



# PROTECTING PORT ROYAL SOUND

## and its Economic Benefits

*August 2021*

A healthy Port Royal Sound is the foundation for a strong economy in Beaufort County. People live, work and visit the Port Royal Sound Area for a variety of reasons. Some of these reasons are easily measured by dollars spent, others are less tangible. Beautiful views may be difficult to quantify, but they are incredibly important to one's quality of life and vacation destination choices. It is important to not only recognize these benefits, but to protect them for future generations. The beauty and health of Port Royal Sound is directly influenced by Beaufort, Port Royal, Bluffton and Hilton Head and the growing unincorporated areas of the County. In return for enjoying all that the Sound offers us, we must prioritize the protection of its health, or it will not continue to be an economic benefit to our area.

**The presence of a healthy Port Royal Sound significantly influences three local economic drivers in Beaufort County: tourism, real estate values, and ecological services provided by its expansive coastal marshes.**

### TOURISM

Beaufort County and its municipalities have capitalized on the allure of Port Royal Sound's coastal habitats and the county's beautiful, swimmable beaches to build a thriving tourism industry, generating **\$1.48 billion in economic impact** by bringing nearly **3 million visitors** to the region in 2018. Additionally, the same 2018 study tied tourism to 15.1% of all jobs in the county, supporting **\$530.2 million in wages** for employees and generating \$14.6 million in local government revenue.<sup>1</sup> If the beaches were to become un-swimmable and the sport-fishing industry collapsed, the tourism industry would be severely impacted.

With Beaufort County being the third most popular tourist destination in the state, a healthy Port Royal Sound adds significant value to the South Carolina economy as well.<sup>2</sup> In 2019, coastal tourism alone accounted for 66% of all tourism revenues in the state, with tourism expenditures rising to over \$1.64 billion in Beaufort County, over \$10.1 billion in the coastal counties, and over \$15.5 billion statewide.<sup>3</sup>

### REAL ESTATE

The natural environment surrounding the Sound provides additional economic value to the real estate market. The allure of having views overlooking the salt marsh significantly enhances real estate property values – both for those homes located on the marsh edge and those located near it. With half of Beaufort County being salt marsh or tidal rivers, the mosaic nature of the tidal creeks and series of sea islands within the Port Royal Sound area is much greater than along other coastlines. This is best illustrated by the over 2,000 miles of tidal creek and salt marsh shoreline within the Port Royal Sound watershed as compared to the entire state's outer coastline being 2,876 miles.

Proximity to parks, trails, and open spaces has been shown to enhance property values in Beaufort County, including a **\$127 million boost in market value** for the 7,450 homes within 500 feet of these spaces.<sup>4</sup> This increase has also led to additional property tax generation. The population in Beaufort County has been growing rapidly for decades, as evidenced by a nearly 200% increase from 1980-2019.<sup>5</sup> As the population grows and development continues, the housing market will become increasingly competitive and lucrative.

## ECOLOGICAL SERVICES

The term “ecological services” describes natural processes and natural resource assets that keep a thriving community healthy. Locally, the expansive salt marshes that dominate the Port Royal Sound landscape provide most of these ecological services for the Beaufort County area. Nearly half of South Carolina’s salt marshes, an estimated 200,000 acres, are located in the Port Royal Sound area.<sup>6</sup>

Some ecosystem benefits are captured in market-based data (e.g., prices, wages, and GDP). Port Royal Sound’s salt marshes and tidal rivers are the nurseries for almost all sports-fishing and commercial seafood species. Recreational fishing generated an impact of nearly \$140 million in the southern coastal congressional district in 2018.<sup>7</sup> The major commercial fisheries in the state are shrimp, shellfish, crab, and offshore finfish – many of which depend on the live oyster reefs and tidal mudflat regions in the Sound as a nursery habitat.<sup>8</sup> This industry, which generated \$159 million in statewide economic impact and supported 1,810 jobs in 2017 (equating to a \$72 million contribution to statewide GDP), would dramatically decline without a healthy Sound.<sup>9</sup>

Other natural resources and ecosystem processes contribute economic benefits to coastal communities but are not typically captured in market transactions. These are referred to as “non-market” benefits and distinct economic valuation techniques must be used to estimate their values. It is important to document both market and non-market benefits to gain a more holistic understanding of the economic benefits provided by Port Royal Sound.<sup>10</sup>

Wetlands (e.g., freshwater, brackish, and salt marshes) provide a variety of ecosystem

services to humans including natural hazard regulation (e.g., buffers against wave energy, erosion mitigation, floodwater storage), habitat for commercially important fish and shellfish species, water quality improvements, recreational opportunities (e.g., fishing and boating), carbon storage, and aesthetically pleasing views.<sup>11</sup>

A 2020 study found that the annual economic benefits of coastal protection provided by wetlands in Beaufort County is estimated at \$5,000 per hectare per year.<sup>12</sup> Based on an approximate area of 72,583 hectares of wetlands in Beaufort County, the county’s wetlands are estimated to provide almost **\$363 million per year in coastal protection.**<sup>13</sup>

Wetlands also prevent carbon from being released into the atmosphere through a process known as carbon sequestration, which has implications for climate change mitigation. Based on reported carbon sequestration rates of various wetland types in South Carolina and Georgia, the area of wetlands in Beaufort County, and the EPA’s Social Cost of Carbon estimate of \$42 per metric ton of carbon stored per year, Beaufort County wetlands provide an estimated economic benefit of **\$2.5 million per year in carbon storage services.**<sup>13-16</sup>

Wetlands trap sediment and pollutants that runoff from adjacent land, improving nearby water quality, which protects existing food chains and saves municipalities money on water treatment costs. A 2015 study found that the economic benefits of water quality enhancement services provided by wetlands in South Carolina are estimated at \$892 per hectare per year, equating to an average of **\$64.7 million per year in water quality protection** benefits from wetlands in Beaufort County.<sup>13,17</sup>

Wetlands also act like sponges, absorbing and holding water from rain and river discharge, and releasing it slowly. The water held back by wetlands helps recharge groundwater sources, maintaining our water supplies by increasing the amount of water remaining in aquifers. The same 2015 study found an estimated \$57 per hectare per year in water supply protection services provided by South Carolina wetlands, equating to an average of **\$4.1 million per year in water supply protection** from wetlands in Beaufort County.<sup>13,17</sup>

Oyster reefs are another habitat that provide key ecosystem services, including water quality processes, nursery habitat for key fishing species, and shoreline protection. A 2012 study looking mainly at oyster beds in Virginia and North Carolina estimates an average \$9,843 per hectare per year of non-harvest value of oyster beds.<sup>18</sup> Based on this value and the 1,074 hectares of oyster beds in Beaufort County, an estimated **\$10,571,382 per year non-harvest value** is provided by oyster reefs in Beaufort County.<sup>19</sup>

### LOOKING AHEAD

While the outlined benefits reach across a broad spectrum of sectors, Port Royal Sound and coastal wetlands remain under threat. Beaufort County is one of the fastest growing counties in the state, with a projected population increase of 28% by 2040 - over 51,000 new residents.<sup>20</sup> While this population growth brings additional economic development that is vital to the region, it also places a significant strain on public systems as well as the

natural environment that draws so many visitors to the region.

Additionally, the rise of “over-tourism” seen in countries such as New Zealand serve as a warning for uncontrolled tourism growth without a plan to protect local resources.<sup>21</sup> Such growth increases risk of beach pollution, red tide events, and algal blooms, all of which can have severe negative impacts on coastal economies.<sup>22,23</sup> While efforts to manage both tourism and population growth, like the recent housing development fee put forth by the Beaufort County School Board, place greater attention on developing solutions to these issues, extensive work, including research and education is still necessary.<sup>24</sup>

Economic valuation research helps put a price on natural resources and encourages decision-makers to design policies and regulations that support and enhance this natural capital.<sup>25</sup> By supporting the preservation and maintenance of Port Royal Sound, the residents, visitors, businesses, and local officials of Beaufort County and its municipalities will be able to take full advantage of the environmental assets of the region and ensure their existence for years to come. Natural conservation efforts provide new job opportunities and help to combat future environmental changes. By engaging in and supporting these educational and community-based efforts, including those by the Port Royal Sound Foundation, Beaufort County and its municipalities can continue to draw national attention, becoming a prime example of the rewards of tying economic development to environmental conservation.

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