

# PORTS & WATERWAYS

## Grade: C-

### Overview

Maine's industrial ports are in fair to good condition, but require an additional \$12 million in capital funding in the short-term to remain competitive, safe, and secure. Substantial long-term investments are also required to facilitate the projected surge in containerized cargo traffic. Maine should also continue to promote enhancements to ports and harbors serving its viable cruise, commercial fishing, and recreation industries.

### Introduction and Background

Maine has 12 significant ports and harbors, which are well suited to handle the requirements of modern cruise vessels. Five of these ports, Portland, Searsport, Bucksport, Bangor, and Eastport, are also considered suitable to handle the requirement of most modern cargo vessels.<sup>i</sup>

Figure 1: Ports and Harbors of Maine

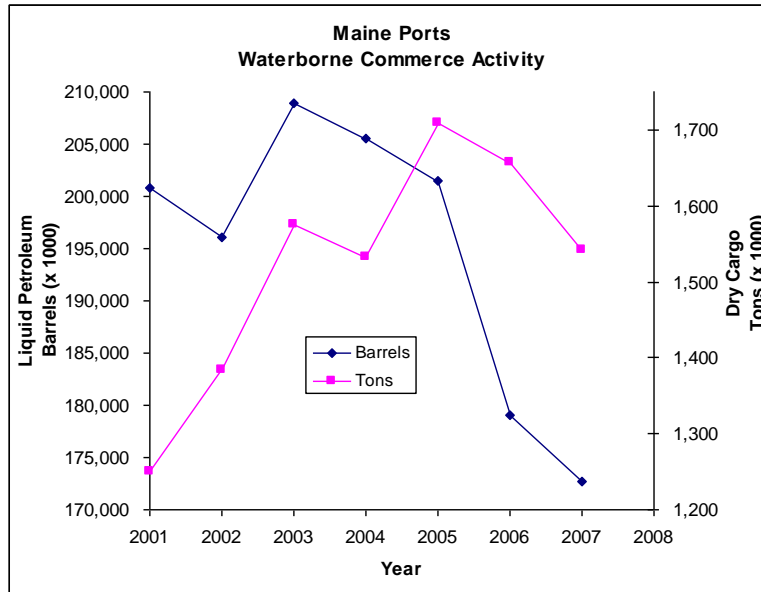


### Industrial

Since 1970, industrial port development has been generally concentrated in three areas: Eastport/Quoddy Bay, Penobscot Bay and River (Searsport, Bangor and Bucksport), and Portland Harbor. Each area offers deep water, quality pilotage and services necessary for oceangoing vessels. Utilization of industrial ports in Maine varies depending on the terminals, time of year and market conditions. Recent trends in utilization of industrial ports of Maine, as well as the U.S. are illustrated in Figure 2 and Figure 3. In 1980, only a small amount of dry cargo was handled at the Port of Searsport; none in Eastport and Portland. Today, the three ports collectively handle more than 1.5 million tons of dry cargo per year, including containers. Additionally, Portland and Searsport also handle more than 125 million barrels of petroleum products per year.<sup>ii</sup>

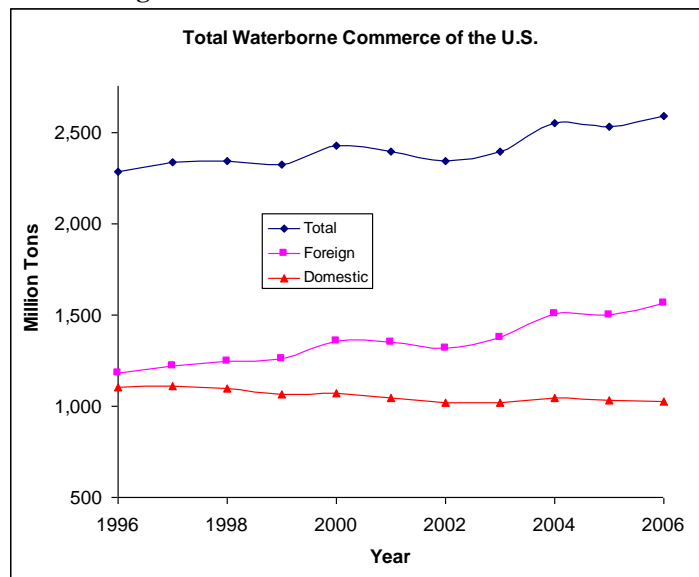
As depicted in Figure 2, since 2001, the trend in total volume of petroleum shipped through Maine's ports has been generally declining while the total volume of dry cargo has increased. The data indicates that liquid petroleum shipping volume decreased at an average annual rate of 4.5 million barrels and dry cargo shipping increased at an average annual rate of 56,000 tons from 2001 to 2007. However, it should be noted that both the cargo and petroleum industries have experienced significant decreased activity in the past 2 to 4 years.

**Figure 2: Maine's Total Waterborne Commerce**



As depicted in Figure 3, total waterborne commerce activity increased during the last 10 years, due primarily to increases in foreign commerce.<sup>iii</sup> The Maritime Administration, an agency of the U.S. Department of Transportation, projects a surge in international cargo traffic through U.S. ports over the next 10 to 15 years.<sup>iv</sup> According to a Cornell Study, North Atlantic ports will need to add at least 43 percent in additional capacity to accommodate the increased demand for shipping containerized cargo.<sup>v</sup>

**Figure 3: US Total Waterborne Commerce**



### *Intermodal Connections*

Intermodal connectivity is critical to the long-term success of shipping and handling cargo through Maine's ports. The two most critical modal connectors, highway and rail, provide avenues for moving freight to and from port terminals. The Maritime Administration has been exploring the development of a robust short-sea shipping system to aid in reducing the growing amount of freight congestion on our nation's rail and highway systems. Short-sea shipping refers to the movement of freight along coasts and inland waterways.

### *Cruise*

Maine has enjoyed an increase in coastal cruising programs during recent years and is currently a summer home for the cruise operations of American Cruise Line, American Canadian Caribbean Line and Clipper Cruise Line. The ports of Portland and Bar Harbor are deep-draft ports and regularly host vessels of all sizes. The port of Rockland, which has been a port of call for military ships, is beginning to attract deep-draft cruise passenger vessels. In addition, the ports of Bangor, Belfast, Bucksport, Camden and Rockland have flourished as popular boutique ports of call.

### *Commercial Fishing and Recreation*

The Maine coast is over 3,000 miles long and is known worldwide for its beauty, sailing grounds, fishing industry and deep-water ports. Maine and, in particular, the port of Portland is a nationally recognized leader in the commercial fishing industry.

## **Condition and Adequacy**

### *Industrial*

During the past 10 years, the Maine Department of Transportation (MaineDOT) and the Maine Port Authority have invested more than \$50 million to promote growth in the three industrial ports. In Eastport, a \$16 million facility was completed in 1998.<sup>vi</sup> In Searsport, an \$18 million investment in a public/private partnership with Sprague Energy resulted in a new terminal completed in 2003. In Portland, more than \$16 million was invested in the Ocean Gateway project and the International Marine Terminal, which included the purchase of a new container crane and additional land.<sup>vii</sup>

Maine's dry cargo facilities are supported on concrete and steel piles. All three of Maine's dry cargo ports' major piers were rebuilt in the past decade. Generally, Maine's cargo piers are built to the current industry standard of a load capacity of 1,000 pounds per square foot. Pier condition is considered good, but annual maintenance of pipe coating and cathodic protection is necessary. New pavement, better rail, highway upgrades and additional crane capacity is needed at these ports.

### *Intermodal Connections*

In Portland, the new waterfront connector provides a direct connection from the marine terminals to the interstate highway system.<sup>viii</sup> In addition, direct rail access from Pan Am Railways is available to Sprague Energy's Merrill Marine Terminal. The recent agreement between Pan Am and Norfolk Southern Railway to improve Pan Am's main corridor in Massachusetts will have a direct benefit to Maine rail users who move their product to inland U.S. markets.<sup>ix</sup> In Searsport, direct rail access is available to the terminal at Mack Point via the Montreal Maine and Atlantic (MMA) Railroad. The MMA offers double-stack rail clearance from Searsport to Montreal and then via class I connections to the U.S. Midwest. In Rockland, a considerable amount of cement product is moved via rail and then onto barges for transport to other U.S. markets. Without these intermodal connections, this traffic would travel down the busy Interstate 95 corridor. The port of Eastport could be improved with the addition of a rail connection.<sup>x</sup>

### *Cruise*

Waterfront facilities supporting Maine's cruise industry are adequate for the current market, but need upgrading and expansion to keep up with the increasing demand for port calls. According to Cruise Lines International Association Inc., the cruise industry has had an average growth rate of 8.5 percent annually since 1980 and is an important factor in our nation's overall economic growth.<sup>xi</sup> Industry data shows that 40 percent of cruise ship passengers stay at least one night in a port city and each overnight cruise visitor spends an average of \$289 per visit on retail, dining, local transit and lodging.<sup>xii</sup>

Maine has been partnering with various public and private agencies to develop its waterfront infrastructure in support of the cruise industry. The following three projects have recently been completed as part of waterfront development programs:<sup>xiii</sup>

1. Portland's Ocean Gateway: 18,100-square-foot passenger building and a 12,400-square-foot pier expansion.
2. Rockland's Gateway Center and Maine Lighthouse Museum
3. Bangor Waterfront Project: High-speed ferry dock with public and private boat slips, office buildings, parking garage, hotels and conference center.

#### *Commercial Fishing and Recreation*

Maine was ranked seventh in the nation in total commercial landings of fish while the port of Portland is ranked thirty-fourth out of all United States ports. The port of Portland recorded more than 70 million pounds of commercial fish landings in 2006—a 24.8 percent increase from 2005. In 2006, the entire state recorded more than 234 million pounds of commercial fish landings—a 9.1 percent increase from 2005. However, partially due to increased regulations over the years, fish landings in 2006 were 34 percent less than the record 356 million pounds recorded in 1950.<sup>xiv</sup>

As of September 30, 2007, four waterway projects were either under contract or study by the U.S. Army Corps of Engineers for maintenance dredging or channel improvements serving the commercial fishing industry. Unfortunately, some of these activities have not been completed due to either lack of federal funding, regulatory reviews, or execution of cost sharing agreements with the affected municipalities.<sup>xv</sup>

MaineDOT has provided \$960,000 in funding to support the 2008 Small Harbor Improvement Program (SHIP). These funds will be provided to 21 coastal communities to help preserve working waterfronts and public access.<sup>xvi</sup>

#### *Safety and Security*

In Maine, considerable effort has been made by both public and private operators to perform gap analyses and construct considerable upgrades to Maine's facilities. These upgrades have been possible largely through annual federal port security grants. Continued funding of this program is critical to the long-term safety and security of Maine's facilities.

#### **Investment Needs**

MaineDOT reports that an annual investment of at least \$2 million is necessary to maintain and upgrade Maine's three industrial ports. Incremental capital investment is also being sought to supplement future bond issues for the following projects:<sup>xvii</sup>

- \$4.5 million for a dredging project at Searsport,
- \$2.0 million for a trans-load facility at Eastport and
- \$5.5 million for additional improvements to the International Marine Terminal and Ocean Gateway project in Portland.

In the long-term, at least \$200 million is needed for the development of a modern container terminal in Searsport.<sup>xviii</sup> Continuous SHIP grants are needed to promote Maine's growing cruise, fishing and recreational maritime industries.

#### **Conclusions and Recommendations**

Maine's industrial ports are in fair to good physical condition; however, the ports need improvements to accommodate the demands of the shipping industry. Maine ASCE gives ports and waterways a grade of C-.

Maine ASCE makes the following recommendations:

- Continue to invest in maintenance of industrial ports;
- Upgrade containerized cargo capacity to capitalize on opportunities of a growing market;
- Program incremental capital improvements to the ports to enhance intermodal connections, such as rail and short-sea shipping terminals;

- Continue to invest in waterfront development projects through the SHIP program;
- Increase investments in ports supporting the cruise industry to capitalize on the economic impacts of this growing industry;
- Continue to promote and prioritize U.S. Army Corps of Engineers maintenance dredging and channel improvement projects in Maine's navigable waterways.

**Sources:**

Interviews and emails with staff at MaineDOT Office of Freight Transportation (Kevin Rousseau) & Maine Port Authority (John Henshaw)

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i <http://www.maineports.com/>

ii Maine Department of Transportation, Office of Freight Transportation.

iii USACE: Maritime Transportation System: Trends and Outlook 2007-R-5. 13 March 2007.

iv <http://www.marad.dot.gov/Programs/shortseashipping.html>

v "Port Development Strategic Plan Maine Port Authority-Final Report" The Cornell Group, Inc. November 2007.

vi <http://www.portofeastport.org>

vii Maine Department of Transportation, Office of Freight Transportation.

viii <http://www.portofportlandmaine.org>

ix "Hopes riding high for Pan Am-Norfolk Southern joint venture" by Douglass Rooks, Maine Better Transportation Assoc. Maine Trails June/July 2008

x Maine Department of Transportation, Office of Freight Transportation.

xi "The Cruise Industry: A \$35.7 Billion Partner in U.S. Economic Growth-2006 Economic Summary". Cruise Lines International Association, Inc. (CLIA).

xii <http://www.aapa-ports.org/Industry>

xiii <http://www.cruisemaineusa.com>

xiv <http://www.iwr.usace.army.mil/ndc/wcsc> and USACE: Maritime Transportation System: Trends and Outlook 2007-R-5. 13 March 2007.

xv "Update Report for Maine," US Army Corps of Engineers. New England Dist. Sept. 30, 2007.

xvi Maine Better Transportation Association Maine Trails article "MaineDOT awards SHIPS grants" April/May 2008

xvii Interview with John Henshaw, Maine Port Authority on October 17, 2008

xviii Maine Department of Transportation, Office of Freight Transportation.