

Panama Canal

The Panama Canal route is an all-water option for transpacific cargo destined to the Gulf, Southeast, and Northeast U.S. (See Exhibit 19.) The Panama Canal is used principally for Northeast Asia origins to East Coast Ports with China being the largest source of imports.

Exhibit 19: Panama Canal Routing

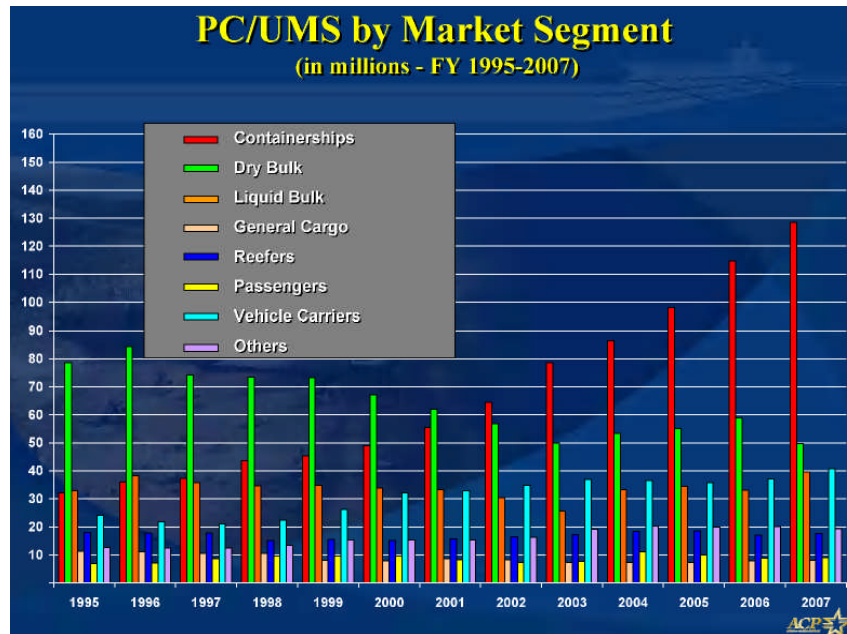


Overall, Panama Canal tonnage has increased significantly over the last 10 years while Canal transits have remained relatively flat. Average tonnage for commercial vessel transits has increased from 18,940 tons in 1995 to 23,591 tons in 2007 – an increase of nearly 25%.

Containership tonnage through the Canal has been increasing dramatically while tonnage for other vessel types has remained relatively flat or declined. (See Exhibit 20) Containership tonnage, now representing over 40% of total tonnage, has been the major driver of Canal transit growth. The Panama Canal handled 12.6 million TEU in 2007 compared to 11.15 million TEU in 2006 an increase of 13.4%.

The container vessels transiting the canal also average about 60% larger than other ships. The growth of container ships with their high tonnage capacity largely explains the increase in the average tonnage noted.

Exhibit 20: Panama Canal Tonnage by Market Segment



Source: Panama Canal Commission

A major issue of concern regarding the continued growth through the Panama Canal has been the uncertainty of its future capacity. A recent study by the Panama Canal Authority (ACP) estimates that the Canal's maximum sustainable capacity with existing locks would be reached in 2011. Due to the reduction in Canal tonnage in 2007 and 2008, this projection has been revised and the current estimate of reaching the capacity limit is 2012. The Canal expansion is not expected to add new capacity until 2015.

This does not mean that container growth will be stopped after 2012. ACP has taken steps to improve utilization. In October 2007, ACP reported that the number of transits by container ships increased by 10% in fiscal 2007 and the TEU capacity of these ships increased by 4.5%. The growing traffic led the authority to make infrastructure improvements that enabled it to add two new reservation slots at the beginning of 2008. Also, most of the maintenance and improvement projects have been completed so that there should be fewer delays in fiscal 2008 improving the reliability of Canal transits.

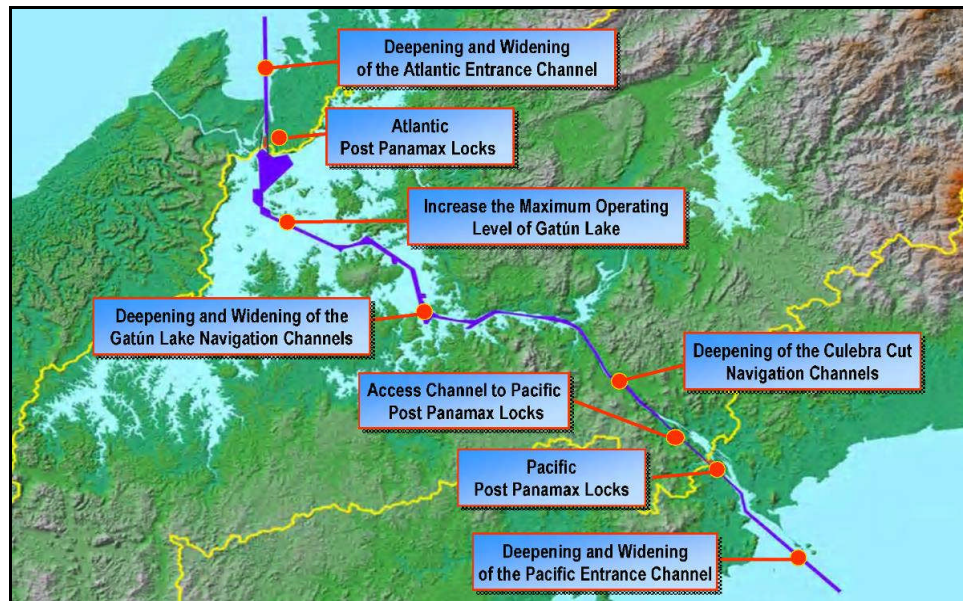
On average, container ships pay more than three times the toll of other commercial vessels. As capacity limits begin to be reached that container ships will likely take a larger allocation and displace other vessels moving through the Canal.

The Canal's current maximum vessel size is 4800 TEU while the 2007 average vessel size through the Canal is 3500 TEU. As ocean carriers build post-Panamax ships the cascading of Panamax vessels from other trade lanes may provide larger vessels for Panama Canal service. In addition, one carrier, "K" Line is reported to be building new vessels at 4800 TEU for use in Panama Canal service.

The ACP is moving forward with a major Canal expansion project that includes a third set of parallel locks and selective deepening and widening of existing channels. Exhibit 21 provides an

overview of the main elements of the project. Four international consortia are developing proposals for the project. The current plan for completion of the project is fourth quarter 2014. However, with a project of this magnitude, actual completion will likely take longer.

Exhibit 21: Panama Canal Expansion Project



Source: Panama Canal Authority

The project will increase the capacity of the Canal and allow it to handle much larger vessels. The new locks will take the maximum vessel capacity from 4,800 TEU to 12,600 TEU. The new locks will be able to handle container ships, which are 1200 feet in length with maximum draft of 50 feet.