered on Pitt County and Greenville MSA. The total population of the commuting zone is 348,071 of which half is located within Pitt County. Hyde County’s population accounts for 1.6 percent of the total. (www.ers.usda.gov)

16. Commuting Flows

U.S. Census data shows a more limited pattern of commuting flows. (<http://onthemap.census.gov>)

17. Occupations

The Bureau of Labor Statistics provides occupational and wages data for regions in North Carolina. Hyde County is one of 14 counties comprising the Northeast Coastal nonmetropolitan area. Table 1 shows employment levels and annual mean wages for the top five occupations (by number of employees) in this region. (www.bls.gov)

Table 1: Top Five Occupations in Northeast Coastal North Carolina

Occupation	Employment	%	Annual Mean Wage (AMW) \$	AMW % Region	AMW % NC AMW	AMW % NC Occupation AMW
Office and administrative support	14,060	14.6	30,400	86.3	68.8	92.0
Food preparation and serving related	11,050	11.5	19,830	56.3	44.9	96.3
Sales and related	10,650	11.0	28,560	81.1	64.7	74.0
Transportation and material handling	7,620	7.9	29,580	84.0	67.0	94.0
Education, training, and library	7260	7.5	37,570	106.7	85.1	79.0
All occupations	96,040	100.0	35,210	100.0	79.7	79.7

18. Top Ten Industries in Hyde County

Emsi (October 2016) *Highest Ranked Industries; Top 10 Industries (6-digit) in Hyde County, NC: Emsi Q3 2016 Data Set*. Northeastern Workforce Development Board.

19. Business Structure

According to the U.S. Census, County Business Patterns, (www.census.gov/programs-surveys/cbp.html), the structure of the 164 business establishments in Hyde County in 2014 by two-digit NAICS codes was as shown in Table 2.

Table 2: Business Structure of Hyde County NC (2014)

Sector (NAICS 2-digit)	Establishments	%	Employees	%	Ann. Payroll \$	%
Accommodation and food services	28	17.0	157	18.3	4,946,000	19.2
Retail trade	37	22.6	115	13.4	3,333,000	13.0
Wholesale trade	11	6.7	72	8.4	2,671,000	10.4
Construction	22	13.4	86	10.0	2,415,000	9.4
Manufacturing	5	3.0	64	7.5	2,295,000	8.9
Real estate, rental and leasing	9	5.5	51	5.9	1,312,000	5.1
Transportation and warehousing	8	4.9	20	2.3	617,000	2.4
Agriculture, forestry, fishing and hunting	3	1.8			383,000	1.5
Other services	7	4.3			282,000	1.1
Health care and social assistance	9	5.5				
Finance and insurance	8	4.9				
Professional, scientific, technical services	5	3.0	293	34.1		
Arts, entertainment and recreation	5	3.0			7,454,000	29.0
Information	3	1.8				
Utilities	2	1.2				
Educational services	1	0.6				
Administrative, support/waste management	1	0.6				
TOTAL	164	100.0	858	100.0	25,708,000	100.0

20. Agriculture in Hyde County

U.S. Department of Agriculture, National Agricultural Statistics Service, *2012 Census of Agriculture, County Profile, Hyde County, North Carolina*

21. Tourism

Estimates of tourism expenditures by county are prepared annually by the U.S Travel Association's Travel Economic Impact Model. (<https://partners.visitnc.com/economic-impact-studies>). Table 3 shows a ranking of tourism spending per resident by northeastern North Carolina counties.

Table 3: Ranking of tourism spending per resident by northeastern North Carolina counties

	County	Population	Spending \$	Spending \$ per cap
1	Dare	35,663	953,040,000	26,723
2	Hyde	5,526	32,360,000	5,856
3	Currituck	25,263	137,710,000	5,451
4	Carteret	68,879	302,770,000	4,396
5	Beaufort	47,651	70,900,000	1,488
6	Pasquotank	39,829	55,040,000	1,382
7	Chowan	14,394	18,720,000	1,301
8	Pamlico	12,781	16,240,000	1,271
9	Washington	12,385	14,360,000	1,159
10	Tyrrell	4,070	3,460,000	850
11	Perquimans	13,440	9,830,000	731
12	Gates	11,431	6,020,000	527
13	Camden	10,309	1,920,000	186

22. Tourism Tax Benefits to Hyde County

Morse, S. (2014) *Hyde County, NC 2014 Tourism Economic Fact Sheet*. West Carolina University

The Visitor Attraction Context**23. Angler Survey**

The survey of 853 angling parties consisting of 2,055 individuals was conducted in March through October 2014 for the National Wildlife Resources Commission. The report was published as: Dockendorf K.J., K.M. Potoka, & C.D. Thomas (2015), *Lake Mattamuskeet Creel Survey, 2014*. National Wildlife Resources Commission.

24. National Wildlife Refuge Visitor Survey

The survey of visitors to eight National Wildlife Refuges in North Carolina and Virginia was conducted over the period October 2004 through October 2005, and the results were published as: Vogelsong, H. (2006), *East North Carolina National Wildlife Refuge Visitor*

Use Study. East Carolina University Department of Recreation & Leisure Studies. The survey yielded information on visitor demographics and economic impact. Some highlights from the survey were:

- The average age of refuge visitors was 51.44 years.
- Mean household income was over \$50,000 with over a third over \$75,000 (Mattamuskeet, 35.8 percent).
- Mattamuskeet attracted the most diverse population with 13.5 percent African American (4.8 percent overall).
- Although overall 60 percent (59.8 percent) overall had at least a college degree, Mattamuskeet attracted less well educated visitors with only 40.6 percent with a college degree.
- Visitor groups averaged 2.86 people at Mattamuskeet (2.89 overall) with most (61.2 percent) arriving alone or in twos, and 30 percent in groups of three to five. They arrived in average of 1.23 vehicles.
- 65.9 percent of visitors to Mattamuskeet described themselves as tourists, of which 91.6 percent said that visiting the refuge was the primary purpose for being in the region. Mattamuskeet visitors made 15 visits per year, one of the highest in the survey. The average travel distance from home was 174 miles with 42.8 percent traveling over 100 miles.
- Average visitor spending per travel party directly related to visiting the refuge for Mattamuskeet was \$174.46 compared with \$150.06 for all 8 sites.

Table 4 provides information on spending directly related to a visit to Mattamuskeet, as well as other spending on the same trip.

Table 4: Visitor Spending at Mattamuskeet NWR

Spending Category	Mattamuskeet Directly-related (\$)	Mattamuskeet Other (\$)	All Eight Sites Directly-related (\$)	All Eight Sites Other (\$)
Program and Permit fees	18.71	9.13	9.38	5.25
Food and drinks	40.27	27.91	28.00	63.43
Shopping	7.11	7.40	9.87	28.17
Lodging	50.80	24.35	58.71	126.31
Transportation	39.22	21.14	28.34	48.01
Entertainment and Recreation	8.15	11.99	7.92	15.12
Other Expenses	10.19	5.12	7.83	9.27
Mean	\$174.46	\$107.04	\$150.06	\$295.56

The total number of visitors for all eight refuges was 1,512,346, generating total direct expenditures related to the refuge visits of \$166.61 million (2006 dollars). These together with estimated indirect and induced expenditures created 4,718 jobs. Expenditures not directly related to refuge visits totaled a further \$324.62 million and created 9,573 jobs.

Table 5 summarizes the estimated economic impacts (using IMPLAN) for the three Hyde County refuges:

Table 5a: Economic Impacts of Three Refuges in Hyde County, NC

Refuge	Average Per Person Spending \$			Total Annual Visitation	Total Direct Expenditures \$2006 m		
	Direct	Other	Ratio		Direct	Other	Ratio
Mattamuskeet	76.62	49.15	1.6:1	86,000	7.03	4.51	1.6:1
Alligator River	84.21	251.74	1:3.0	35,000	3.15	9.41	1:3.0
Pocosin Lakes	35.21	102.15	1:2.9	65,800	2.47	7.17	1:2.9
Total Survey	75.67	132.05	1:1.7	1,512,346	166.61	324.62	1:1.9

Table 5b: Economic Impacts of Three Refuges in Hyde County, NC

Refuge	Refuge-Related Expenditure Impact			Other Expenditure Impact		
	Indirect (\$m)	Induced (\$m)	Jobs	Indirect (\$m)	Induced (\$m)	Jobs
Mattamuskeet						
Alligator River						
Pocosin Lakes						
Total Survey	30.36	35.40	4,718	54.03	69.67	9,573

25. Economic Impact of Wildlife Refuges

A major study commissioned by the U.S. Fish and Wildlife Service calculated the economic benefits to local communities that visitors to National Wildlife Refuges bring. The study focused on final demand, employment, income, and tax revenue effects generated by these visitors. It was published as Carver E. & J. Caudill (2013), *Banking on Nature: The Economic Benefits to Local Communities of National Wildlife Visitation*. U.S Fish & Wildlife Service. A sample of 92 refuges was studied, which included Alligator River and Pocosin Lakes. The findings relating to these is summarized in Table 6:

Table 6: Visitor Numbers and Expenditures for Alligator River and Pocosin Lakes NWR

Residents								
Refuge	Non-consumptive	Hunting	Fishing	Total	Final Demand	Jobs	Job Income	Total Tax Revenues
Alligator River	#	23,237	2,044	2,100	27,381		3	
	\$000	173.7	20.3	15.8	209.8	298.2		96.7
Pocosin Lakes	#	25,080	2,275	490	27,845		4	
	\$000	164.4	63.0	4.9	232.3	269.5		81.5
Non-residents								
Refuge	Non-consumptive	Hunting	Fishing	Total	Final Demand	Jobs	Job Income	Total Tax Revenues
Alligator River	#	23,001	511	900	24,412			
	\$000	1,099.1	15.3	15.4	1,129.7	1,525.1	14	470.3
Pocosin Lakes	#	35,020	7,075	210	42,035			
	\$000	1,151.4	600.3	4.8	1,756.5	1,911.6	21	582.8

Alligator River and Pocosin Lakes were both allocated to an economic area that included Hyde County. All data is 2011. The main points are:

26. Alligator River

- Non-consumptive visits represented 84.9 percent of resident visitors and 94.2 percent of non-resident visitors. Of resident visitors, hunting accounted for 7.5 percent and fishing 7.7 percent; of non-resident visitors, hunting accounted for 2.1 percent and fishing 3.7 percent.
- Residents generated \$96,700 in job income and \$46,100 in tax revenues compared with \$470,300 in job income and \$128,200 in tax revenues generated by non-residents. The additional economic value of the refuge was \$899,500, a \$0.31 economic effect for every \$1 budget expenditure.

27. Pocosin Lakes

- Non-consumptive visits represented 90.1 percent of resident visitors and 83.3 percent of non-resident visitors. Of resident visitors, hunting accounted for 8.2 percent and fishing 1.8 percent; of non-resident visitors, hunting (big game) accounted for 16.8 percent and fishing 0.5 percent.
- Residents generated \$81,500 in job income and \$38,400 in tax revenues compared with \$582,800 in job income and \$272,600 in tax revenues generated by non-residents. The additional economic value of the refuge was \$1,347,000, a \$2.32 economic effect for every \$1 budget expenditure.

Table 7 shows expenditures per visitor to the two refuges comparing activities and whether resident or non-resident:

Table 7: Per Capita Visitor Expenditures by Origin for Alligator River and Pocosin Lakes NWR

NWR	Activity	Resident \$	Non-resident \$	NR/R
Alligator River	Non-consumptive	7.47	47.78	6.4
	Hunting	9.93	29.94	3.0
	Fishing	7.52	17.11	2.3
Pocosin Lakes	Non-consumptive	6.50	32.88	5.1
	Hunting	27.60	84.85	3.1
	Fishing	10.00	22.86	2.3

28. USFWS National Survey

Every five years, the U.S. Fish and Wildlife Service conducts a major national survey of potential anglers, hunters, and wildlife watchers. The latest was carried out in 2011 and the North Carolina edition was published as: U.S. Fish and Wildlife Service and U.S. Census Bureau (2014), *2011 National Survey of Fishing, Hunting and Wildlife-Associated Recreation — North Carolina*.

29. Occupancy Rental Income

Data generated by the Hyde County Finance Department (October 27, 2016) for the period July 2015 to June 2016 showed that there were ten properties offering lodging accommodation. Of these, three account for 82 percent of the income, and one 41 percent. The peak months are January and February, which account for 31 percent of the total income, the next most popular being July and August, which account for 21 percent. January and July are the two months when eight out of the ten properties were generating rental income; in

November and March-May only four out of ten have any rental income. A calculation of theoretical capacity was made based on the maximum monthly rental income for each property and extrapolated over 12 months. This showed that the actual \$276,885 rental income represented 32 percent of the theoretical maximum of \$863,748.

30. Visitor Estimates

Estimates of visitors to Mattamuskeet Lodge for 2015-2016 totaled 32,750 (provided by Refuge Director, November 2, 2016). Table 8 shows the breakdown of visitor activities. This compares with the estimate by the U.S Fish & Wildlife Service of 58,000 from Mattamuskeet: About the Refuge on its website at <https://www.fws.gov/refuge/Mattamuskeet/about.html> and with the estimate of 86,000 from Vogelsong, H. (2006), *East North Carolina National Wildlife Refuge Visitor Use Study*. East Carolina University Department of Recreation & Leisure Studies.

Table 8: Visitation at Mattamuskeet NWR, October 1 2015 — September 30, 2016

Category	Visitors	%
Wildlife Observation Visits	8,250	25.2
Fishing Visits	7,000	21.4
Auto Tour Visits	4,500	13.7
Visitor Center Visits	3,500	10.7
Foot/Trail Pedestrian Visits	3,000	9.2
Photography Visits	3,000	9.2
Hunting Visits	1,150	3.5
Special Events Participation	1,000	3.1
Boating Launches	500	1.5
Interpretive Program Participation	400	1.2
Bicycle Tours	250	0.8
General Recreational Visits	200	0.6
Total	32,750	100.0

31. Anderson C.J., J. Carr & C. Kline (2008, rev. 2009), *Mattamuskeet Lodge: Business Management and Tourism Study*. NC State University Tourism Extension and NC Central University for North Carolina Wildlife Resources Commission.
32. From Outer Banks of North Carolina, www.outerbanks.org
33. From <https://irma.nps.gov/stats>
34. **Economic Development Resources for Hyde County**
The following is a summary of the main economic development resources that can be accessed for Hyde County businesses and projects.

35. Albemarle Commission

Further information on the Commission and the Comprehensive Economic Development Strategy can be found at www.albemarlecommission.org.

36. NC East Alliance www.nceast.org

The NCEast Alliance is a regional, private, nonprofit economic development agency serving Coastal Carolina and located in Greenville. Its focus is on marketing and business attraction, workforce development and education, and regional advocacy. The Alliance identifies potential relocation and expansion opportunities working with counties across the region, including Hyde County.

37. NC Department of Commerce Rural Division www.nccommerce.com/ruraldevelopment

The Rural Division has several grant programs and planning services to assist rural communities. The Economic Infrastructure Program provides grants to local governments for infrastructure projects (water, sewers, natural gas, broadband, access roads) that support economic development; the Building Reuse Program provides grants to local governments for the renovation of vacant buildings and renovation and expansion of business premises.

38. The Rural Center www.ncruralcenter.org

The Rural Center, based in Raleigh NC, serves the state's 80 rural counties, offering a range of leadership, entrepreneurship training, and microenterprise loan programs.

39. NC Economic Development Partnership <https://edpnc.com>

The Partnership is a public-private partnership that contracts with the North Carolina Department of Commerce to recruit new businesses to the state, support existing businesses, connect exporters to global markets, help start-up businesses, and attract tourists and visitors. It provides a range of incentives, grants, research and other services.

40. USDA Rural Development www.rd.usda.gov/nc

The U.S. Department of Agriculture's Rural Division through its North Carolina office provides a range of loan guarantees, grants, loans, and microloans for rural economic development, value-added agriculture, energy, housing, and community facilities. Hyde County works with the area office in Kinston, NC.

41. Mattie Arts

According to information supplied by Mattie Arts Director, Judy Mclawhorn (October 25, 2016), the center in 2016 provided 27 classes (e.g. drawing, decoy carving, etching, stained glass, metal smithing) for 163 students. Since the Center opened in October 2012, it has paid out nearly \$30,000 to local artists and instructors. <http://mattieartscenter.org>

**42. Pamlico Shores Produce
www.pamlicoshores.com**

References

Anderson C.J., J. Carr & C. Kline (2008, rev. 2009), *Mattamuskeet Lodge: Business Management and Tourism Study*. NC State University Tourism Extension and NC Central University for North Carolina Wildlife Resources Commission.

Carver E. & J. Caudill (2013), *Banking on Nature: The Economic Benefits to Local Communities of National Wildlife Visitation*. U.S Fish & Wildlife Service.

Dockendorf K.J., K.M. Potoka, & C.D. Thomas (2015), *Lake Mattamuskeet Creel Survey, 2014*. National Wildlife Resources Commission.

East Carolina University's Bureau of Business Research, *Mattamuskeet Lodge Impact Study*, March 15, 2016.

Emsi (October 2016) Highest Ranked Industries; *Top 10 Industries (6-digit) in Hyde County, NC: Emsi Q3 2016 Data Set*. Northeastern Workforce Development Board.

Forrest, L.C. (1999, 2000), *Lake Mattamuskeet: New Holland and Hyde County*. Charleston SC: Arcadia Publishing.

Morse, S. (2014) *Hyde County, NC 2014 Tourism Economic Fact Sheet*. West Carolina University.

Powers, J.A. (1999), *Reviving the Past Glories of Mattamuskeet Lodge*, <http://www.ncgenweb.us/hyde/misc/JPOWERS1.HTM>

Stokes S. & Lowe M. (2013), *Wildlife Tourism and the Gulf Coast Economy*. Datu Research for Environmental Defense Fund.

U.S Department of the Interior, National Park Service, National Register of Historic Places, *Lake Mattamuskeet Pumping Station/Mattamuskeet Lodge*. Nomination Form. www.hpo.ncdcr.gov/nr/HY0003.pf (July 1979).

U.S Fish and Wildlife Service and U.S Census Bureau (2014), *2011 National Survey of Fishing, Hunting and Wildlife-Associated Recreation – North Carolina*.

Vogelsong, H. (2006), *East North Carolina National Wildlife Refuge Visitor Use Study*. East Carolina University Department of Recreation & Leisure Studies.