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Mission

-programs and initiatives, ranging from ship-financing, ship operations, ship recycling, manpower, port development.

Vision

-cargo readiness and infrastructure priorities for MTS (Jones Act vessels)







Under the Administrator there are four (4) Offices run by an Associate Administrator with responsibilities as listed below by the respective Office. The four main pillars of MARAD are 1) Environment and Compliance, 2) Intermodal System Development, 3) National Security, and 4) Business & Workforce Development.

This brief will not only cover the roles and functions of MARAD, but will focus on this Agency's support of the MDA enterprise and its National Security function.



Here's were the Gateway Offices are located to strategically support the Nation's maritime industry.

Maritime Administration

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CARGO: U.S. Merchant Marine

Cargo Preference

- Cargo moving internationally by water funded by the Federal Government must go, to the extent required by the respective law, on a U.S.-flag vessel
- · For FY 2012 this program generated \$3.7 billion in revenue support for the U.S.-flag fleet
- Compliance and enforcement Greatest challenges

Jones Act

- · Cargo moving on U.S. domestic waters must move 100% on U.S.-flag/Jones Act qualified vessels
- Jones Act vessels must be U.S. built, U.S. Flagged and U.S. citizen crewed
- DHS Controls waivers. MARAD role is checking vessel availability

Title XI Loan Guarantee Program

- Promotes growth and modernization of the U.S. Merchant Marine and U.S. shipyards by providing additional
 opportunities for vessel construction
- Current Title XI Portfolio: \$1.8 billion supporting 39 Loan Guarantees representing 21 companies
- Current Subsidy Available: There is \$38 million available which equates to approximately \$420 million to support potential applications

6

U.S. Department of Transportation



Major Actions

- Merchant Ships Sales Act of 1946
- Cargo Preference Act of 1954
- Merchant Marine Act of 1970
- · End of new shipbuilding and operating subsidy contracts
- Food Security Act of 1985
- Oil Pollution Act of 1990
- Maritime Security Act of 1996 (MSP-47)
- Maritime Security Act of 2003 (MSP-60)
- Moving Ahead for Progress in the 21st Century Act (MAP-21)

Numerous legislative and policy initiatives over the decades have been implemented to support U.S.-flag vessel and shipbuilding services, both in the foreign trades and domestically. The success of these efforts has been mixed. The incredible surge in U.S. shipbuilding during WW2 stands out as one of the great achievements in world history, made possible in large part by the groundwork laid by Merchant Marine Act of 1936.

Following the war, however, the Merchant Ship Sales Act of 1946 authorized the sale of a large portion of the over 3,500 government-owned ships built during the war to domestic and foreign commercial buyers. This action enabled the rapid rebuilding of U.S. commercial fleet, but also the fleets of other nations. By 1951, the number of ships in the U.S.-flag privately-owned fleet had grown to its peak of 1,242 ships. Since then, the number of ships in the U.S. fleet has fallen steadily, although the carrying capacity (as measured in Gross Tons) continued to grow until 1988 as average vessel sizes in the world fleet increased.

It is important, however, to disaggregate the fleet into components by vessel type. In the case of dry cargo vessels, many of which are supported by the MSP and previously by ODS, the drop in numbers and capacity is less severe. Tankers, on the other hand, have experienced much greater reductions.



























The rankings included <u>in this report</u>are based on seven elements provided by ocean carriers representing more than 75 percent of global capacity. Those data points are: vessel name, terminal name, port city, port country, berth arrival, berth departure and number of moves (including lift-ons, lift-offs and re-stows). Berth arrival and departure refer to lines down and lines up — that is, the actual arrival and departure of the ship at berth. The calculation of moves per hour between these two times is referred to as unadjusted gross berth productivity. It's the same calculation for all 483 terminals and 771 ports the JOC evaluates, allowing for basic apples-to-apples comparison globally. The data enters a data warehouse in standardized format so that it's accessible for reports, rankings, analysis and other uses.

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	Country Name	2008	2009	2010	2011		
	China	137.375452	132.467477	143.565314	152.06		
	Hong Kong SAR, China	108.775353	104.473311	113.596848	115.27		
	Singapore	94.4679227	99.4744036	103.76191	105.02		
	Korea, Rep.	76.396375	86.6719234	82.6138605	92.02		
	Malaysia	77.600104	81.2143519	88.1434274	90.96		
	United States	82.4504287	82.4311602	83.795224	81.63		
	Japan	66.6344861	66.3295799	67.4332983	67.81		
	Vietnam	18.7323427	26.3870689	31.363308	49.71		
	Canada	34.277672	41.3418341	42.3852928	38.41		
	Thailand	36.4808471	36.7823708	43.7585561	36.7		
	Mexico	31.1650182	31.8918701	36.3478198	36.09		
	Australia	38.2068172	28.8029995	28.1086697	28.34		
	Indonesia	24.8467706	25.6764919	25.6013457	25.91		
	Chile	17.4154697	18.8399089	22.0520001	22.76		
	Peru	17.3822807	16.9584085	21.7852494	21.18		
	Russian Federation	15.313503	20.6372687	20.8754769	20.64		
	Philippines	30.2614261	15.8969067	15.1855167	18.56		
	New Zealand	20.4798114	10.5891071	18.3797164	18.5		
	Denver New Colores	6 02/09221	6 58064337	6 37750258	8 93		

The international score uses six key dimensions to benchmark countries' performance and also displays the derived overall LPI index. The scorecard allows comparisons with the world (with the option to display world's best performer) and with the region or income group (with the option to display the region's or income group's best performer) on the six indicators and the overall LPI index.

The logistics performance (LPI) is the weighted average of the country scores on the six key dimensions:

1) Efficiency of the clearance process (i.e., speed, simplicity and predictability of formalities) by border control agencies, including customs;

2) Quality of trade and transport related infrastructure (e.g., ports, railroads, roads, information technology);

3) Ease of arranging competitively priced shipments;

4) Competence and quality of logistics services (e.g., transport operators, customs brokers);

5) Ability to track and trace consignments;

6) Timeliness of shipments in reaching destination within the scheduled or expected delivery time.

The scorecards demonstrate comparative performance—the dimensions show on a scale (lowest score to highest score) from 1 to 5 relevant to the possible comparison groups—of all countries (world), region and income groups.

PPI

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Country	Year LE	Rate	LPI Score	<u>Customa</u>	trastructure internatio	onal shipments Logistics	competence Trackin	g & tracing Ter	eltress
Germany	2014	1	4.12	2	1	4	3	1	4
Netherlanda	2014	2	4.05	4	3	**	2	6	6
Beiglum	2014	3	4.04	11	ő	2	4	4	2
United Kingdom	2014	4	4.01	5	6	12	8	5	7
Singapore	2014	5	4.00	3	2	6	8	11	9
Sweden	2014	6	3.96	15	9	3	6	7	8
Norway	2014	7	3.96	(1)	4	30	1	31	5
Luiembourg	2014	8	395	10	15	1	14	22	1
United States	2014	9	3.92	16	5	26	7	2	14
		-	T	1	1	1	1	1	1

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Regarding GDP, this recently released study done by the World Economic Forum (in collaboration with the World Bank and Bain & Co.) found that trade facilitation (i.e., improving supply chain efficiency) is much more effective in trying to increase GDP than the traditional approach of reducing tariffs. In fact, the study finds that reducing tariffs only increases global GDP by \$ 0.4 trillion (0.7%) and increases exports by \$ 1.1 trillion (10.1%).

In comparison, if countries only focused on tackling two main supply chain barriers – that is (1) improving border administration (things like customs procedures, import/export documentation, and regulations), and (2) improving physical infrastructure, then global GDP would increase by 2.6 trillion (4.7%) and exports by US\$ 1.6 trillion (14.5%).

The bottom line: Focus on supply chains efficiencies to spur economic growth...that's where the money is.



Again, the 2 most important areas countries should tackle, the report says, are border administration and physical and IT infrastructure. These findings have been the centerpiece during discussions by members of the House Ways & Means Committee in Congress., and has been praised by the private sector through the National Association of Manufacturers, FedEx, and others.

	Maritime Administration	
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Single Win - A	dow (Department of Commerce) CE Streamlined (NEI NEXT)	
Advisory C	ommittee on Supply Chain Competitiveness	
White Hous	se Task Force on Ports	
Public Priv	rate Partnerships	
Port author	rities, technology incubators, NGOs, and manufacturers	
	25 U.S. Department of Transpo	ortation





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Just a note on climate change, and the impact of shipping on climate change

Now, we all know that there is overwhelming scientific consensus on global warming and climate change. The Intergovernmental Panel on Climate Change and other well respected organizations like NASA and the World Resource Institute have warned us of the implications of passing the 2 degree Centigrade tipping point, where we can expect to see a myriad of impacts to water distribution systems, human health, populations settlements, tourism, infrastructure, and security. In the context of trade and economic vitality in the Asia Pacific, this will undoubtedly pose challenges to supply chain systems, access to markets, commodity prices, etc. Of particular note are declining food stocks, especially fish food sourced from the Coral Triangle which supports billions of people in Indonesia, the Philippines, and other APEC nations. In addition, we also know that rising rising sea levels will impact the effectiveness of port infrastructure systems that serve as facilitators of global commerce.



90% of global trade is facilitated by ocean going vessels (approx. 90,000) entering/exiting a port.

<u>Asia</u>

By the 2050s, freshwater availability is projected to decrease.

Coastal areas, especially heavily populated mega-deltas will be at greatest risk Climate change is projected to compound the pressures on natural resources and the environment associated

with rapid urbanization, industrialization and economic development. Endemic morbidity and mortality due to

diarrhoeal disease associated with floods and droughts due to changes in the hydrological cycle.

Australia and New Zealand

By 2020, **significant loss of biodiversity** is projected to occur in some ecologically rich sites, including the Great Barrier Reef.

Latin America

There is a risk of significant **biodiversity loss** through species extinction in many areas of tropical Latin America. Productivity of some important crops is projected to decrease and **livestock productivity to decline**, with adverse consequences for food security. In temperate zones, soybean yields are projected to increase.

Overall, the number of people at risk of hunger is projected to increase (medium confidence). Changes in precipitation patterns and the disappearance of glaciers are projected to significantly affect water availability for human consumption, agriculture and energy generation.

Glo	obal shipp gro	ing is the six eenhouse ga	th largest produce s emissions	r of
	RANKING	COUNTRY	EMISSIONS (BILLION TONS CO ₂)	
	1	USA	6.05	
	2	China	5.01†	
	3	Russia	1.52	
	4	India	1.34	
	5	Japan	1.25	
	6 (Global Fleet	1.12*	
	7	Germany	0.8	

The **shipping industry is responsible for** a significant proportion of the global climate change problem. **More than three percent of global carbon dioxide emissions** can be attributed to ocean-going ships. This is an amount comparable to major carbonemitting countries—and the industry continues to grow rapidly. **In fact, according to a recent study, if global shipping were a country it would be the sixth largest producer of greenhouse gas emissions. Only the United States, China, Russia, India, and Japan emit more carbon dioxide than the world's shipping fleet.** Nevertheless, carbon dioxide emissions from ocean-going vessels are currently unregulated.

Like all modes of transportation that use fossil fuels, ships produce carbon dioxide emissions that significantly contribute to global climate change and ocean acidification. Besides carbon dioxide, ships also release a handful of other pollutants that also contribute to the problem. **To make matters worse, these ships also burn the dirtiest fuel on the market, a fuel that is so unrefined that it can be solid enough to be walked across at room temperature. In addition to exacerbating climate change, shipping emissions have been blamed for posing a significant threat to human health.** The particulate matter emissions alone from shipping can account for approximately 60,000 cardiopulmonary and lung cancer deaths each year.

In fact, this is what happened in the case of the Ports of Los Angeles and Long beach back in 2001, which we'll get to in a minute.





Marine ports in the United States are major hubs of economic activity and major sources of pollution. Enormous ships with engines running on the dirtiest fuel available, thousands of diesel truck visits per day, mile-long diesel locomotives hauling cargo and other polluting equipment, and activities at marine ports cause an array of environmental impacts that can seriously affect local communities and the environment. These impacts range from increased risk of illness, such as respiratory disease or cancer, to increases in regional smog, degradation of water quality, and the blight of local communities and public lands.

Most major ports in the United States are undergoing expansions to accommodate even greater cargo volumes. Next slide..

Excerpts from NRDC:

The growth of international trade has resulted in corresponding rapid growth in the amount of goods being shipped by sea. Despite the enormous growth within the marine shipping sector, most pollution prevention efforts at the local, state, and federal level have focused on other pollution sources, while the environmental impacts of ports have

Marine ports are now among the most poorly regulated sources of pollution in the United States. The result is that most U.S. ports are heavy polluters, releasing largely unchecked quantities of health-endangering air and water pollution, causing noise and light pollution that disrupts nearby communities, and harming marine habitats.

In March 2004, NRDC and CCA issued report cards for the 10 largest U.S. ports on their efforts to control pollution -- or lack of efforts to control pollution. In the short time since the grades were issued, steps to reduce port pollution have already been made. For example, the first container ship in the world plugged into shoreside power at the Port of Los Angeles. This report discusses solutions to port pollution problems and provides additional information on the health and environmental impacts of port operations; an overview of policies governing U.S. marine ports; and detailed analysis and technical recommendations to port operators, regulatory agencies, and community-based environmental and health advocates.

<u>Air Pollution and Health Impacts from Port Operations:</u> The diesel engines at ports, which power ships, trucks, trains, and cargo-handling equipment, create vast amounts of air pollution that affect the health of workers and people living in nearby communities and contribute significantly to regional air pollution. More than 30 human epidemiological studies have found that diesel exhaust increases cancer risks, and a 2000 California study found that diesel exhaust is responsible for 70 percent of the cancer risk from air pollution.⁴ More recent studies have linked diesel exhaust with asthma.⁴ Major air pollutants from diesel engines at ports that can affect human health include particulate matter (PM), volatile organic compounds (VOCs), nitrogen oxides (NOx), and sulfur oxides (SOX).

The health effects of pollution from ports may include asthma, other respiratory diseases, cardiovascular disease, lung cancer, and premature death. In children, these pollutants have been linked with asthma and bronchitis, and high levels of the pollutants have been associated with increases in school absenteeism and emergency room visits. In fact, numerous studies have shown that children living near busy diesel trucking routes are more likely to suffer from decreased lung function, wheezing, bronchitis, and emergency room visits. and allergies.

Many major ports operate virtually next door to residential neighborhoods, schools, and playgrounds. Due to close proximity to ports, nearby communities face extraordinarily high health risks from associated air pollution. Many of these areas are low income communities of color, a fact that raises environmental justice concerns.

Although cars, power plants, and refineries are all large and well-known sources of pollution, Figure E-1 demonstrates that the air pollution from ports rivals or exceeds these sources. In the Los Angeles area, oceangoing ships, harbor tugs, and commercial boats such as passenger ferries emit many times more smog-forming pollutaris than all power plants in the Southern California region combined. And the latest growth forecasts predicting trade to approximately triple by 2025 in the Los Angeles region mean that smog-forming emissions and diesel particulate pollution could severely increase in an area already burdened by the worst air quality in the nation. The larger contribution of port sources to air pollution can be attributed to the fact that pollution form cars, power plants, and refineries is somewhat controlled, whereas port pollution has continued to grow with almost no regulatory control.

Figure E-1 uses the Port of Los Angeles and the Port of New York and New Jersey as examples because they are the largest ports on the West Coast and East Coast, respectively. The Port of Virginia is comparable in size to other large ports such as Savannah, Houston, and Seattle. Figure E-1 also highlights emissions of NOx and PM, because these pollutants are associated with very severe health impacts. Despite very conservative assumptions used to calculate port emissions, ports out-pollute some of the the terms of terms o the largest sources of harmful emissions, raising the question, Should ports be regulated like other large sources of pollution?



For example, in 2001, the POLA buried a tiny public notice and requested public comment on plans to expand the POLA to accommodate a large shipping firm. Concerned over the impacts to the local community, a coalition of approximately 40,000 worked with the NRDC to block the expansion effort.

In the years leading up to 2001, the NRDC consistently rated the Ports of LA and Long Beach as the U.S.' dirtiest ports. At that time, one-third of the pollution in Los Angeles county could be traced back to the port. That started to change when the port decided to embark on a terminal expansion project in partnership with a foreign carrier. Concerned about the threat of added pollution, noise, and congestion, outraged homeowners and other residents formed a 40,000 person coalition to oppose the expansion and won by proving that the Port and the Army Corps of Engineers failed to properly evaluate the environmental impacts of air pollution and increased traffic on nearby communities, in violation of the California Environmental Quality Act.

In 2002, the local community won an injunction ordering the port to halt construction of the complex until they had prepared an environmental impact statement. Then, in 2003, the community negotiate a settlement that established a \$50 million fund to mitigate environmental impacts of port operation and expansion. The settlement also put into place a number of pollution prevention measures never before implemented at any shipping terminal. At that time, an attorney from the NRDC said, "This terminal will be the first to use a significant amount of alternative energy. All of its yard tractors will use alternative fuel and at least 70 percent of the ships docking there will plug into electric power to run their systems while in port instead of using diesel engines. This will reduce pollution by one ton a day per ship."

The Challenge: In the working-class Latino neighborhoods of San Pedro and Wilmington, California, residents are continually inundated with noise, traffic and pollution from the Port of Los Angeles. Some live just 500 feet from the port, which with the neighboring Port of Long Beach produces one quarter of the toxic pollution in the Los Angeles area annually. In early 2001, community members discovered a brief item buried in a 10-page public meeting agenda indicating that the Port of Los Angeles intended to consider plans for a new shipping berth. When they investigated further, residents uncovered what was really on the table: a huge new terminal for China Shipping, right in their neighborhood.

Working Together: The community coalition contacted NRDC for help. One week later, NRDC staff attended a Los Angeles City Council meeting with the hope of persuading the council to reject approval of the port expansion. But, dismissing concerns over the additional pollution burden that the project would impose on thousands of residents in adjacent communities, the City Council approved the expansion. NRDC and San Pedro and Peninsula Homeowners United (representing more than 40,000 community residents) responded by filing lawsuits in state and federal court in an attempt to halt construction.

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Today the POLA/POLB and others like Ports of San Diego, New York, and Miami, are some of the greenest ports in the world. They continue to test new technologies and employ best management practices like LEED, OffPeak Trucking, etc.

A goal of the Port of Long Beach is to be a Zero Emissions Port. They and others currently employ the following technologies:

1 & 2: Components to new scrubber system that captures sulphur emissions

- 3: Zero-emissions Electric Drayage Trucks
- 4. Hydrogen Powered Road Trucks
- 5. Vehicle Control Systems installed in drayage trucks
- 6. Stationary Lithium Ion Battery Stations
- 7. Diesel Particulate Filter Systems
- 8. Smart Oil Bypass Filtration Systems
- 9. Hybrid Electric Automated Crane Systems
- 10. Inert Gas System to treat ballast water
- 11. World's first LNG tugboat ("Prius of the Seas")

And more, like hydrogen fuel cell trucks/forktrucks, and Overhead Catenary Trucks.






Example: Reverse Trade Mission (RTM)

- USTDA-funded partnership with the U.S. Commercial Service, U.S Maritime Administration and China MOT
- Technical tours of three US ports Miami, Houston, and ports in Southern California
- Demonstrations and negotiations with private sector manufacturers of green port technologies





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Add decline in US fleet Add LPI (use website), JOC Add Brazil Working Group Comment on China Working Group Hookup computer and use





Why do we require Government impelled cargo to be moved on U.S.-flagged ships?

The United States needs a revenue base that will retain and encourage a privately owned and operated U.S.-flag merchant marine because the fleet provides:

- Essential sealift capability in wartime or other national emergencies.
- A cadre of skilled seafarers available in time of national emergencies.
- Help to protect United States ocean commerce from total foreign domination and control.

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What percent of cargo must go aboard U.S.-flag vessels?

•	Cabotage cargo	- (Jones Act)	- 100%
	Military cargo	- (1904 Act)	- 100%
•	Export – Import Bank	- (Pub. Res. 17)	- 100%
•	Agricultural Cargo	- (1954 Act)	- 50%
•	Civilian Agency Cargo	- (1954 Act)	- 50%





Major Actions

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Following the war, however, the Merchant Ship Sales Act of 1946 authorized the sale of a large portion of the over 3,500 government-owned ships built during the war to domestic and foreign commercial buyers. This action enabled the rapid rebuilding of U.S. commercial fleet, but also the fleets of other nations. By 1951, the number of ships in the U.S.-flag privately-owned fleet had grown to its peak of 1,242 ships. Since then, the number of ships in the U.S. fleet has fallen steadily, although the carrying capacity (as measured in Gross Tons) continued to grow until 1988 as average vessel sizes in the world fleet increased.

It is important, however, to disaggregate the fleet into components by vessel type. In the case of dry cargo vessels, many of which are supported by the MSP and previously by ODS, the drop in numbers and capacity is less severe. Tankers, on the other hand, have experienced much greater reductions.



The U.S.-flag dry cargo fleet includes containerships, RO/RO, break-bulk, and a few dry bulk vessels. The size of this fleet (with the exception of dry bulk vessels) has been very responsive to the demands of moving military cargoes. The fleet was maintained and even grew while there was military cargo to be moved. The number of privately-owned U.S.-flag vessels in the dry cargo fleet held up reasonably well after the Korean War and into the Vietnam War, before the number of vessels began to drop precipitously. Much of this decrease in vessel numbers is attributable to the advent of containerization in the 1950s, and which became widely deployed during the latter half of the 1960s. Unlike the earlier break-bulk vessels, which are constrained in size due to the long times required to load and unload their cargoes, containerships operate more efficiently at large sizes, leading to a drop in the number of vessels needed to move the same amount of cargo. This tradeoff is reflected in the relatively steady capacity of the dry cargo as vessel numbers continued to drop from 1970s to the first half of the 1990s. The phasing out of the ODS program also contributed to the decline.

The establishment of the 47 ship MSP in 1996, and its reauthorization at 60 vessels in 2003, helped stabilize the number of dry cargo vessels, even as capacity of these vessels increased, particularly with the buildup of the wars in Iraq and Afghanistan. Subsequently, with the winding down of hostilities in Iraq and Afghanistan after 2010, and (not shown in the figure) a fall in food aid budgets, vessel numbers and capacity began to decline again. The MAP-21 repeal of the incremental 25 percent of food aid formerly carried by U.S. vessels appears also to have contributed to a sharpening of the decline in both vessel numbers and capacity after 2012. As of today, the number of privately-owned dry cargo vessels is lower than it has been at any time since the end of the World War II, although capacity still remains within the band that has prevailed since the Vietnam War.

The diminishment of vessel numbers is of real concern, as each vessel employs qualified mariners. These mariners are essential to crew our reserve sealift assets during time of mobilization.



The U.S.-flag tanker segment is primarily driven by the demand to move domestic petroleum and petroleum products. Only about 5 U.S.-flag tankers participate in the foreign trades. As with dry cargo ships, surplus government-owned ships were sold after World War II under the Merchant Ship Sales Act of 1946 (Malcolm McLean developed the modern concept of containerization on a modified World War II T2 tanker operating in the Jones Act trade in 1956). However, due to remarkable economies of size associated with the handling and transportation of liquid cargoes, tanker sizes grew rapidly after the war as WW2 era T2 tankers were retired. This led to falling vessel numbers and growth of overall capacity (measured in Gross Tons) prior to 1970.

The Merchant Marine Act of 1970 allowed construction and operating subsidies for tankers in foreign trade and the deferral of taxes on U.S.-flag earnings deposited into the CCF. This was successful initially, with 55 tankers built with CDS funds between 1971 and 1975. Moreover, due to the closing of the Suez Canal, the 1973 oil crisis, and subsequent higher oil prices, market forces created an incentive to develop domestic petroleum sources, primarily the Alaska North Slope (ANS). Production of ANS crude oil began in 1977 and rapidly increased to its peak production in 1988, leading to more vessels and much greater capacity. Today, however, ANS production is only about 25% of its 1988 peak.

Coincident with the decline in ANS production after 1988, the Exxon Valdez oil spill led directly to passage the Oil Pollution Act of 1990 (OPA90), which phased out single hull tankers beginning with the largest ships. With the decline in oil production, there was no need to replace these ships on a one-to-one basis. As a result very few large tankers have been built in the United States until recently. (Note: this analysis does not reflect the rising use of articulated tug-barges in recent years, which have replaced some tanker of the phased-out tanker capacity.)

The recent development of new United States oil and gas production has recently led to sharply increased demand for domestic tankers. This recent recovery has generated significant work for U.S. shipyards in the construction of large, self-propelled tankers as well as offshore service vessels and other tug-and-barge units. (note: MARAD does not have a consistent series of data on new building at U.S. shipyards but will develop such a series.)



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	Government		Commercial
	National Defense Reserve Fleet (NDRF) – DOT Authorized Program for Ready Reserve Force (R 46 - Former Commercial Ships in the RRF 5/10-day "on-call" readiness for activation/assign RRF -~ one-half of the government-owned surge Commercial U.S. Ship Managers – contracted DOD funding ~\$300M Annually • 56.5M/ship=totalprogram cost • 56.5M/ship=totalprogram cost • 56.5M/ship=totalprogram cost • Sequester Rescission Avoided in FY13 Major Operations Success: Desert Shield/Storm Freedom – Enduring Freedom Major Relief Operation Success: Hurricane/Earth Recovery - Katrina Rita, Haiti and Sandy	RF) ment s sealaft ; Iraqi nquake	Maritime Security Program (MSP) fleet – commercially owned sealift ships operating in international trade 60 MSP ships committed through FY 2025 Employs 2,700 U.S. mariners Supports approximately 5,000 shore side jobs MSP fleet – 95% of cargo transported in support of troops in Iraq and Afghanistan Retainer payments- \$3.1 M per ship/year authorized through FY 2018 Funding shortages for FY 2013 and concern for FY 2014 due to sequestration Assured Access for DOD through Emergency
	Disaster Refer Services SAFEPORT/SAFESTOR Pert Recovery Emergency /Relief Worker support Commercial Charters		Preparedness Program (EPP) enrollment commitments O EPPs are Voluntary Internodal Sealific Agreement (VISA) and Voluntary Tanker Agreement (VTA) O MSP fleet capacity represents 80% of U.Sflag VISA commitment
•	Other DOD Support O NDRF Anchorages O Missile Defense Agency		
	Other Federal Support		



Maritime Security Program

- The MSP serves to maintain an active, privately-owned, U.S.-flag and U.S.-crewed liner fleet in international trade that is available to support the global national security transportation needs of the Department of Defense
- Retainer payment is provided by the Federal Government for commercial ships operating in international trade and available to support the Department of Defense in war or national emergency
- Requires Emergency Preparedness Program commitment Voluntary Intermodal Sealift Agreement (VISA) and Voluntary Tanker Agreement (VTA) programs

The image part with relationship ID rtd16 was not found in the file. **MSP Facts**

- The MSP supports over 2,700 skilled American mariners who are available to crew both the MSP fleet and the Government-owned strategic sealift fleet in peace and war.
- The MSP fleet commits 100% of their capacity to VISA
 - MSP fleet commits 80% of all U.S.-flag capacity to VISA to meet DOD requirements.
 - MSP commits 127,000 twenty foot equivalent (TEU) container capacity
 - 3.0 million square feet of Roll-on/Roll-off (RO/RO) capacity
- The MSP encourages modernization of the U.S.-flag fleet
 - Since October 1, 2005, 50 MSP ships have been replaced with newer and modern ships.

The image part with	n relationship ID rId16 was not found in the	file.				
	47 Ships	MSP	Fleet Capacity	/ in 1997		
VES	SEL TYPE		TOTAL TEU CAPACITY		TO C	TAL SQ. FT. APACITY
39 5	Containerships LASH		110,897 6,230			
3	RO/RO's					304,965
	TOTAL TEU's		117,127	TOTAL SQ	. FT.	304,965
	60 Ships	MSP	Fleet Capacity	in 2014		
<u>VE</u> 30	SSEL TYPE Containerships		TOTAL TEU <u>CAPACITY</u> 112,954		то <u>С</u>	TAL SQ. FT. APACITY
4	Geared Containers	s ks	13,841 648			171,579
17	RO/RO's				2	,883,313
2	Tankers	5	51,662 DWT each	1		
	TOTAL TEU'S		127,443	TOTAL SQ	. FT.	3,054,892
Changes s	ince 1997 have increased	RO/RO	square footage by 2,	,749,927 & incre	eased TE	EU's by 10,316

VE	SSEL TYPE	TOTAL TEU	TOTAL SQ. FT.	TOTAL MTON
- 4	Containamhin	CAPACITY 127.100		CAPACITY
94	Containersnip Containersnip	137,109	1,940	
8	Geared Containership	13,841	20.265	
4	Multipurpose Containershi	p 2 004	20,305	
5	Container-RO/RO	2,004	158,722	
5	Heavylift Breakbulk	324	1/5,234	15 ((0)
2 Heavylifts		(00		17,000
2 Breakbulk		698	1. 000	
3	Bulk Carrier	338	45,000	
2	IIB		67,560	
23	RO/RO		3,370,692	
2	RO-RO/LO-LO	788	118,544	
116	SHIPS	155,102 TEU's	3,958,063 SQ. FT.	17,660 MTONS
1	136Barges109Tugs5OSV's4Push Boats	1,970 TEU's	1,664,460 SQ. FT.	

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Voluntary Intermodal Sealift Agreement Participants as of February 2014

A Way To Move, Inc. American International Shipping, LLC* American Marine Corporation American President Lines, Ltd. American Roll-On Roll-Off Carrier, LLC APL Marine Services, Ltd.* Argent Marine Operations, Inc.* Beyel Brothers Inc. Central Gulf Lines, Inc.* Columbia Coastal Transport, LLC CRC Marine Services, Inc. Crimson Shipping Co., Inc. Crowley Puerto Rico Services, Inc. Crowley Marine Services, Inc. Dann Marine Towing, LC Farrell Lines Incorporated* Fidelio Limited Partnership* Foss International, Inc. Foss Maritime Company Hapag-Lloyd USA, LLC* Horizon Lines, LLC LA Carriers, LLC Laborde Marine, L.L.C. Liberty Global Logistics, LLC* Liberty Shipping Group, LLC Lockwood Brothers, Inc. Lynden Incorporated Maersk Line, Limited* Marine Transport Management

Matson Navigation Company, Inc. McAllister Towing and Transportation Co., Inc. McCulley Marine Services, Inc. National Shipping of America, LLC Northcliffe Ocean Shipping & Trading Company Northland Services, Inc. Pasha Hawaii Transport Lines LLC Patriot Shipping, L.L.C. Resolve Towing & Salvage, Inc. Samson Tug & Barge Company, Inc. Schuyler Line Navigation Company, LLC Sea Star Line, LLC SeaTac Marine Services, LLC Seabridge, Inc. Sealift Inc. Smith Maritime, Inc. Stevens Towing Co., Inc. Stevens Transportation, LLC Superior Maritime Services, Inc. Tactical Shipping, LLC Teras BBC Ocean Navigation Enterprises Houston, LLC Totem Ocean Trailer Express Trailer Bridge, Inc. TransAtlantic Lines, LLC Western Towboat Company Waterman Steamship Corporation* Young Brothers Limited 56 VISA Participants

* Denotes Maritime Security Program operators





Maritime Administration The image part with relationship ID rId3 was not found in the file. Education United States Merchant Marine Academy - Mission; To educate and graduate licensed merchant mariners and leaders of exemplary character who will serve America's marine transportation and defense needs in peace and war. · Funding for payroll, operations and capital improvement for FY 13 is \$81.7M. · Annually, graduates about 200 students who all receive a bachelor's degree, a merchant marine officer's license, and an officer's commission on active duty or in the reserves of the armed forces. • In return for fully funded four year education, graduates incur a 5 year service obligation to either sail as a US merchant marine officer and concurrently serve in a reserve unit of the armed forces, or to serve as an active duty military officer. · One of the five federal service academies. Six State Maritime Academies (ME, MA, NY, MI, TX, CA) MARAD provides; · Maintenance and Repair of DOT owned Training vessels critical to obtain minimum sea time for USCG credentials and international training endorsements (FY 13 \$10.5M) · Direct funding for maintenance and support, and fuel for the training vessels (FY 13 \$3.4M, FY 14 request \$3.6M) · Student Incentive Payment Program-enables enrollment of approximately 300 students to sail and serve in a reserve unit of the armed forces; graduates incur a service obligation (FY 13 \$2.3M, FY 14 requested \$2.4M) · Annually, the six State Maritime Academies (SMA) produce approximately 650 merchant marine officers **Training Ships** · MARAD maintains 7 training vessels for the maritime academies to meet nearly 125,000 cadet sea days of annual training. SMA fleet averages 35 years; recapitalization needs exist. Funding in FY13 \$11.2M, FY14 request \$11.1M. KINGS POINTER to be funded by USMMA in FY14 following training ship conversion from NASA-vessel. 59

U.S. Department of Transportation











- Primary purpose of our study is to evaluate the anticipated economic and infrastructure impacts of the Panama Canal expansion,
 - and to gain a reasonable understanding of the Nation's entire Transportation System.
- As you can see, we have three key objectives for this study;
 - 1) To provide a clear, sensible and objective understanding of the potential impacts on the entire transportation system.
 - 2) To identify a range of needs for private and public investment, and
 - 3) To identify port and infrastructure policy opportunities for Federal consideration.

We believe that achievement of these objectives could a have potentially significant bearing on the entire U.S. Transportation System.



The Study Began in April 2011 and Expected to be Completed Later This Year.

Conducted in 4 Phases.

- Phase I Objectives:
 - Evaluate Developments in Trade National and Global Economies To Define Current Baseline Market Conditions and Trade Patterns.
 - Significant Outreach Component Listening Sessions w/Industry on US East/West Coasts.
 - Independent Industry-Led Peer Review of Study's Methodology and Draft Phase I Report.
 - Phase I Analysis Concluded Late 2013 Phase I Report Released November 25, 2013.
- Phases II and III:
 - More Robust Outreach Effort Designed to Investigate US Port and Shipper Expectations And Identify Plans for Post-Panamax Logistics. Efforts Included:
 - Interviews w/U.S. ports Information Used to Validate Data Collected under Phase I.
 - Online Survey of 2500 US shippers To Determine Current Practices and Anticipated Post-Panamax Plans.
 - Peer Review Teams DOT Modes, USACE, USCG, TRB Involved In All Phases of Study.
 - Phase IV: Currently Underway By MARAD and Contract Technical Team
 - Involves:
 - Analysis of Outputs from Quantitative Modeling Developed in Cooperation with Federal Highway Administration's Freight Analysis Framework
 - Incorporation of Phases II/III Analysis and Conclusions
 - Development of Draft Policy and Investment Recommendations
 - Final Report Production Release Expected Late 2014 (Upon All Internal/External Federal Government Approvals).



- Description: Illustration of the Increased Capacity Upon Completion of Canal
 - Increase From 5,000 TEU Vessels to 13,000 TEUs Vessel Capacity To Be Offered by the Expanded Panama Canal.
 - Although the Cited Metric Relates to Container Ship Capacity (13000 TEU Post-Panamax) -Analysis To Date Shows Greater Opportunities For Bulk Carriers Can To Advantage of Substantially Deeper Draft of Expanded Canal.
 - Analysis indicates that U.S. bulk carriers traversing the canal are often loaded below their maximum due to depth constraints of the existing locks. Opportunities exist for more economical shipment of bulk goods if existing ships can be loaded more efficiently.
 - Currently, Panama Canal Can Only Accommodate Less Than 10% of Global LNG Fleet.
 - It is expected that Recent Developments Increased U.S. Oil and Gas Production May Alter Global Energy Trade Patterns And Allow Much Larger Percentage of Global LNG Carrier Fleet (More Than 80%). This Expanded Capacity Is Especially Important For Energy Trade Development Between U.S. Gulf Coast and Asian markets.



Now that the Phase I Report is Complete, We Can Offer Preliminary Findings:

- Most Noteworthy Findings Suggests "Containerized Traffic" Most Likely Market Segment Affected By Expansion.
 - Contributing Factor Volume of Containerized Goods and the Trade between Asia and US Gulf and East Coast Ports Will Generate the Greatest Economies of Scale Thru Use of Larger, More Efficient Container Vessels In Trade Route.
- **Costs Impacts**: Expect Delivered Costs (per container) to US Gulf and East Coast Ports of Entry To Decrease (vs. West Coast entry and subsequent rail transit across the continent). However, Reduced Costs Will Come w/Increased Water Transit Time.
- Transit Time Impact: Door to Door Transit Times Will Depend on routing Choices by Shippers The Next Slide Will Address In More Detail
- Infrastructure Investments: We Have Begun to See Investments Undertaken By Eastern US Railroads In Anticipation of the Expansion – We Expect Cost Reductions As A Result
 - However Specifics Remain Unknown Will Depend On Factors:
 - Panama Canal Tolls;
 - Carrier rates;
 - US railroad rates for transcontinental service;
 - Shipper preferences (time vs. money); and
 - Transshipment of containers in Panama or Caribbean ports to smaller vessels serving the US.
- Gradual Impact: Overall, We Anticipate Any Impacts to U.S. Ports and Inland Infrastructure to Occur Gradually – Not Overnight After Expansion Project Is Completed.



- Market Regions (Shown Orange, Blue & White) Likely Affected by Expansion Expect Costs Reductions On Containerized Goods.
 - Blue Region: The East Coast Inland region (blue) currently receives a mix of West Coast and East Coast traffic, and is the area most likely to be affected by the Canal expansion, with greater reliance on East Coast ports. Additionally, the Inland Coastal region is the primary region in which lower costs that will be made possible by the expanded Panama Canal may result in some shifting towards Panama Canal all-water services.
 - White Region: Extension of the white area to Houston and points further to gain a larger share of containerized goods after the expansion of the Panama Canal.
 - Agricultural and energy <u>exports</u> from Gulf ports, especially through the Port of New Orleans, may affect portions of the U.S. that extend well inland to the Upper Mississippi River via the inland waterway system.
 - **Grey:** Western, Mountain and West Central states (Grey) US West Coast port of entry and rail conveyance are expected to maintain a price (and time) advantage.
- Note impacted regions presented in this map are those regions benefitting most from the reduced cost of transportation at a greater overall transit time. That is to say, time sensitive goods and high value products (i.e., consumer electronics) are not expected to align as closely to this map – as much as low cost, high volume containerized goods (i.e., clothing).
- Uncertainty regarding canal tolls, carrier rates, and even US railroad rates have the capacity to dramatically alter the regions of impact.







The Way Ahead

Our Commitment to the American People:

• Support growing importance of international trade across the intermodal system for the door-to-door network

• Enhance America's leadership and prominence in international maritime community

• Promote U.S. shipbuilding and repair

• Stimulate competition, innovation and efficiency

• Help overcome impediments to domestic maritime system growth while addressing regulatory compliance issues

• Promote merchant mariner growth to support economic and national security needs

• Meet U.S. national security transportation needs around the world

MARAD commitment....

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