

Maine

Economic Impacts in the Gulf of Maine

Over the last three decades, Maine has had a growing population. In 1980 the population of Maine was 1,124,660, and by 2010 it had reached 1,328,361, an increase of over 203,000; it is estimated that the population change from 1980 to 2020 will be 33.8% (NOAA 2010). This increase is associated with many factors, one of which is the number of available jobs in coastal communities, which brought \$1.2 billion in goods and services to Maine's economy in 2009 (ENOW 2009, NOEP 2012). Jobs varied in profession, but a majority of them were involved with habitat restoration, including construction, fish nurseries, and engineering to name a few. These jobs provide both human and environmental health improvements, which allow Maine to continue to be one of the visitation hot-spots in the Gulf of Maine.

| Sector* | Total Economic Value (2009) |
|----------------------------|-----------------------------|
| Living Resources | \$158,035,066 |
| Marine Construction | \$18,587,577 |
| Marine Transportation | \$81,785,137 |
| Offshore Mineral Resources | \$1,932,486 |
| Ships and Boat Building | \$386,585,695 |
| Tourism and Recreation | \$1,021,736,430 |
| Goods and Services* | \$1,120,000,000 |

Table 1 Maine sector data, acquired from the National Ocean Economics Program (*ENOW 2009).

The Center for the Blue Economy – National Ocean Economics Program (NOEP) has economic data divided into six major sectors: tourism and recreation, transportation, construction, living resources, ship and boat building, and minerals. The tourism and recreation sector provided over \$1 billion to Maine's GDP in 2009, followed distantly by ship and boat building at \$386.5 million. The tourism and recreation sector has been an economically important sector since 2001. In 2000, when it provided \$742.2 million, it was only surpassed by ship and boat building, with \$791.7 million. (NOEP 2009)

Tourism and recreation is, by far, the most economically successful sector in Maine's coastal communities. From 1999 to 2000 there were 16.1 million beach visitation days annually, with each consumer spending about \$207 per visit (Pendleton 2009). This amount of visitation provided 27,870 ocean jobs in 2009, supplying \$570 million in wages and \$1.215 billion in goods and services (Pendleton 2009). Maine's coastal communities are an important part of the states' GDP, and they provide a great benefit to the Gulf of Maine as a whole. These benefits are in many different areas, one being habitat restoration.

When visitors come to Maine, they enjoy the landscape, scenery and water, and partake in a variety of recreation activities. “Between 2007 and 2011 Maine received approximately \$800,000 through the Council’s habitat restoration program that generated nearly \$1,000,000 in match for twenty-one projects” (GOMC 2012). Through the Gulf of Maine Council, the State of Maine has access to a regional network of professionals specifically trained on watershed and coastal issues important to the region. These issues can be addressed quickly, and can provide an opportunity for agencies, educators, students, and citizens to become involved in their community.

The current Gulf of Maine action plan provides support and aligns with legislative mandates set by a variety of Maine agencies. Action plans of particular interest include: improve and protect water quality, habitat restoration, marine and aquatic monitoring, adapting to changing climate and coastal storms, and sustainable communities. Additionally, marine environmental monitoring efforts are enhanced through the Council’s regional data and information management efforts. With an annual due of \$18,000 and three appointed members to the Council that represent Maine’s positions in twice-yearly meetings, participation in the Council allows access to financial and human resources region-wide, saving Maine time and money.

With this support, Maine has the ability to continue making the environment a better place for visitors, residents, and wildlife, and can focus on issues and resources that are valuable to the economy. For example, The Trust for Public Land released a report outlining the benefits of forest conservation, which states that from 1998 to 2010, the Land for Maine’s Future (LMF) conserved 550,000 acres. 42,300 acres were acquired annually, with an average acquisition cost of \$113 per acre. The Trust for Public Lands found that these lands provided \$833 million in economic value over the next 10 years after the date of purchase. When compared to the LMF \$76 million investment, every \$1 invested returns \$11 in economic value! (Trust for Public Land 2012)

| <i>Land for Maine's Future Acquisitions and Spending</i> | | | <i>Acreage Acquired by Land Cover Type</i> | | |
|--|---------|--------------|--|---------|------------|
| Year | Acres | Spending | Land Cover | Acres | Percentage |
| 2010 | 396 | \$107,000 | Evergreen Forest | 145,000 | 32.2 |
| 2009 | 7,710 | \$2,910,000 | Mixed Forest | 129,000 | 28.7 |
| 2008 | 11,000 | \$3,720,000 | Deciduous Forest | 62,900 | 14 |
| 2007 | 85,700 | \$10,600,000 | Shrub/Scrub | 54,100 | 12 |
| 2006 | 208,000 | \$6,620,000 | Woody Wetland | 35,600 | 7.91 |

Table 2 Acreage of Trust for Public Lands acquired land (Trust for Public Lands 2012).

One project that is bringing a great deal of restoration to Maine is the removal of the Great Works Dam. This project will improve access to nearly 1,000 miles of historic fish habitat on the Penobscot River, yielding \$5 million available for sustaining 155-188 local jobs, ranging from construction workers, technical experts, and local businesses. Long-term ecological and environmental benefits are plentiful, including an increase in yearly Atlantic salmon stocks (from less than 1,000 to 10,000-12,000), increase in herring (from a few thousand to several million) and American shad (from nearly zero to 1.5 million), and provide new water-related tourism and recreation. (Atlantic Salmon Federation, from Restore America’s Estuaries 2011)

With restoration projects like the Great Works Dam, water quality and wildlife will continue to benefit. As fish passage and other barriers to habitat continue to be removed or retrofitted, Maine's residents will benefit from improved water quality and tourists will continue to visit the region, bringing economic security to the coastal communities. Additionally, habitat restoration can

provide environmental protection from coastal storms; these projects will become increasingly important as the regions' climate changes, bringing about more coastal storms and sea-level rise. (Gulf of Maine Habitat Restoration Web Portal 2012)



Figure 1 Dam removal process at the Great Works Dam (New York Times 2012).

Massachusetts

Economic Impacts in the Gulf of Maine

The Massachusetts coastal region has the greatest amount of economic impact to its state's GDP than any other jurisdiction in the Gulf of Maine. There are several reasons why this is the case, most notably is its population. Over the last four decades, 66% of Massachusetts residents live in the coastal region (Barnstable, Essex, Middlesex, Norfolk, Plymouth, and Suffolk Counties) (NOAA 2010).

| | 2010 | 2000 | 1990 | 1980 | 1970 |
|--------------------------|-----------|-----------|-----------|-----------|-----------|
| Massachusetts Population | 6,547,629 | 6,349,097 | 6,016,425 | 5,737,037 | 5,689,170 |
| Total Coastal Population | 4,349,921 | 4,223,982 | 3,971,422 | 3,810,757 | 3,805,336 |
| Percent of Population | 66.44% | 66.53% | 66.01% | 66.42% | 66.89% |

Table 1 Massachusetts total population versus coastal population (NOAA 2010).

The coastal region has a great number of full-time ocean-sector jobs, about 66,900 in 2009 (ENOW 2010). These jobs provided over \$2 billion in wages and over \$3.6 billion in goods and services to the Massachusetts GDP in 2009 (ENOW 2010). Additionally, according to a report published by the University of Massachusetts, Amherst, 71,160 coastal establishments directly employed over 1.1 million people in 2004, representing close to 37% of employment throughout the state (2006). This difference in employment statistics can be attributed to direct ocean-sector jobs versus indirect ocean-sector jobs. Among employment in the region, the marine science and technology sector directly employs 5,055 people, of which 59% are attributed to marine engineering, 29% to production, and 10% to ship and boat building and repair (UMA-A 2006).

The tourism and recreation sector also provides a large input to the Massachusetts GDP. With Cape Cod Bay, Boston Harbor, the North Shore, and Plum Island Sound, the Bay State's coastline was a relaxation haven for 28.68 million beach visitors in 1999 and 2000. Additionally, 2.925 million people visited Massachusetts for water-related recreation, 31.66 million for swimming, 8.098 for recreational fishing, and 26.102 for wildlife viewing. These visitors were consumers as well, each contributing \$207.26 to the GDP per trip per day in 1999 and 2000 (Pendleton 2009)!

| Sector* | Total Economic Value (2009) |
|----------------------------|-----------------------------|
| Living Resources | \$571,842,708 |
| Marine Construction | \$101,607,685 |
| Marine Transportation | \$1,120,913,852 |
| Offshore Mineral Resources | \$33,965,088 |
| Ships and Boat Building | \$7,688,619 |
| Tourism and Recreation | \$2,523,873,596 |
| Goods and Services* | \$3,656,000,000 |

Table 2 Massachusetts sector data, acquired from the National Ocean Economics Program (*ENOW 2009).

The tourism and recreation sector is such a large part of Massachusetts’ way of life, not just for the coastal region, but for the state as a whole. Residents and visitors enjoy the landscape, scenery and water, and partake in a variety of recreational activities all year round. For example, based on information gathered from the 2010 Massachusetts Recreational Boater Survey, coastal and ocean recreational boating expenditures contributed at least \$806 million to the 2010 GDP. A majority of the expenditure was in gas and oil purchases, but others included groceries, restaurant expenses, marina fees, entertainment and shopping, accommodations, and general recreation. (Urban Harbor Institute 2010)

Keeping Massachusetts’ landscapes, beaches, and watersheds healthy is important to not just the state GDP, but also in protecting property and infrastructure from water-related damage. Wetlands in the Charles River Basin reduce peak river flows during storms and delay storm surges, preventing \$18 million in flood damage each year; additionally, Massachusetts areas with the highest ecosystem service values were those rich in saltwater wetlands (Mass Audubon 2003). Protecting and promoting healthy watersheds prevents large-scale damage. According to the EPA, “wetlands surrounding the Boston area have been estimated to prevent \$42,111 of flood damage per acre of intact wetland” (EPA 2012). With an increasing intensity of coastal storms, the time has never been better to continue improving Massachusetts’ coastal ecosystems.

As part of the Gulf of Maine Council region, Massachusetts pays \$18,000 in dues to be supported by a network of states and provinces. “Between 2007 and 2011 Massachusetts received approximately \$1.2 million in habitat restoration grants through the Council’s restoration grant program that generated \$1.9 million in matching non-federal support” (GOMC 2012). During this time, 29 projects were underway, involving barrier removal planning/construction to benefit salt marshes and streams, in addition to the species that depend on them. Issues including protecting water quality, marine and aquatic monitoring, and changing climate and coastal storms, can be addressed quickly, and can provide an opportunity for agencies, educators, students, and citizens to become involved in their community. (GOMC 2012)

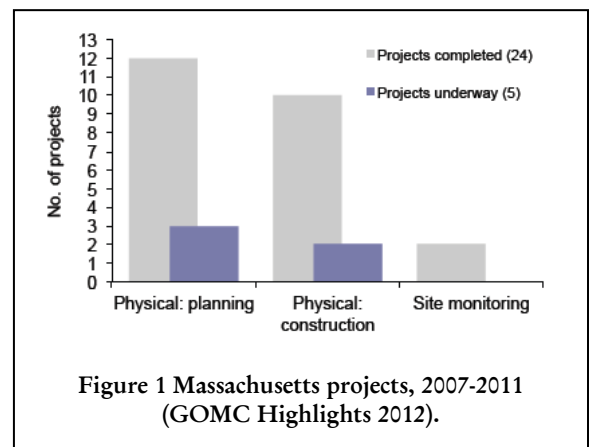


Figure 1 Massachusetts projects, 2007-2011 (GOMC Highlights 2012).

With this support, Massachusetts has the ability to continue making the environment a better place for visitors, residents, and wildlife, and can focus on issues that are valuable to the economy. For example, the Little River in Newbury had a 48” culvert crossing since at least the 1890s. The flow beneath the dam has been pinched due to the size of the culvert, restricting flow and tidal inundation to the upstream marsh. Invasive species took over the area, and the marsh became severely degraded. In 2010, with a \$60,000 GOMC-NOAA grant, the Town of Newbury replaced the culvert with a 6’

box culvert, restoring tidal reach, reducing channel velocity, and minimizing erosion during ebb and flow tides. Additionally, the Town of Newbury benefited by improving the structural integrity of Newman Road. (GOMC 2012)



Figure 2 Newman Road culvert crossing replacement (GOMC highlights 2012).

New Brunswick

Economic Impacts in the Gulf of Maine

Compared to other jurisdictions within the Gulf of Maine, New Brunswick is the smallest, providing the least amount of total revenue to its GDP. In the overall context of the New Brunswick economy, ocean activities represent just 4.1% of total GDP, 7.4% of total employment, and 7.6% of total income; however, from 1997 to 2008, ocean sector output increased by about 11%. Marine construction saw the biggest gains in this time, increasing 1,569%; second was tourism and recreation, up 678%. Regarding the entire Atlantic region, New Brunswick represented 7% of GDP, 20% of total employment, and 17% of total income in 2008. (Gardner, M. et al 2010)

| Sector* | Total Economic Value (2008) |
|----------------------------|-----------------------------|
| Living Resources | \$269,177,000 |
| Marine Construction | \$271,732,000 |
| Marine Transportation | \$224,829,000 |
| Offshore Mineral Resources | Unavailable |
| Ships and Boat Building | \$103,232,000 |
| Tourism and Recreation | \$184,500,000 |
| Government | \$74,416,000 |

Table 1 *Sector values are collected from "Economic Value of the New Brunswick Ocean Sector".

Marine construction and living resources provide the largest input to New Brunswick's economy, at \$271.7 million and \$269.1 million, respectively. The marine construction sector is simply that: marine construction. It is divided into the Bay of Fundy and Gulf of Maine; in 2007 Fundy had \$307.9 million in expenditures, while the Gulf had \$1.2 million between all types of ports and harbors. The living resources sector is comprised of commercial fisheries and aquaculture, also divided into Bay of Fundy and Gulf of Maine. In 2008, Fundy had 600 vessels and employed 1,500 people, while in the Gulf there were 1,801 vessels employing 4,500 people. Aquaculture in Fundy exported \$268.3 million in 2008, employing 1,475 people and producing 26,500 tonnes of fish at 85 sites, while the Gulf produced 1,098 tonnes and had over 546 sites. (Gardner, M. et al 2010)

Overall, New Brunswick relies on its ocean economy more for its exporting and expenditure gain, than it does for its tourism and recreation (which brought \$184.5 million for the GDP in 2008). That is not to say the tourism and recreation sector is any less valuable. The Bay of Fundy (the bay with the highest tides on the planet) had 183 million visitors in 2008, spending \$12.3 million; local recreation (including fishing, boating, and swim/paddle) brought \$3.9 million, \$29.9 million, and \$8.5 million, respectively. Overall, marine tourism had 815,000 trips in 2008, bringing \$125.6 million into the GDP. In



Figure 1 New Brunswick map (GOMC 2012).

the Gulf region, recreation (fishing, boating, and swim/paddle) brought \$3 million, \$23.7 million, and \$6.7 million, respectively. Finally, coastal tourism in the Gulf equaled 241,000 trips, bringing \$36.9 million in GDP. (Gardner, M. et al 2010)

Keeping New Brunswick's environment healthy is important to not just the provinces GDP, but to the marine construction, living resources, tourism and recreation, and marine transportation sectors. As part of the Gulf of Maine Council region, New Brunswick pays \$20,000 in dues (share between the Department of Environment and Department of Agriculture, Aquaculture, and Fisheries) to be supported by a network of states and provinces. Participation in the Council allows New Brunswick access to human and financial resources throughout the region, which saves time and money for the province. Issues that are important to the province are discussed a twice-yearly meetings and four additional Working Group meetings. Issues may include protecting water quality, marine and aquatic monitoring, and changing climate and coastal storms, can be addressed quickly, and can provide an opportunity for agencies, educators, students, and citizens to become involved in their community. (GOMC 2012)

With this level of support, New Brunswick has the ability to continue making the environment a better place for visitors, residents, and wildlife, and can focus on issues that are valuable to their economy. For example, the Musquash Marsh restoration project and post-restoration monitoring is one of the recent project funded, in part, by the GOMC-NOAA Partnership. Between 2002 and 2005, Ducks Unlimited and other partners provided funding to remove 1,097 meters of rail bed and 6,000 cubic meters of dyke, improving tidal flow throughout a major part of the marsh. The funding provided by the GOMC-NOAA Partnership allowed for Ducks Unlimited to monitor the restoration process after the project was complete, recording that the marsh is improving over time, and will continuously be improved with sea-level rise. (GOMC 2012)



Figure 2 Musquash Marsh restoration process (GOMC 2012).

Another project of interest to New Brunswick is the Kennebecasis River Assessment and Restoration project. The Kennebecasis Watershed Restoration Committee received a \$19,000 GOMC-NOAA Partnership grant to begin habitat monitoring assessments previously impacted by agricultural practices, namely cattle roaming. Six tributaries were assessed for riparian and aquatic habitat conditions, and the results allowed for management in a variety of ways. A 603-meter section of stream was fenced to prevent cattle access, in addition to streamside tree and shrub plantings allowed for 3,015 square meters of riparian re-establishment. The project



Figure 3 Kennebecasis Watershed Restoration Committee (2010).

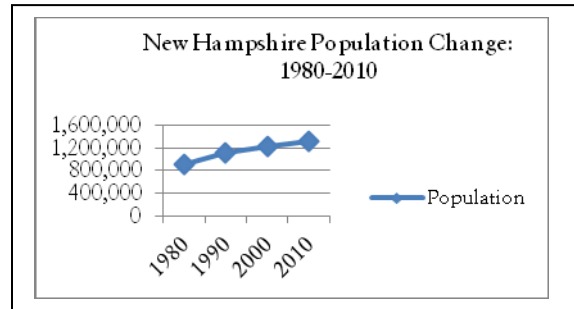
is one of the most successful in the province, and is used as an example of cost-effective conservation in an agricultural perspective. (GOMC 2012)

Other projects, such as the St. Croix River at Milltown Dam, are monitoring and/or restoration projects that provide beneficial information regarding New Brunswick's water quality and overall ecosystem health. Understanding the ecosystem will benefit the economy regarding tourism and recreation, living resources, and marine construction; but it will also improve the regions' ability to withstand ever-increasing storm surges and other impacts of future climate change.

New Hampshire

Economic Impacts in the Gulf of Maine

From 1970 to 2010 New Hampshire's population has almost doubled, from 737,681 to 1,316,470, respectively. Rockingham County is the second most populated county in the state (Hillsborough County is the most). At 295,223 residents, Rockingham County is home to 22% of New Hampshire's residents, an increase almost two and a half fold since 1970 (when population was 138,951). This increase is due to a variety of factors, one being the number of jobs available in the ocean communities. (NOEP 2012, NOAA 2010)



In 2009 almost 8900 jobs were available on the seacoast, providing \$176 million in wages and \$334 million to the state GDP (ENOW 2009). Additionally, tourism provides a large input to GDP; with Hampton Beach State Park, Odiorne Point State Park, Great Bay Discovery Center, and a large number of tourist attractions, tourism and recreation provided \$268,134,034 to New Hampshire's GDP in 2009, the highest of any sector (NOEP 2012).

| Sector* | Total Economic Value (2009) |
|----------------------------|-----------------------------|
| Living Resources | \$3,436,501 |
| Marine Construction | \$12,643,530 |
| Marine Transportation | \$60,968 |
| Offshore Mineral Resources | \$3,126,716 |
| Ships and Boat Building | Unavailable |
| Tourism and Recreation | \$268,134,034 |
| Goods and Services* | \$334,000,000 |

Table 1 New Hampshire sector data, acquired from the National Ocean Economics Program (*ENOW 2009).

The tourism and recreation sector is such a large part of New Hampshire's way of life, not just for the coastal region, but for the state as a whole. There were 8.126 million annual beach visitation days in 1999 and 2000, with \$207.26 spent each trip per consumer; wildlife viewing and swimming were also common visitation trips (8.63 million and 8.274 million, respectively) (Pendleton 2009). Residents and visitors enjoy the landscape, scenery and water, and partake in a variety of recreational activities all year round. For example, finfish and shellfish recreation brought \$371,690 into New Hampshire's GDP in 2009, up from \$329,300 in 2008 (Ecosystem Indicator Partnership 2010).

Keeping New Hampshire’s landscapes, beaches, and water healthy is important to not just the state GDP input, but also in protecting property and infrastructure from water-related damage. New Hampshire is home to over 1,000 lakes and 12,000 miles of rivers and streams. According to a state-wide survey put out by the Lakes, Rivers, Streams & Ponds Partnership, 85% of respondents are satisfied with New Hampshire’s overall water quality, but 69% would decrease their visits to the state and/or water areas if water quality or clarity declined. The impact of that decline would be massive, since the economic impact of swimming, fishing, and boating totals \$379 million in sales, \$134 million in income, and almost 6000 jobs statewide. (LRSP 2007)

Fortunately, New Hampshire is supported by a network of states and provinces within the Gulf of Maine region. “New Hampshire’s annual dues are \$18,000. Over a five year period NH municipalities and non-profit organizations received \$250,000 in five years to restore habitats and are currently applying for Council funding to increase community resiliency to a changing climate” (Gulf of Maine 2012). Through the Gulf of Maine Council, the State of New Hampshire has access to a regional network of professionals specifically trained on watershed and coastal issues important to the region. These issues can be addressed quickly, and can provide an opportunity for agencies, educators, students, and citizens to become involved in their commu

The current Gulf of Maine Council action plan provides support and aligns with legislative mandates set by a variety of New Hampshire agencies. Topics of particular interest include: improve and protect water quality, habitat restoration, marine and aquatic monitoring, adapting to changing climate and coastal storms, and sustainable communities. Additionally, marine environmental monitoring efforts are enhanced through the Council’s regional data and information management efforts. With an annual due of \$18,000 and three appointed members to the Council that represent New Hampshire’s positions in twice-yearly meetings, participation in the Council allows access to financial and human resources region-wide, saving New Hampshire time and money.

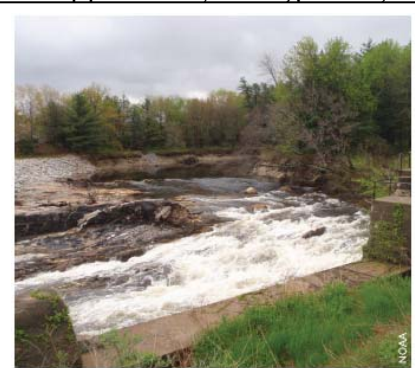
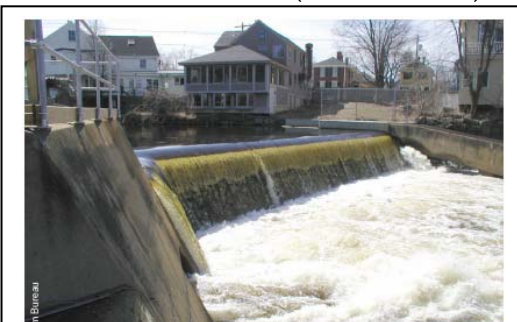


Figure 1 Merrimack Village Dam after removal (NOAA).

With this support, New Hampshire has the ability to continue making the environment a better place for visitors, residents, and wildlife, and can focus on issues that are valuable to the economy, specifically dam removal. For example, the Merrimack Village Dam was used a great deal from the 1730s to the mid-1900s. Over time millhouses along the river were removed, and the dam fell into disrepair due to lack of use and new trends in industry. The New Hampshire Department of Environmental Services Dam Bureau decided to remove the dam, and received a \$75,000 GOMC-NOAA grant (among other support), to do so. As a result of this removal, 14 miles of additional access to free-flowing conditions were made available to many fish species, and the natural habitat was restored. (GOMC 2012)



The Exeter River Great Dam in Exeter, NH, is in the early stages of possible dam removal as well. Constructed in 1914 (though historic

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record indicates that some form of a dam has been in place since the 1600s), there has been concern of public safety, flooding, and environmental degradation, as well as the minimal ability for fish and eel passage. To meet safety standards, the dam would need to be modified, causing a great cost to the town. A feasibility study and impact analysis was granted in 2010, and findings are under discussion today. As a tidal river, this dam is a potential barrier to a variety of estuarine fish and other wildlife. Key partners, including the town of Exeter, NOAA, DES Dam Bureau, and the US Fish & Wildlife, will be discussing the fate of the dam in the early part of 2013. (GOMC 2012)

Nova Scotia

Economic Impacts in the Gulf of Maine

Nova Scotia is in a unique situation within the Gulf of Maine region: it is the only region almost entirely surrounded by water (save about 35km of boundary with New Brunswick). Compared to its Canadian counterpart, Nova Scotia's ocean sector provides much more economic value to the province as a whole. In 2006, overall impacts of ocean activities totaled \$2.576 billion in GDP, \$1.565 billion in income, and 432,590 jobs. (Gardner, M. et al 2009)

| Sector* | Total Economic Value (2006) |
|----------------------------|-----------------------------|
| Living Resources | \$569,239,000 |
| Marine Construction | \$86,760,000 |
| Marine Transportation | \$577,466,000 |
| Offshore Mineral Resources | \$952,435,000 |
| Ships and Boat Building | \$616,590,000 |
| Tourism and Recreation | \$246,525,000 |
| Government | \$1,406,000 |

Table 1 *Sector values are collected from "Economic Value of the Nova Scotia Ocean Sector".

As can be seen in Table 1, the offshore mineral resources sector (offshore oil and gas) provides the greatest impact to the ocean sector economy, at \$952,435,000 in 2006 (down from \$1.5 billion in 2005). The Sable Offshore Energy Project (SOEP) had five fields (a sixth under consideration) in 2006, producing natural gas at a rate of 510 MMscf/d (million standard cubic feet per day). Major exports are to the northeastern US and parts of Nova Scotia and New Brunswick. The second largest impact to Nova Scotia's GDP is the ships and boat building sector (water transportation and ship and boat building), at \$616,590,000 in 2006.

Water transportation in Nova Scotia includes all shipping companies, cruise ships and ferry operators, as well as cargo loading and unloading; ship and boat building is comprised of two yards in Halifax and about 65 boat builders around the province. Both are beneficial, yet water transportation provides more of a GDP, income, and employment input by almost four times that of ship and boat building. (Gardner, M. et al 2009)

Surprisingly, Nova Scotia's tourism and recreation sector is one of the smallest GDP inputs in the province. Though this is the case, it is important to consider the environment and overall watershed health for other reasons, including the impact it has on the living



Figure 1 Commercial fishing boat (Gardner, M. et al 2005).

resources and marine transportation sectors. Totalling over \$1.1 billion, these two sectors are important for both Nova Scotia and the Gulf of Maine as a whole (Gardner, M. et al 2009). In 2009, total finfish and shellfish sales brought in \$14,388,509 (US dollars) to the Nova Scotia GDP, with 249 and 4,796 acres each, respectively (Ecosystem Indicator Partnership 2010). These sectors provide thousands of jobs and income to the region, and if the quality of the watersheds and landscape were to be degraded, the economic impact of these sectors would decrease.

With degraded watersheds, oceans, and landscapes, the seafood and other environmental exports will be of a lesser quality, meaning GDP, employment, and income could all be affected. Keeping Nova Scotia's environment healthy is important to all the sectors, including tourism and recreation and marine construction. In order to provide the utmost quality watersheds, oceans, and landscapes, the Gulf of Maine Council provides funding for habitat restoration. As an active participant in the Gulf of Maine Council region, Nova Scotia pays \$20,000 in dues to be supported by a network of states and provinces. That is, in turn, matched by state, federal, and private funding for a total annual budget of about \$800,000, a 40 to 1 match. Over the last five years, Nova Scotia has been awarded over \$200,000 in grants by the GOMC-NOAA Partnership grant program. Participation in the Council allows Nova Scotia access to human and financial resources throughout the region, which saves time and money for the province. Issues that are important to the province are discussed at twice-yearly meetings and four additional Working Group meetings. Issues may include improving and protecting water use and quality, habitat restoration, marine and aquatic monitoring, practices for adapting to climate change, and many others. (GOMC 2012)

With this level of support, Nova Scotia has the ability to continue making the environment a better place for visitors, residents, and wildlife; in fact, this is already happening with funding through the GOMC. The Clementsport Dam was built about 70 years ago to impound waters on Moose River. The dam has not been maintained since the 1990s, and has become degraded; as a result, the entire impoundment drained, and is now structurally unsafe and in risk of failure. The Clean Annapolis River Project (CARP) began a three-phase project exploring removal of the dam, which was funded a \$61,572 GOMC-NOAA Partnership grant. A second grant was awarded upon completion of the planning phase, in the amount of \$72,560, again by GOMC-NOAA. (GOMC 2012)

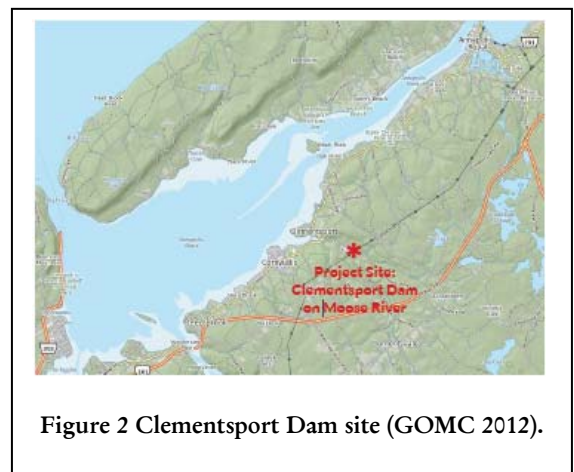


Figure 2 Clementsport Dam site (GOMC 2012).

In September of 2011 the dam was officially removed, and opened 7.8 river kilometers of mainstream rivers to migrating fish species, including Atlantic salmon. With the restore riverine habitats, native processes and species are documented to have returned. Over the next several years monitoring will document how fish passage extents have improved. (GOMC 2012)

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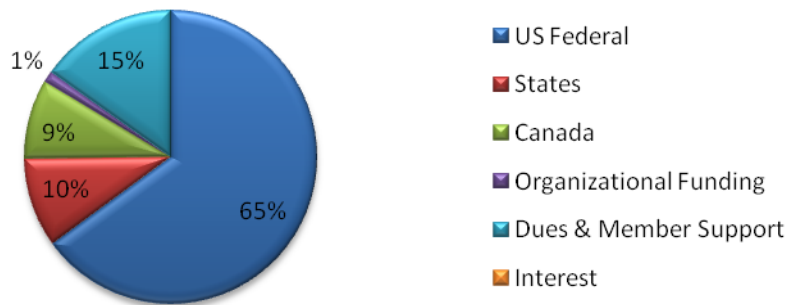
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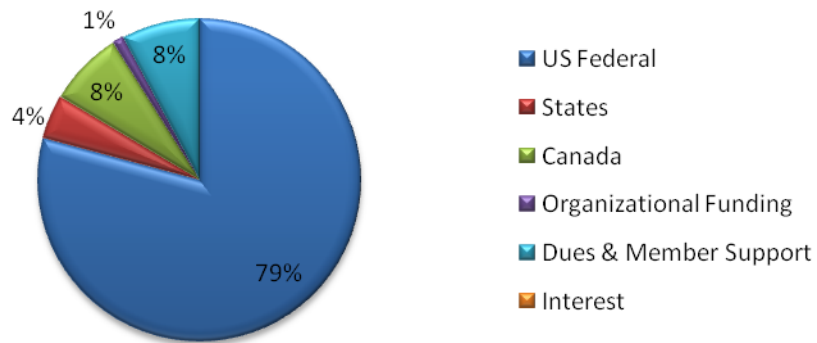
Gulf of Maine Council on the Marine Environment Financial Overview: 2011 & 2012

| Statement of Activities | | |
|--------------------------------|-----------|-----------|
| | 2011 | 2012 |
| US Federal | \$410,170 | \$856,491 |
| States | \$62,000 | \$47,600 |
| Canada | \$55,423 | \$80,750 |
| Organizational Funding | \$8,006 | \$12,225 |
| Dues & Member Support | \$95,765 | \$84,644 |
| Interest | \$14 | \$12 |

Statement of Activities: 2011

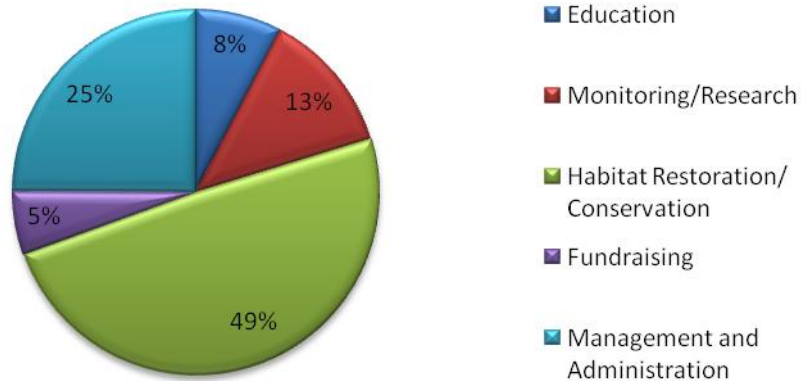


Statement of Activities: 2012

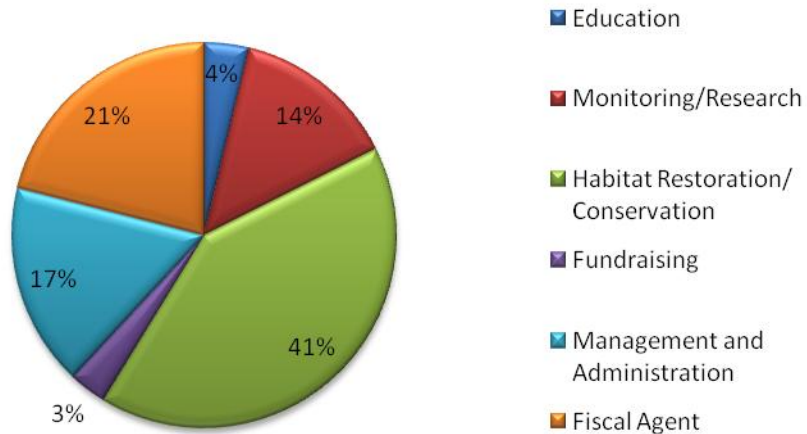


| Expenses by Program Category | | |
|-----------------------------------|-----------|-----------|
| | 2011 | 2012 |
| Education | \$54,949 | \$40,820 |
| Monitoring/Research | \$90,592 | \$148,530 |
| Habitat Restoration/ Conservation | \$353,539 | \$443,293 |
| Fundraising | \$40,050 | \$34,687 |
| Management and Administration | \$178,721 | \$183,217 |
| Fiscal Agent | n/a | \$226,586 |

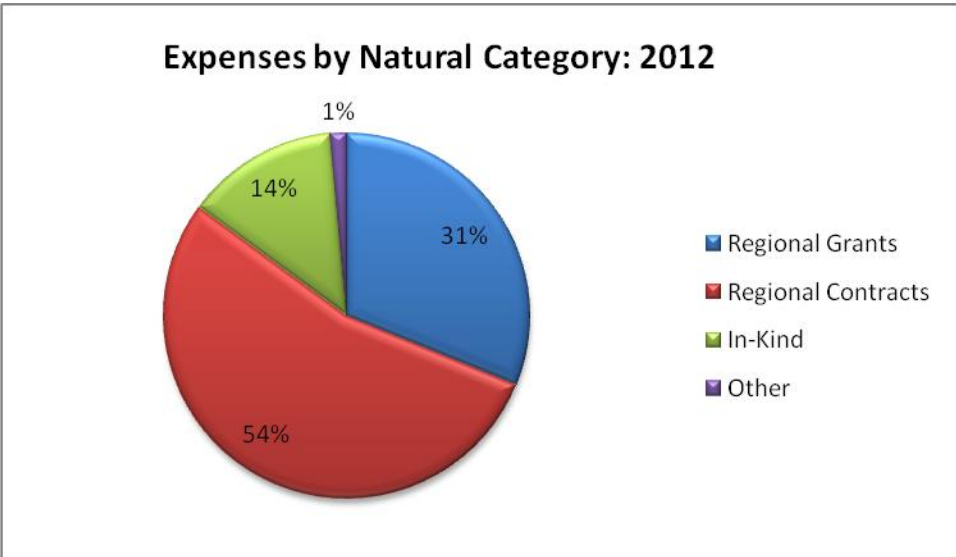
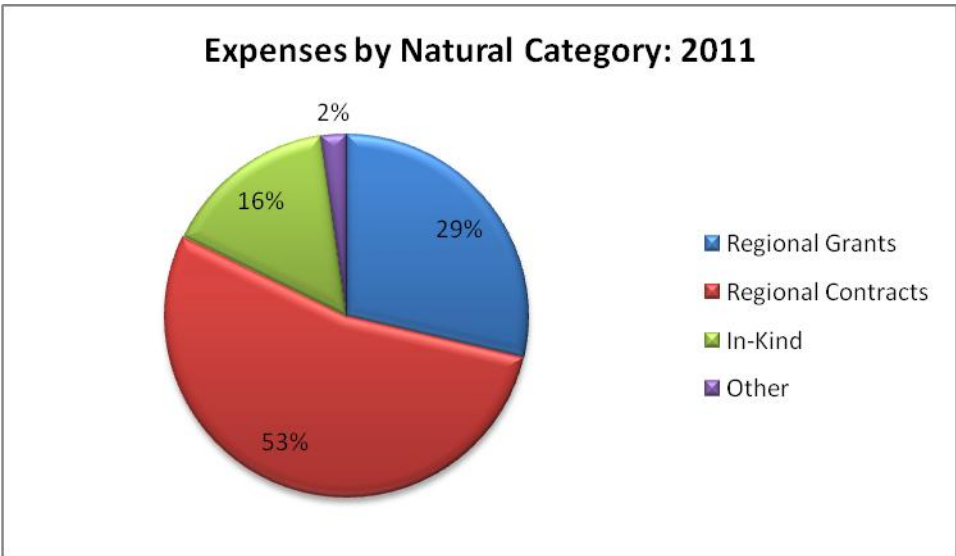
Expenses by Program Category: 2011



Expenses by Program Category: 2012



| Expenses by Natural Category | | |
|------------------------------|-----------|-----------|
| | 2011 | 2012 |
| Regional Grants | \$243,541 | \$387,988 |
| Regional Contracts | \$454,844 | \$671,357 |
| In-Kind | \$131,969 | \$168,015 |
| Other | \$19,466 | \$17,788 |



Gulf of Maine Council benefits to the Regional Economy

Dollars distributed in the Gulf of Maine region: July 2010 – June 2012

Regional Grants

\$631,529

Regional Contractors (Services)

\$1,126,201

Total Contributions to the Gulf of Maine Economy (July 2010 – June 2012)

\$1,757,730

Additional In-Kind Support Documented

\$299,984

Total Jobs Supported* (January 2009 – December 2010)

136,350 (including direct and indirect jobs)

*Maine, Massachusetts, and New Hampshire data – Economics: National Ocean Watch. NOAA. 2009.

*New Brunswick data – Economic Impact of the New Brunswick Ocean Sector. Gardner, M. et al. 2010.

*Nova Scotia data – Economic Impact of the Nova Scotia Ocean Sector: 2002-2006. Gardner, M. et al. 2009.