NARRAGANSETT BAY WATERSHED ECONOMY

The ebb and flow of natural capital

Tourism Overview

Tourism's contribution to the economy is becoming increasingly important in a globalizing world—in 2015, the United Nations reported 1.2 billion international travelers and over $1.26 trillion in tourism spending with 11% of tourists and 19% of spending coming from North America. In that same year, tourism accounted for 7% of the world's total exports, illustrating its vital contribution to the global economy.[1i]

The tourism industry in the Narragansett Bay watershed (NBW) has been shaped by historical forces, including social, economic, and technological changes. Modern tourism in the watershed began in the 18th century with a trickle of the wealthy elite spending their summers along the Bay; by the 19th century, when the Industrial Revolution had taken hold, tourism became accessible to a wider, middle-class population. While the face of tourism has continuously changed over the centuries in the NBW, the popularity of tourism has not. Tourists are visiting the NBW in larger numbers than ever, hailing from countries all across the world. These tourists have an enormous impact on the economy of the watershed, especially the southern portion of the Narragansett Bay. To illustrate this impact, in 2016, the two industries most closely related to tourism—the Arts, Entertainment, and Recreation and Accommodations and Food Services—employed more than 90,000 people in the watershed with wages totaling over $1.8 billion. From these figures, looking specifically at the direct impact of tourism, the number of jobs was approximately 37,500 with wages totaling nearly $1.8 billion. Tourism has established itself as an integral part of the NBW's economy and, given its growth in recent decades, remains a promising contributor to the region's economy. One of these sectors, the Arts, Entertainment, and Recreation, industry encompasses aspects of art and culture in the watershed, both of which play an important role in tourism and the watershed's rich history. For more detailed information on this topic, please see the "Arts and Culture" subsection towards the end of this chapter.

History

Long before the modern wave of tourism, Native American tribes, such as the Narragansett, recognized the benefits and beauty of the NBW—they summered on the shores of the Narragansett Bay with winter homes further inland.[2] It would take centuries for the rest of the world to recognize

[i] This is based on Travel and Tourism Satellite Account of the Bureau of Economic Analysis (BEA).

the beauty of the NBW the way the Narragansett did—modern tourism did not take hold until the 18th century with a trickle of wealthy Southern elites who escaped to the shores of the NBW for the summer. They came in sufficient number so that "[i]n the eight years from 1767 to 1775, indeed, the pioneer society column of the Newport Mercury listed some four hundred summer visitors."[3]

Heading into the 19th century, the numbers of tourists to the NBW remained small. More than 90% of the nation's 3.5 million people lived in rural areas, with seven of every eight workers employed in agriculture in 1810.[4] As a result, there were very few with either the means or time for travel or the knowledge of where to visit. In the decades leading to the Civil War, travel still remained slow (it took three days to travel from New York to Newport) and tourism was still restricted to a small, privileged group of individuals.[5] Changing settlement patterns, however, slowly gave rise to an increase in tourism, as people moved off farms and into cities. This trend was occurring especially quickly in the NBW—by 1860, 60% of the population in Rhode Island (RI) and Massachusetts (MA) resided in urban areas (much higher than the national average of 20%), a major shift from 93% of people residing in rural areas in the country only half a century earlier.[6]

After the Civil War, tourism experienced a sudden, major shift as the trickle of tourists grew into a swift current, forming the modern tourism industry. This growth was partially due to changes in demographics, although population growth had slowed despite the millions of immigrants who continued to arrive at Ellis Island. More of the growth came from changes in the size and structure of the economy as well as technological advances. In 1860, the U.S. economy was smaller than that of France or the UK, but by 1920, the U.S. economy was nearly 75% larger than the combined economies of France and the UK and three-fourths the size of *all* of Western Europe.[7] Along with this economic growth came a growing middle-class: there were more workers toiling in factories than on farms and income per person had more than doubled. With rising wages, a shortened work week to slightly more than 50 hours, and paid vacation, an increasing number of workers were able to afford the cost and time of leisure travel to destinations along the NBW (Figure 2).[8] The NBW also provided an escape from the illness and pollution of increasingly industrialized cities.[9]

Advances in travel efficiency also allowed for increased tourism in the area—not only did more people have means to travel, but travel was considerably faster; by 1930, tourists could travel from New York City to St. Louis in 24 hours—about the same time as it took to get from Boston to Newport a century earlier.[10]

It is important to note that while the above section focuses primarily on the southern portion of the Bay, the upper Bay also experienced successful bouts of tourism, but in a much different way. While tourism in the lower Bay focused on seasonal visits, tourists in the upper portion were primarily "day trippers," a subset of tourists that remains important in today's tourism industry. Destinations like Colonel SS Atwell's Clam Shack at Fields' Point in Providence were popular among upper Bay

tourists. Other favorites were the amusement parks and shore dinner halls at Rocky Point in Warwick and Crescent Park in Riverside.

Figure 1: Jamestown, RI, ca. 1890
The Thorndike Hotel, Gardner House, Riverside, Bay View Hotel, ferry boat "*Conanicut*" and the Bay Voyage Hotel.
Source: Jamestown, RI visitor website

By 1920, the importance of tourism to the area's economy was recognized by the state of RI—the government acknowledged the decline of manufacturing in the region and the rise of tourism and its growing contribution to the economy.[11] Thirty years later, this sentiment was reflected by the national government: in a report to the President of the United States on the strengths and weaknesses of New England (a region that had experienced decades of slow growth and decline), the committee came to much the same conclusion, stating, "the vacation business has excellent prospects for expansion nationally and especially in New England with its historic significance, scenic beauty, temperate summer climate, excellent hunting, fishing, and winter sports facilities."[12]

This recognition, however, occurred as the population of the area experienced declines in population growth; between 1940 and 1980, the population of MA and RI grew at less than half of the U.S. rate as people left the region or chose not to enter it.[13] By the early 1950s, the return of the America's Cup and the Jazz and Folk Festivals were bringing some tourists to Newport. At this time, much of colonial Newport's housing stock was still in place—in part because Newport had never fully recovered from its occupation in the Revolutionary War as it "missed" the Industrial Revolution upstate, and in part because of early preservation actions that had saved the Great Friends Meeting House, Touro Synagogue, Old Colony House, Redwood Library, and Gilded Age "summer cottages" along Bellevue Avenue. In the upper Bay, meanwhile, the amusement parks, beaches, and shore dinner halls were closing. By the early 1980s, Newport had lost the America's Cup and the *Wall Street Journal* wrote that "to many New Englanders [RI was] little more than a smudge on the fast lane to Cape Cod."[14]

Luckily, this downward trend in tourism did not continue—the entire New England region benefitted from the "Massachusetts Miracle," a period of intense economic growth in MA during the 1980s. Decades of decline were reversed and tourism reinstated itself as a major industry. By 1981, tourism generated 5% of the state's GDP, two years later RI held the first Governor's Conference on Tourism, and by 2014-2015 tourists were spending upwards of $25 billion in MA and RI, where it was supporting over 210,00 jobs.

Methodology and Data Limitations

Quantifying the tourism sector in the watershed is difficult because the industry transects multiple areas of the economy, including the travel, housing, retail, and restaurant industries, among others. This also means that there is no single NAICS industry code associated with the tourism, making analysis more difficult than it is with other economic sectors. For example, with aquaculture, there is a NAICS industrial code (1125) with measures of economic size such as employment, wages, and sales for just this industry, which makes an economic analysis of aquaculture more clear-cut.
The tourism industry is an umbrella industry that encompasses the eating & drinking industry (312120), the real estate and rental and leasing industry (53), the retail trade industry (44-45), and the bed and breakfast industry (721191), for example. Due to this large scope, analysis of the tourism sector as a whole can be difficult and accurate estimates of its impact hard to capture. Given these difficulties, there are two approaches used in this report to examine the impact of tourism on the NBW. The first "producer" approach examines the industries that are most related to tourism, including their employment level, wages, and GDP. This approach has three methods: 1) using National Ocean Economic Program (NOEP) Tourism and Recreation data, 2) using Bureau of Labor Statistics for two industries closely related to tourism, and 3) examining seasonality of taxes for two industries closely related to tourism. The second "consumer" approach examines tourism rates and the tourists' levels of expenditure. Additional information on methodology can be found in the "Methodology" section of this report.

Producer approach (industry contribution)

The first method utilizes NOEP data from its estimation of the "Ocean Economy." NOEP's Ocean Economy data include all industries related to ocean/marine activity, including living resources, minerals, ship and boat building, tourism and recreation, and transportation. For each industry, NOEP has information on number of establishments, employment, wages, and GDP for each sector.[15] This report specifically examines the tourism and recreation data. Given the overlap between maps of coastal areas used by NOEP and the area of the NBW, the NOEP ocean economy estimates are used in this report as estimates for the RI portion of the NBW.[ii] There is, however, some margin of error in this approach. This is because NOEP data includes *all* coastal areas of RI, while this report only

[ii] The six sectors in the ocean economy are construction, living resources, minerals, ship and boat building, tourism and recreation, and marine transportation.

includes those that fall into the boundaries of the NBW. For example, the NOEP data for RI would include data for all of Washington County, while this report would only include scaled data for the portion of Washington County that falls in the NBW (for a map of the NBW, please see the "Geography" section). However, given the high level of overlap between the NBW and NOEP areas, NOEP data is used as a proxy. Additionally, as Bristol County is the only county in MA to lie along the coast, NOEP data is used just for this county to represent the MA portion of the NBW.

The second method uses Bureau of Labor Statistics (BLS) data for two industries that are closely related to tourism: Arts, Entertainment, and Recreation and Accommodations and Food. Data are broken down by county. As this method uses a different data source than the first method, it is not meant as a comparison to method one—it does, however, provide deeper insight into tourism's impact using alternative data.

The third method examines the seasonality of the data using RI tax records, which may be helpful given the cyclic nature of the tourism industry. For example, in New England, nearly two-thirds of business occurs in July and August; in MA, it was 60% and in RI it was 67%. In this report, we examine the seasonal pattern in RI based on existing state tax records. Monthly tax revenues are available for all communities in RI for two of tourism's main sectors—food and drinks and accommodations, and these are the taxes studied in this report.

Consumer approach (tourism rates and expenditures)

This approach utilizes specific estimates from the consulting firm Tourism Economics on the number of tourists and the level of their expenditures using the IMPLAN model. This model is designed to capture the linkages between industries—who buys what from whom—and the patterns of spending. By simulating the flow of money through this economic system, the model generates estimates of the jobs and wages created by those expenditures. This report examines the *direct* impact of tourism—for example, the waiters, crew members, and lifeguards. For more information on its *indirect* impacts—for example, the workers employed in industries supplying the restaurants, hotels, and shops with produce, clean linens, and locally produced merchandise—please reference Tourism Economics' 2015 report.

Current Status and Trends

Producer approach – method one (NOEP data)

In 2014, there were 2,156 establishments in the tourism and recreation industry employing 34,757 people (Table 1). Nearly one of every 13 jobs in the state is in this sector in the watershed. This is disproportional to the one of 33 share of wages that is in the watershed, possibly because watershed jobs are more likely to be seasonal and pay lower wages.

Table 1: NOEP Estimates of Recreation and Tourism in RI: 2014
(in 2016 dollars)

	Number of Establishments	Employees	Wages
Tourism & Recreation Sector	2,156	34,757	$687,123,024
State Economy	35,802	463,375	$23,152,721,807

Source: NOEP Ocean Economy

The only watershed county in MA with coastal access in the NBW is Bristol County, and the numbers are similar except for a larger share of activity in the Living Resources sector. This is due to the contributions of the state's fishing fleet and fish processing plants, including those in New Bedford.

From these NOEP data, the main difference between MA and RI is the relative sizes of the industries at the state level. One indicator of this difference is per capita figures for the two states. In 2014 in RI, 33 of every 1,000 people were employed in the tourism and recreation industry in the water sector. This is three times larger than the number in MA (ten for every 1,000), and even larger than the number in Bristol County, MA (five in every 1,000). Within RI, there is also a considerable range in the size of the industry across the state. Newport was at the high end with more than twice the state average (78 in 1,000), while Providence (22 in 1,000) was at the low end, although it is still twice as high as for MA (ten in 1,000). The story is similar when looking at wages, although the differentials are a bit larger.

Producer approach – method two (BLS data)

In the Arts, Entertainment, and Recreation industry in 2015, there were 930 establishments in the watershed, which represented 51% of the industry's employment in the watershed counties (Table 2). These establishments employed 15,000 people and paid wages of $1.85 billion (adjusting for inflation between 2015 and 2016). Of the watershed total, slightly more than half was in RI.

Table 2: Arts, Entertainment, & Recreation in RI &
Accommodations & Food Services in RI
(2016 dollars)

	Establishments	Employment	Wages (in 2016 dollars)
Arts, Entertainment, & Recreation	930	15,003	$436,391,956
Accommodations & Food Services	4,652	76,490	$1,416,163,370
Total	5,582	91,492	$1,852,555,326

Source: BLS

The Accommodation and Food Services industry is also heavily dependent on tourism. In 2015, there were 4,652 establishments in the watershed, again with RI accounting for more than 50% of both employment and wages. Those establishments employed 76,490 and paid wages of $1.4 billion (2016 dollars).

Taken together, in the watershed in 2015, there were 5,582 establishments generating over 91,000 jobs that paid wages of more than $1.8 billion in these two sectors.

Producer approach – method three (seasonal tax data)

Moving on to the tax-seasonality approach, the seasonal effect is defined as the above average tax revenues in the summer months, when it is assumed that tourism is at its peak. The seasonality is more pronounced in the water-dependent communities in the watershed. This is evident in the monthly indexes for the hotel tax in the watershed's 13 water-dependent communities and 16 non-water-dependent communities (Figure 2). In the water-dependent communities, in July (month seven), tax revenues from the hotel tax are five times above the January level, while in the remainder of the state the multiple is 3.25. A similar but less pronounced seasonal effect exists in the meal and beverages tax.

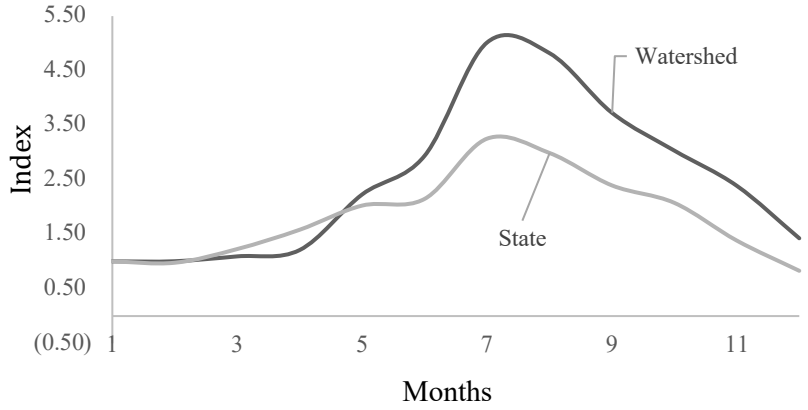

Figure 2: Seasonality of Hotel Tax Revenue: 2015
Source: RI Department of Revenue, 2015, 2016

To quantify this seasonality effect, the base amount (or level of comparison) for the taxes was set as the average for the months from November-March (months with comparatively lower tourism rates). In 2015, the state raised more than $28.5 million in these two taxes—$3.6 million from the hotel tax and nearly $24.9 million from the meals and beverage taxes.[16] Under this scenario, if the year had no seasonal effect, the state would have raised slightly more than $23 million in these two taxes—$2.1 million from the hotel tax and nearly $21 million from the meals and beverage taxes. These figures can then be used to isolate the monetary impact of the seasonal effect, calculated by taking the

difference between the actual revenue in 2015 and the year-without-seasonal-effect prediction. Therefore, of total 2015 tax revenue of $28.5 million, more than $5.4 million came from the seasonal effect of summer months.

It is also possible to estimate sales given that these are tax revenues are from a 1% tax rate. Based on this rate and adjusting for inflation, a year without seasonal effect (no "summer") would generate $2.34 billion in industry revenue (Table 3). Actual sales are estimated nearly $2.89 billion, so the seasonal effect is $550 million.[17]

Table 3: Hotel and Meal & Beverages Tax Revenue in RI: 2015 (in 2016 dollars)

	State Taxes		Industry Revenues	
	Hotel	**Meal & Beverage**	**Hotel**	**Meal & Beverage**
Actual	$3,694,449	$25,176,806	$369,444,916	$2,517,680,570
Non-seasonal	$2,116,908	$21,254,207	$211,690,825	$2,125,420,682
Seasonal	$1,577,541	$3,922,599	$157,754,091	$392,259,887

Source: RI Department of Revenue, 2015, 2016

It is clear from these producer-side estimates that there may be a connection between increased summer month tax revenue and increased tourism during these months. Using NOEP's approach, the tourism and recreation industry in the watershed creates nearly 35,000 jobs and $687 million in wage income. Looking at state tax data on two industries shows that 19% of annual sales is from a seasonal effect. In 2015, in these industries, this represents $550 million. If one were to attribute this seasonal factor to other spending, the cumulative effect would be substantially larger.

Consumer approach

Data for this approach comes from consultants working for state agencies, including from a number of consulting firms working over a span of years using similar, but not identical terminology and methodology.[iii] The numbers here are an attempt to piece together the size of the industry in the watershed. This is done separately for the RI and MA sections of the watershed – this is because, due to the different data sources and data collection methods, the two states might not be comparable.

In 2015 there were 24.1 million tourists in RI. "Tourist" can refer to two types of individuals: "visitors" who traveled at least 50 miles or stayed overnight, and "travelers" who traveled less than 50 miles and did not stay overnight. In RI, there has been an increase in the share of long distance/overnight tourists. In 2009, 43% of the visitors were long-distance or overnight tourists, and

[iii] These firms include: Tourism Economics, IHS Consulting, Advantage Marketing, and the Donahue Institute

by 2013 the number had risen to 48%. There is no comparable number in 2015, but data indicate that nearly one-third of the tourists stayed overnight in RI (although it is not clear is if this is considered in the reports).[18]

In 2015, the expenditures of "visitors" alone was slightly more than $4 billion. Expenditures were also rising rapidly (Figure 3). Between 2010 and 2015, tourism spending increased 60% faster than the overall state economy.[19] In part, this rapid growth reflects the industry's recovery from the recession because it is an industry greatly affected by the overall state of the economy, and in part the industry's faster than average long-term growth.

Table 4: Impact of Travelers in RI Watershed: 2015 (2016 dollars)

	Employment	Wages (billions)
Direct Impact	30,464	$1.58
Total Impact	68,610	$2.89

Source: Tourism Economics, 2015

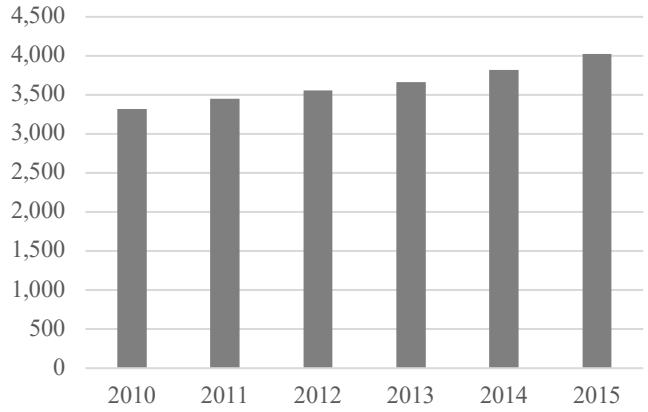

Figure 3: Visitor Spending in RI (millions)

Source: Tourism Economics, 2015

Note: Visitors defined as individuals who traveled 50+ miles or stayed over-night
Travelers defined as individuals who did not travel 50+ miles or stayed over-night

The largest share of spending in 2015 was the food and beverage sector. This sector accounted for 24% of total spending, followed by 21% in the recreation sector that includes gaming and marinas.[20] Growth in overnight and long-distance tourists is evident in a rising share of spending going to lodging and the declining share going to local transportation.

A direct impact of the $4 billion in spending by "visitors" is nearly 36,000 jobs—waiters, housekeepers, shop keepers, rental agents, and tour directors—that the spending supports (Table 5). These jobs account for nearly 6% of the state total, or about 50% of manufacturing employment in the state. These numbers make the industry the 5th largest employer in the state behind health care, retail, manufacturing, and professional, scientific, and technical services. There is also an above average growth in employment. Between 2010 and 2015, tourist industry employment increased 2.7% a year, more than twice the overall rate of employment growth in the state (Figure 4).[21]

Table 5: Direct Impact of Tourists in RI: 2015 (2016 dollars)

	Visitors	Travelers	Total
Employment	35,720	17,381	53,101
Income (Millions)	$1,065	$511	$1,576

Source: Tourism Economics, 2015
Note: Visitors defined as individuals who traveled 50+ miles or stayed over-night
Travelers defined as individuals who did not travel 50+ miles or stayed over-night

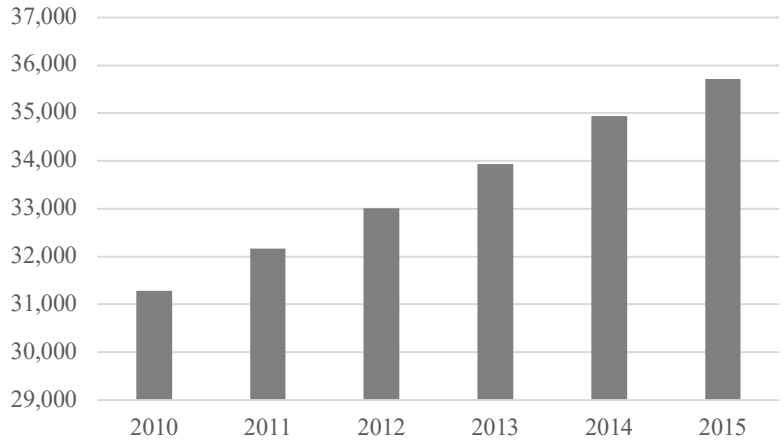

Figure 4: Direct Impact of Visitors on Employment in RI
(*Note:* Visitors defined as individuals who traveled 50+ miles or stayed over-night
Travelers defined as individuals who did not travel 50+ miles or stayed over-night
Source: Tourism Economics, 2015

The wages earned in these jobs in 2015 total just over $1 billion, which equals about 33% of the wages earned in manufacturing (Table 5). The additional industry sales and individual incomes increase taxes at all levels. The estimate is that the additional spending will generate nearly $500 million in state and local tax revenue. It is possible to estimate the impact of those day trippers who

travel less than 50 miles.[iv] In 2015 the employment supported by day trippers was about half of that supported by overnight tourists.[22] The total direct employment supported by tourists was 53,101, 20% more than manufacturing employment in the state. The total income generated by those jobs was nearly $1.6 billion.[23]

These previous figures are state totals. The 2015 report provides expenditures by county, which can then be translated into the RI portion of the NBW.[v] In 2015, expenditures in the watershed, once adjusted to 2016 dollars, were estimated to be 85% of the state total. There were also substantial differences in the level and intensity of the tourism spending across the state. Nearly half is evenly divided between Newport and Providence Counties, while spending is lowest in Bristol where only 1% of the tourism spending occurs (Table 6). The differences across the state are even more pronounced when looking at the spending per resident. Newport ($15,508) is the highest in the watershed while Bristol is the lowest ($784).

Table 6: Traveler Spending in the RI Portion of the Watershed: 2015 (2016 dollars)

	Spending (Millions)	Spending Per Resident
Bristol	$75.9	$784
Warwick	$1,024.6	$12,394
Newport	$1,285.4	$16,686
Providence	$1,288.8	$7,251
South County	$466.4	$6,171
Blackstone Valley	$549.6	$2,277
Balance of state	$339.9	$1,852
Watershed	$5,030.8	$4,843

Source: Tourism Economics, 2015

There are also significant variations within the state in terms of the type of spending. In Blackstone Valley, one-third of expenditures were in recreation, which includes gaming. Newport and South County, meanwhile, account for 82% of spending on seasonal homes, while Newport, where 8% of the state's people live, accounts for 38% of lodging expenditures and 30% of food and beverage expenditures.[24]

Tourism in MA is also a large industry. In 2014, tourist expenditures were $19.5 billion, with about 86% of that total from domestic travelers. In RI, international travelers represented less than 1% of the total, while in MA international travelers' spending was 14% of the total, and this was growing

[iv] Non-construction employment for the travel economy is assumed to be the impact of the day trippers. For example, the travel employment for retail was 3,544 and for all direct it was 5,410, so 1,866 is estimated to be the day trippers.

[v] Using the assumptions that the share of spending in a community in the watershed equals the share of the community's population in the watershed and that the structure of the impact remains unchanged (e.g., there is uniform spending throughout the county, both inside and outside of the watershed).

14% faster than domestic spending. In terms of economic impact, the $19.5 billion in tourist expenditures supported 212,200 jobs at which they earned $7.86 billion in wages.[25]

It is also possible to estimate the size of the industry in the MA part of the watershed because the 2014 MA study has data at the county level, although it is only for domestic tourism. Domestic tourist expenditures in 2014 in the four watershed counties is estimated to be $2.9 billion, which accounts for about 17% of state's domestic tourist expenditures.[vi] This is substantially below the share of the state's population (38%) because per capita tourist expenditures in the watershed counties was only 45% of the state total and because nearly 50% of the state's tourism spending is in Suffolk County. Within the watershed, expenditures in 2015, once adjusted for inflation, were just over $1 billion. These expenditures supported nearly 7,000 jobs and wages of $205 million.[26]

Table 7: Tourism in MA Watershed: (2014)
(in 2016 dollars)

	Bristol	Norfolk	Plymouth	Worcester	Watershed
Direct Impact					
Expenditures	$307.6	$104.5	$250.5	$352.9	$1,015.5
Employment	1,996.1	978.0	1,662.6	2,304.8	6,941.5
Wages	$60.8	$30.6	$48.0	$66.5	$205.9
Total Impact					
Employment	3,208.8	1,572.3	2,672.7	3,705.2	11,159.0
Wages	$116.1	$58.4	$91.6	$126.9	$393.0

Source: Research Department of the U.S Travel Association, 2015

The two studies were done by different consulting firms and they are not exactly comparable. They do, however, allow for an estimate of the combined impact of tourism. Looking at the direct impact of the tourist spending, the number of jobs directly related to tourist spending will be near 37,500 earning wages of nearly $1.8 billion. Looking at the total impact and including the indirect and induced effects, the tourism industry in the watershed generates nearly 80,000 jobs and wages of almost $3.3 billion.

It is not difficult to see the extent to which the tourism industry in the watershed is centered in RI. One indicator that may not be completely captured in the aggregate numbers would be the events held in Newport, which remains a primary tourist destination. Included on that list would be annual events such as the Black Ship Festival and the Newport Boat Show. There are also the Newport Mansions, a large slate of summer sailing events on the waters of the Bay, and the cruise ship visits that have become a regular feature in the waters off of Goat Island in the fall.

[vi] The MA figures are only for domestic travel that was 86% for state and is likely to be a higher percentage in watershed since international destinations such as Vineyard Nantucket, and Cape Cod are not in watershed. Also, the total expenditures estimates were based on the reported multipliers in the MA study that were applied to the direct spending figures in the report. To estimate the economic impact of the spending in the region, the same assumptions are made as in the RI analysis and the 2014 data is converted to 2015 dollars.

Here are a few of the numbers:

1. The Preservation Society of Newport County's mansions:[27] A 2013 study estimated that the mansions attract 650,000 visitors that spent an average of $118 a day in Newport. The annual direct spending of these individuals is nearly $78 million (in 2016 dollars). The total impact on the state, which includes the direct, indirect, and induced effects, was the creation of 1,949 jobs that pay wages of $42 million that supports 786 jobs with wages of $3.3 million (2016 dollars). This activity generates nearly $5.7 million in taxes for the state (2016 dollars).
2. The Volvo Ocean Race:[28] Newport was a stopover port for the Volvo Ocean Race in May of 2015. In the 13 days the race village at Fort Adams was open, the event attracted nearly 148,000 viewers—42% who were from out of state and 10% who were international visitors. Spectators spent $23.2 million, which had an impact of $49.1 million on the state's economy once the indirect effects were included (2016 dollars).
3. Cruise Ships: In 2017, 80 cruise ships including the Queen Mary II with the capacity of nearly 2,700 guests, were scheduled to dock in Newport. The cruise ship activity has been a growth sector. In 2016, 59,023 passengers visited Newport, more than double the number in 2000. The revenue from the head tax in 2016 was $354,138, which up nearly 125% from 2000 after an adjustment for inflation.[29]

Regardless of the metric used, the figures discussed above illustrate the enormous importance of the recreation and tourism industry in the watershed. Millions of tourists and day trippers come to the watershed annually, spending millions of dollars that stimulate the local economy. These tourists and their spending generate nearly 80,500 jobs that pay nearly $2.9 billion in wages in a single year. It is important to highlight that the tourism industry includes figures that may overlap with other sections in this report given that the major category in the tourism industry is "recreation and entertainment."[vii] This "recreation and entertainment" may include spending from categories such as recreational fishing, wildlife viewing, recreational boating, hunting, and beach use, all of which are sections in this report. As a result, these total tourism figures overlap with these other sectors. Please see these sections for further information and breakdown of data for their related industries.

Arts and Culture in the NBW

As detailed above, one consumer-side approach to measuring the impact of tourism in the watershed entails examining the Arts, Entertainment, and Recreation industry. Included in this industry are arts and culture, both of which are integral elements of the watershed's history and major contributors to the tourism sector. There are numerous galleries, events, artists, theaters, and organizations dedicated

[vii] The industry impact is broken down into: 1) agriculture, fishing, mining 2) construction and utilities 3) manufacturing 4) wholesale trade 5) air transport 6) other transport 7) retail trade 8) gasoline stations 9) communications 10) finance, insurance, and real estate 11) business services 12) education and health care 13) recreation and entertainment 14) lodging 15) food and beverage 16) personal services 17) government

to art and culture in both RI and MA, drawing in residents and tourists alike to the watershed. There are numerous benefits related to art and culture – some of which are not quantifiable or cannot be measured through their market value; this report focuses on the market value that can be measured. Recently, the Bureau of Economic Analysis (BEA) launched a new effort to capture economic data on the estimated overall impact of the "Arts and Culture Industries" at the state-wide level and data from these estimates are provided below for both RI and MA. As evidenced by the BEA data and examples below, it is clear that the arts and culture industries have immense economic and social contributions to the watershed.

According to the BEA, there were 17,902 individuals employed in the "Arts and Cultural Industries" in RI in 2015, 3.3% of the state's total employment. Additionally, there were wages of $1 billion, 3.4% of the total wages of the state. Of this number, slightly over 4,000 worked in the "core" art and cultural industries with a majority in educational services, performing arts companies, advertising, architectural services, and photography and photofinishing services. The total value added to the state's economy was nearly $1.9 billion (2016 dollars), ranking RI 42nd in the country for value added.[30] Using the proportional scaling methodology discussed in the above sections, this translates to 15,900 employees in the NBW portion of RI with $904 million in compensation. Additionally, in MA, there were 131,169 individuals employed in the "Arts and Cultural Industries" in 2015, 3.6% of total employment in the state. There was nearly $11.5 billion (2016 dollars) in compensation. In the "core" industries, there were over 37,000 employees with a majority in advertising, architectural services, education services, performing art companies, and promoters of performing arts and similar events. The total value added to the state's economy was approximately $21.3 billion (2016 dollars), ranking MA 9th in the country for value added.[31] This translates to approximately 19,400 individuals employed in the sector and $1.7 billion in wages in the NBW portion of MA.

Aside from these aggregate figures, there are numerous examples of events and organizations that illustrate the importance of art and culture in the watershed. One example is the music festivals of Newport, perhaps the most famous musical events in the state. A 2012 study of the Jazz and Folk Festivals estimated that there was over $5.3 million (2016 dollars) in direct spending related to the festivals, mostly comprised of spending on lodging and food and beverages, although it also includes expenditure relating to shopping, entertainment, and other expenses. Additionally, the report found that although nearly 90% of attendees traveled to Newport solely with the purpose of visiting the festival, half of these visitors traveled to additional destinations during their stay (21% visited other spots in Newport, 17% visited the Newport mansions, and 17% visited Providence and Warwick); this indicates that, in addition to festival-related spending, these visitors and tourists extended their expenditure to surrounding communities through activities such as dining and accommodations.[32] Another example of a vital cultural and artistic event is WaterFire in Providence, RI, which draws in residents and tourists alike to the attraction. Approximately one million individuals visit the event each year, and the WaterFire organization estimates that the event generates $114 million in economic output, $9 million in taxes, and supports nearly 1,300 jobs annually.[33]

The watershed also provides a culturally rich and diverse art scene, some of which is inspired directly by scenery of the Bay—Downtown Providence, for example, offers free monthly Gallery Nights, highlighting over 15 popular art venues and inviting visitors to explore the city's diverse communities.[34] Save The Bay has also used annual art auction nights to raise both awareness and funding for their ongoing conservation projects. Although the organization does not restrict submissions to these auctions solely to works that involve the Narragansett Bay, many pieces are often related to the natural features and resources of the area by default.[35] Some special exhibitions, however, such as the "Pathways 2017" gallery exhibit displayed at The Gilbert Stuart Museum in North Kingstown, RI, have focused specifically on the Narragansett Bay and artists who have utilized its scenic views and attractions as inspiration in their works. In the first half of the showcase spanning from mid to late summer, the museum's Rhode Island Masters series displayed oil and watercolor paintings of South County land and seascapes from 1865 through to the year following devastation caused by New England's infamous Hurricane of 1938. These pieces have enduring value not only as works of art, but they also serve as evidence chronicling the state's coastal history and heritage, as the paintings capture the picturesque views that both captivated the artists at the time of their creation and that continue to resonate today with both RI residents and tourists. The autumn portion of the gallery series featured current local art inspired by Rhode Island coastlines, providing space for emerging artists to display their work. According to museum records, about 3,500 of the 4,500 (~78%) total annual visits to the museum coincided with the "Pathways 2017" exhibition, with approximately 2,900 attendees during the first portion that included the Rhode Island Masters paintings.[36] [37]

Overall, the arts and culture sector, in addition to providing immeasurable and immense value to the watershed's heritage, brings in millions in revenue and employs thousands each year. Aside from their economic and historical importance, local arts and culture can also provide an invaluable service—they can facilitate public interest and potential funding for environmental protection, and they may indirectly contribute to maintaining the watershed's aesthetic resources' value for the region's economy over time.

Future Threats and Opportunities

Sea level | Water clarity | Marine beaches | Water quality for recreation

Tourism across the NBW will be sensitive to environmental changes in coming years, ranging from impacts of sea level rise to changes in water quality. Structurally speaking, a number of tourist destinations, such as hotels, landmarks, and beaches could potentially disappear with a rise in sea level. A 9.8-foot rise by 2100 is predicted for the Northeast coastal region. To put this into perspective, just a seven-foot rise in sea level, 3,918 buildings will be lost in the NBW.[38] Given that a number of tourist destinations in the NBW are located along the coast, such as the Newport Mansions, these destinations or their supporting infrastructures (such as hotels and restaurants) could be flooded or submerged when the sea level rises. Additionally, lighthouses, which serve as a tourism staple in the

NBW, are especially sensitive to rises in sea level. Several lighthouses along the coast have already needed to be relocated due to coastal erosion.[39]

Furthermore, the aesthetic value of waterbodies in the NBW is threatened by decreases in water quality. In the past, the Narragansett Bay has been characterized by its relatively clear water, but due to a number of anthropogenic factors, such as urbanization, this water clarity has been declining. Since the 1970s, major steps have been made in improving water clarity, but this is under threat due to increasing population and urbanization in the NBW. Given that water clarity is a human measure of water quality, if clarity declines, then individuals may perceive the water as being dirtier or less desirable for recreational activities.[40] Additionally, in the NBW, 85% of estuarine waters and 20% of freshwater rivers/streams were deemed acceptable for recreational use, such as boating and swimming. This approval is threatened by factors that are placing increasing stress the fecal pathogen load in waterbodies, including storm and wastewater runoff, sewer overflows, increasing impervious cover, and poor wastewater treatment systems, many of which occur due to increasing population and poor management.[41] For more specific information on recreational activity as it relates to marine beaches, please see the "Beaches" section.

Overall, sea level rise threatens a number of historical and cultural tourist sites in the NBW. Increasing stress placed on water quality threatens water-based tourism, such as boating, beach visitation, or fishing. There is the opportunity to manage these threats, such as preventing nutrient loads and runoff into waterbodies, which may help maintain these waterbodies for recreational and tourism purposes. Taking such actions will be imperative for ensuring the future the tourism sector and its important contribution to the economy of the NBW.

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