Rhode Island's Ports: Opportunities for Growth

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RI Bays, Rivers, and Watersheds Coordination Team

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The following approach was used in conducting the assessment

- Review maritime markets in which the Rhode Island ports of Providence, Davisville, and Newport compete:
  - **Break Bulk**
  - **Bulk**
  - **Containers**
  - **Cruise**
- Identify potential growth in cargoes currently handled at the Ports of Providence and Davisville
- Identify potential new markets
- Assess the competitive position of Rhode Island Ports in New England and East Coast Markets
- Assess RI Port Facilities needs relative to the potential growth opportunities
- Identify potential economic benefits of Rhode Island Ports growth opportunities

SUMMARY OF FINDINGS

The New England Ports have a small share of the East Coast break bulk and dry bulk markets

- East Coast dry bulk imports are driven by coal and salt/stone
- Coal is the key dry bulk import at Bridgeport, while salt is the major import at Boston and Providence
- Coal is the major export from the East Coast ports
- Scrap is the leading dry bulk export from New England ports, and Providence

Several break bulk commodities have grown over time and represent potential opportunities for Rhode Island ports

- Overall, break bulk imports have not shown growth over the past decade
- However, specific break bulk cargoes that have shown growth over time are :
  - Break bulk fruit imports
  - Auto imports and exports
    - Davisville handles imports and exports of new vehicles
    - ProvPort handles exported Previously owned vehicles
  - Pulp imports
  - Scrap paper exports
- Autos are the major break bulk imports and exports through the Providence Customs District
- Paper scrap exports are a key break bulk export from Boston
- Pulp is the major break bulk export from Eastport
- Steel is the major import via New Haven

Growth opportunities for RI's Ports

- Base market opportunities - Automobile market shows potential growth market:
  - Davisville currently pursuing new auto export market as well as imports and domestic distribution
  - Exemption from Harbor Maintenance Tax is a key competitive advantage for RI's Ports
  - Water depth could become an issue, and if the harbor deepening were to be undertaken by the federal government, then the competitive advantage of Davisville as an auto port would be eroded due to the imposition of the Harbor Maintenance Tax.
  - Previously Owned Vehicles – (POV) have been a growing export market from ProvPort

Growth opportunities for RI's Ports

- New market opportunities - The break bulk fruit and perishables import market:
  - Stable growth market
  - Currently concentrated in the Delaware River area
  - Providence ports located in proximity to key perishable goods distribution centers in New England
  - Break bulk banana business has moved from Bridgeport to the Delaware River, however, the return of break bulk operations to New England is underscored by the new break bulk fruit service between Mexico and New Bedford

Growth opportunities for RI's Ports

- New Market Opportunities – Container Feeder Service
  - There has been an increase in all-water service for Asian container operations since 2002, due to several factors:
    - West Coast Port Shutdown in 2002
    - Tuck and rail capacity issues in 2002-2004 at West Coast ports
    - Infrastructure and environmental fees at West Coast ports
    - Expansion of the Panama Canal in 2014
    - Increased usage of the Suez Canal as production centers increase in Vietnam and India, and further commitment of $210 billion in infrastructure development in India
    - The growth in Suez Canal usage will favor North Atlantic ports of container growth
  - Imported Asian container service has increased at East Cost ports, including New York, Boston, and Baltimore, and potentially at Halifax in the future
  - Previously, barge feeder services moved containerized cargo between Halifax, Boston and New York, but was discontinued
  - With aggressive marketing, there may be the potential to develop a barge feeder operation between New York and Providence, which would provide an alternative to the trucking of containerized cargo between the Port of New York/New Jersey and Providence ports.
    - This is compatible with the development of the Marine Highway, moving truck traffic from congested highways

Growth opportunities for RI's Ports

- New Market Opportunities – Offshore wind energy
  - Development of support base for offshore wind energy operations:
    - Potential development of a land side operations
    - Deepwater is looking to develop a landside operations base in Davisville to support offshore wind turbine farms
  - The wind power market is uncertain, and investment in wind energy support and facilities should be placed on the private sector, not the State
    - Price of offshore generated electricity is projected to be significantly higher than alternative price onshore
      - Deepwater estimates the wholesale price of its electricity to be in the mid-teens
      - Wholesale prices from conventional electricity generation are significantly less
    - Offshore projects appear to be in jeopardy until commitments can be made as to purchases of electricity
    - Furthermore, delivery infrastructure (grids) will be required, and investment in this infrastructure is uncertain
    - Rhode Island Ports should only invest in facilities after commitments have been established. Furthermore, private sector investment and partnership should be a pre-requisite for any terminal development in support of the wind energy programs

Potential state investments to support future terminal operations should they develop

- RO/RO Ramp – $1.75 million
  - To support potential container feeder operations
    - If RO/RO feeder operation were to develop
    - Traditional RO/RO vessels have ramps incorporated in their design and do not require use of a ramp
- Chill Facility – $2 million
  - To support potential fresh fruit import market
    - Public and/or private sector investment
    - Estimated $100 per sq ft investment for facility
- Reefer Plugs – $5,000 per unit
  - To support chill facility operations – optional
  - To support container feeder operations if refrigerated containers are handled
- Cruise Ship Dock – $12.5 million
  - "T" dock for passenger embarking/debarking
  - Two mooring dolphins
  - Assumes location is in relative proximity to deep water to accommodate ships (i.e. off of Goat Island)

Leading Port Growth Opportunities

- Base Cargo:
  - Auto units could grow from 200,000 (import and domestic) units to 300,000 units (good possibility)
- Potential Opportunities:
  - Develop of a break bulk fruit operation (will require aggressive marketing)
  - Possible container barge feeder operations – 24,000 TEUs (will require significant reduction in barge rate/stevedoring charges and a RO/RO operation)
  - Wind energy 130 units – uncertainty, and should include significant infrastructure investment by private sector
    - State should not invest until private sector commitment.

Potential economic benefits of identified market opportunities: Model Projections

Martin Associates' ProvPort Economic Impact Model was adjusted to reflect the potential annual economic impact of the identified opportunities. This study was conducted for ProvPort in 2006, and included the development of local models to estimate induced and indirect economic impacts of the direct operations at marine terminals in Providence. Specific terminal models were developed for ProvPort operations. In addition, Martin Associates has developed more than 300 economic impact studies for most ports in the United States and we were able to use direct impact models to estimate the types of impacts that could be anticipated from the growth in new automobile exports and imports, the development of fruit import operation similar to the size of operations of a terminal in the Delaware River, and the development of a barge feeder operation. Our wind energy models for Gulf Coast and Pacific Northwest ports were used to estimate the impacts of the potential wind energy imports, but not manufacturing/assembly.

Potential Economic Benefits of Identified Growth Opportunities (Annual)

	100,000 Potential Autos	130 Units Wind Energy	24,000 TEU Barge Feeder	Break Bulk Fruit
JOBS				
Direct	183	154	52	58
Induced	187	152	57	59
Indirect	65	28	6	5
Total	435	334	115	122
PERSONAL INCOME (millions)				
Direct	$8.4	$6.8	$2.6	$2.7
Respending/Local Consumption	$18.9	$15.2	$5.8	$5.9
Indirect	$2.7	$1.2	$0.2	$0.2
Total	$30.0	$23.2	$8.6	$8.8
BUSINeSS REVENUE (millons)	$79.1	$34.2	$7.2	$6.5
LOCAL PURCHASES (millions)	$6.3	$2.7	$0.6	$0.5
STATE AND LOCAL TAXES (millions)	$3.5	$2.6	$1.0	$1.0

Source: Martin Associates

OVERVIEW OF CARGO MARKET

National and regional cargo markets were reviewed to assess the position of Rhode Island ports as basis for identifying potential opportunities for future RI Port development and their economic benefits

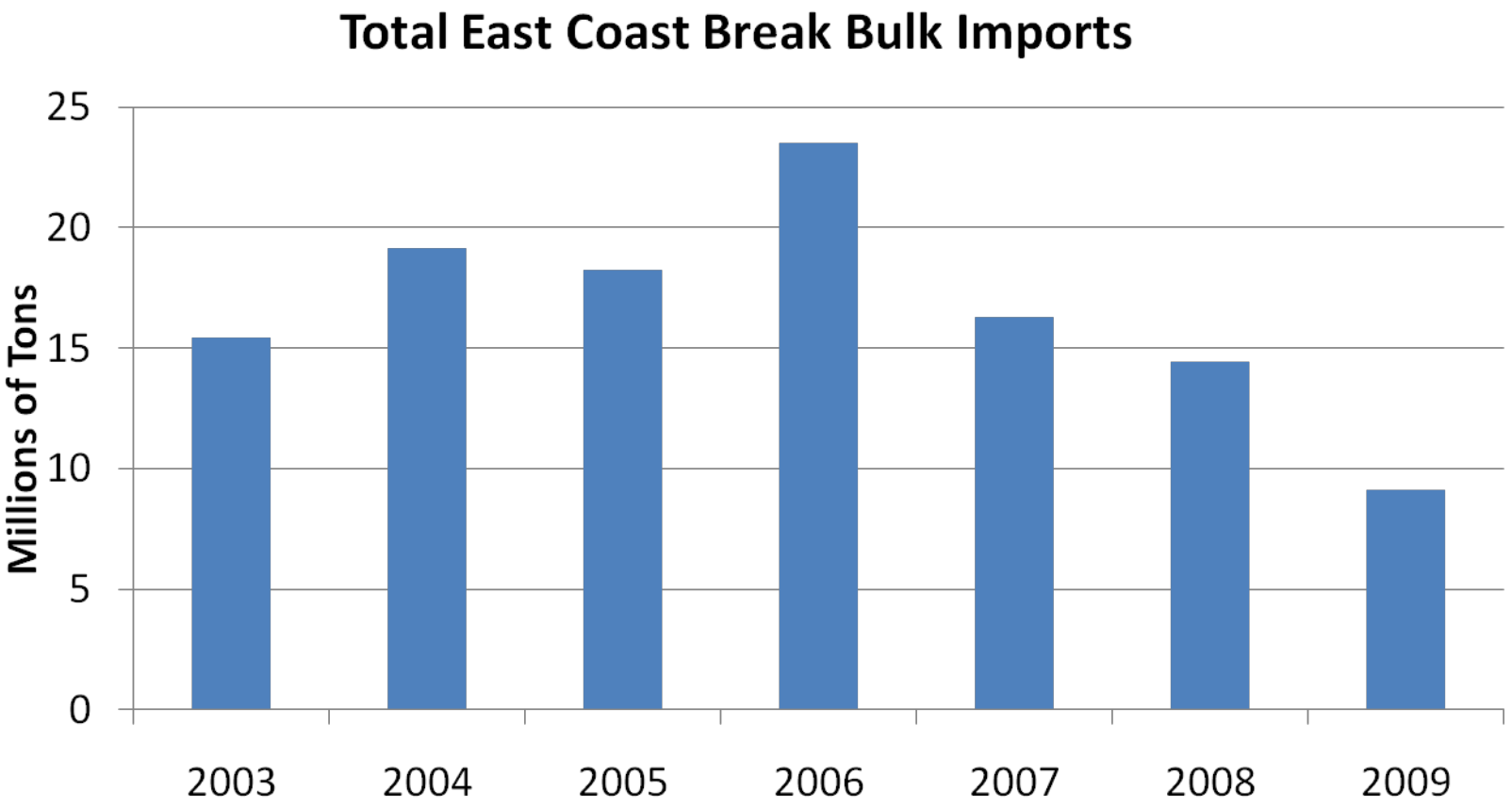
- **Break bulk**: Includes cargoes that are typically palletized, bagged or handled in individual pieces such as steel, fresh fruit, forest products, automobiles, and wind turbines:
  - Imports
  - Exports
- **Bulk**: Liquid and dry products that are not packaged but move in large, fungible lot sizes and include petroleum, liquid bulk, cement, limestone, coal, scrap:
  - Imports
  - Exports
- **Containerized cargo**: General cargo that is moved via a 20 ft., 40 ft. or 45 ft. ocean container, and is typically higher value cargo including apparel, electronics, furniture, machine parts, etc.

Historical Trade Data

- Historical commodity specific data (all reported in tons) was developed by Port, handling type and commodity
- US Bureau of the Census Foreign Trade Division, Import and Export Merchandise, trade statistics:
  - This does not include domestic waterborne data
  - Providence data includes cargo activity at:
    - ProvPort
    - Melville
    - Newport
    - Davisville
- Historical data is provided, as are the compound annual growth rates (CAGR)

Break Bulk Imports

The East Coast break bulk import market has been in constant decline since 2006



Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Philadelphia, Baltimore, Charleston and Newark are the major East Coast break bulk import ports

Port	2003	2004	2005	2006	2007	2008	2009	CAGR
Philadelphia, PA	3,414,628	5,270,817	4,643,693	6,705,702	3,787,950	3,159,318	1,619,891	-11.7%
Baltimore, MD	2,443,779	2,839,202	3,030,566	3,059,760	2,400,358	2,257,603	1,620,859	-6.6%
Charleston, SC	2,526,436	2,657,627	2,185,539	3,054,620	2,149,090	1,575,747	1,069,761	-13.3%
Newark, NJ	1,495,238	1,580,058	1,470,585	2,729,676	1,736,718	1,776,375	1,084,518	-5.2%
Jacksonville, FL	972,306	1,101,223	998,967	1,495,124	1,358,498	1,227,843	911,563	-1.1%
Wilmington, DE	975,670	1,027,813	1,107,945	986,023	938,383	681,757	627,268	-7.1%
Savannah, GA	587,693	869,612	1,082,889	1,313,658	949,211	891,448	454,411	-4.2%
Wilmington, NC	337,871	619,643	505,917	567,139	414,420	347,189	176,475	-10.3%
Port Canaveral, FL	363,101	469,707	502,776	529,209	310,296	232,675	127,586	-16.0%
Brunswick, GA	187,253	360,099	397,664	395,128	365,792	337,928	300,551	8.2%
Port Everglades, FL	173,155	270,013	274,421	339,103	167,322	608,138	399,622	15.0%
New Haven, CT	399,953	393,333	313,735	461,855	207,219	182,094	111,188	-19.2%
Norfolk, VA	418,225	426,982	337,271	280,532	203,647	163,159	95,217	-21.9%
Beaufort-Morehead City, NC	253,878	233,269	241,521	341,227	277,430	154,514	85,186	-16.6%
Providence, RI	151,317	126,484	207,057	331,597	182,261	205,704	170,869	2.0%
New York, NY	90,823	236,735	233,388	225,431	123,721	213,137	70,561	-4.1%
New London, CT	181,442	194,546	235,583	146,534	161,005	95,344	28,671	-26.5%
Bridgeport, CT	182,136	179,735	182,470	183,032	198,701	63,136	64	-73.5%
Newport News, VA	111,884	105,968	102,977	108,789	97,694	113,969	82,925	-4.9%
Portland, ME	117,556	89,333	17,560	90,137	104,837	52,783	34,248	-18.6%
Boston, MA	25,314	40,483	48,978	89,992	154,401	85,150	58,235	14.9%
Searsport, ME	2,419	25,549	91,770	53,856	56	1,414		n/a
New Bedford, MA	8,004	4,831	21,632	4,508	142	1,978	1,411	-25.1%
Fall River, MA	4,362	7,299	1,290	1,801	2,352	2,133	1,078	-20.8%
Portsmouth, NH	1,226	787	866	11	10	699	118	-32.3%
Eastport, ME					153	187	3,028	n/a
Gloucester, MA	1,036	119	10	0	409	631		n/a
Grand Total	**15,426,704**	**19,131,267**	**18,237,071**	**23,494,444**	**16,292,076**	**14,432,055**	**9,135,304**	**-8.4%**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Northern Europe, South America and Japan/Korea are the key trade lanes for imported break bulk on the Atlantic

Row Labels	2003	2004	2005	2006	2007	2008	2009	CAGR
Northern Europe	5,677,814	7,567,473	7,497,484	9,459,448	5,772,039	4,393,377	2,626,613	-12.1%
South America	4,004,488	4,564,864	3,764,417	4,360,608	3,084,290	2,459,437	1,871,935	-11.9%
Japan/Korea	1,605,572	1,776,259	2,006,475	2,600,026	2,335,713	2,245,845	1,488,450	-1.3%
Southeast Asia	1,173,011	1,359,151	1,398,915	1,918,262	1,366,582	886,338	647,544	-9.4%
Mediterranean	671,704	959,754	814,676	2,235,278	1,245,039	1,479,723	441,325	-6.8%
Central America	830,120	928,906	920,358	724,399	922,427	954,429	754,809	-1.6%
Canada	634,491	680,173	717,476	681,116	402,124	372,646	240,841	-14.9%
Africa	433,751	512,794	498,862	565,521	388,550	421,128	311,403	-5.4%
Caribbean	91,906	247,747	227,726	232,230	535,976	957,863	580,262	36.0%
South Asia	151,555	374,654	270,786	510,814	182,874	240,496	145,803	-0.6%
Australia/New Zealand	140,350	121,558	96,000	137,770	30,577	5,424	16,509	-30.0%
Middle East	11,840	34,932	23,850	67,842	19,649	9,624	5,187	-12.9%
Other	101	3,001	47	1,128	6,235	5,725	4,622	89.0%
Grand Total	**15,426,704**	**19,131,267**	**18,237,071**	**23,494,444**	**16,292,076**	**14,432,055**	**9,135,304**	**-8.4%**

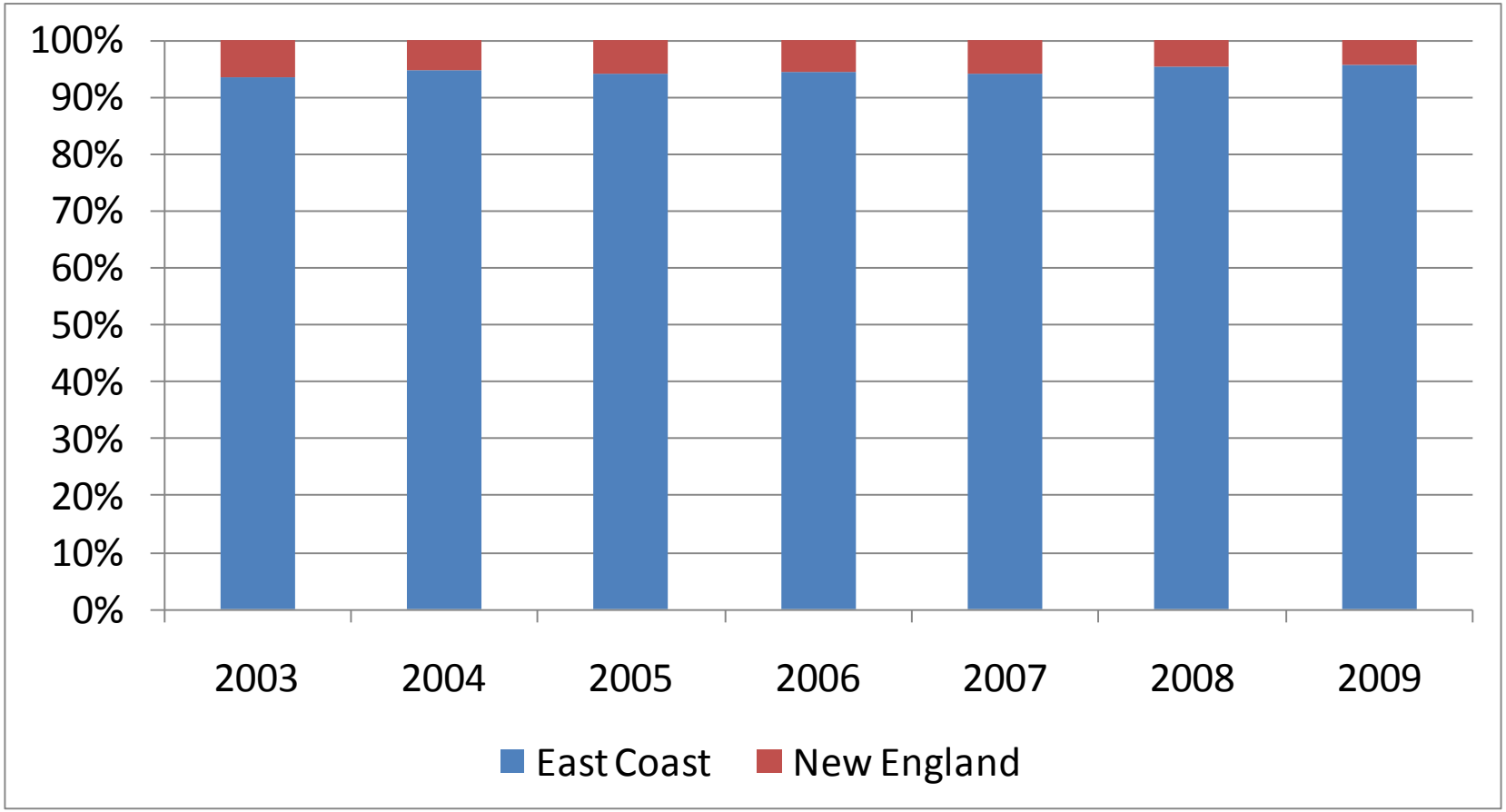
Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Iron and steel products and autos dominate the East Coast break bulk import market

Commodity	2003	2004	2005	2006	2007	2008	2009	CAGR	Cum Share
Iron And Steel	4,203,027	6,462,036	5,440,155	8,562,397	4,583,342	4,075,936	1,978,153	-11.8%	21.65%
Vehicles, Except Railway Or Tramway, And Parts Etc	2,464,301	2,598,333	2,525,474	3,466,467	3,209,429	2,879,474	1,973,269	-3.6%	43.25%
Wood And Articles Of Wood; Wood Charcoal	1,562,257	2,478,745	2,886,495	2,776,344	1,468,749	869,885	362,247	-21.6%	47.22%
Paper & Paperboard & Articles (inc Papr Pulp Artl)	1,838,911	2,062,702	1,781,449	2,017,563	1,758,890	1,434,448	964,489	-10.2%	57.78%
Edible Fruit & Nuts; Citrus Fruit Or Melon Peel	1,537,595	1,480,903	1,340,269	1,245,988	1,280,745	1,255,626	1,186,394	-4.2%	70.76%
Nuclear Reactors, Boilers, Machinery Etc.; Parts	586,652	714,871	795,733	850,036	616,121	506,287	281,984	-11.5%	73.85%
Beverages, Spirits And Vinegar	100,700	330,737	191,757	1,167,990	656,668	1,031,667	335,633	22.2%	77.53%
Wood Pulp Etc; Recovd (waste & Scrap) ppr & pprbd	472,106	372,721	440,507	549,510	615,634	653,923	587,177	3.7%	83.95%
Articles Of Iron Or Steel	389,082	331,068	357,145	534,604	490,834	397,791	270,306	-5.9%	86.91%
Rubber And Articles Thereof	392,142	427,955	461,017	388,327	315,795	221,991	135,626	-16.2%	88.40%
Aluminum And Articles Thereof	179,679	305,541	401,670	387,489	181,743	143,257	182,902	0.3%	90.40%
Cocoa And Cocoa Preparations	142,472	190,924	278,081	302,907	185,140	181,814	195,095	5.4%	92.53%
Prep Vegetables, Fruit, Nuts Or Other Plant Parts	211,099	121,553	160,754	128,967	155,473	174,101	239,894	2.2%	95.16%
Copper And Articles Thereof	268,052	133,647	244,309	235,048	141,027	43,869	14,736	-38.3%	95.32%

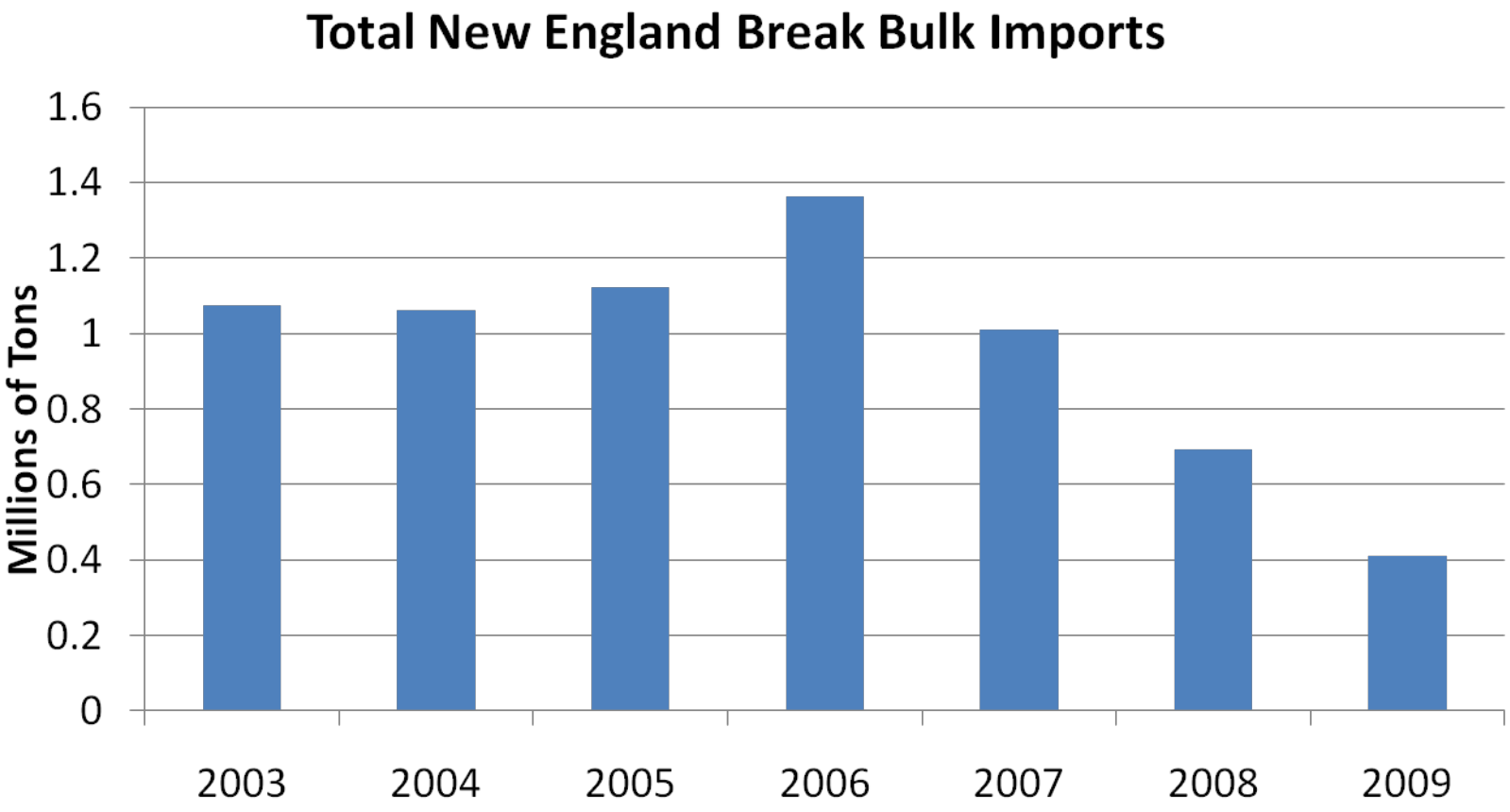
Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

The New England break bulk import market is small in comparison with total East Coast



Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

The New England break bulk import market reflects the East Coast break bulk import market



Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Providence leads other New England ports in terms of break bulk import cargo, primarily automobiles

NE Port	2003	2004	2005	2006	2007	2008	2009	CAGR
New Haven, CT	399,953	393,333	313,735	461,855	207,219	182,094	111,188	-19.2%
Providence, RI	151,317	126,484	207,057	331,597	182,261	205,704	170,869	2.0%
New London, CT	181,442	194,546	235,583	146,534	161,005	95,344	28,671	-26.5%
Bridgeport, CT	182,136	179,735	182,470	183,032	198,701	63,136	64	-73.5%
Portland, ME	117,556	89,333	17,560	90,137	104,837	52,783	34,248	-18.6%
Boston, MA	25,314	40,483	48,978	89,992	154,401	85,150	58,235	14.9%
Searsport, ME	2,419	25,549	91,770	53,856	56	1,414		n/a
New Bedford, MA	8,004	4,831	21,632	4,508	142	1,978	1,411	-25.1%
Fall River, MA	4,362	7,299	1,290	1,801	2,352	2,133	1,078	-20.8%
Portsmouth, NH	1,226	787	866	11	10	699	118	-32.3%
Eastport, ME					153	187	3,028	n/a
Gloucester, MA	1,036	119	10	0	409	631		n/a
Grand Total	**1,074,763**	**1,062,499**	**1,120,951**	**1,363,324**	**1,011,546**	**691,254**	**408,910**	**-14.9%**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Northern Europe is the major trading partner for New England break bulk imports

Trade Route	2003	2004	2005	2006	2007	2008	2009	CAGR
Northern Europe	338,034	458,920	444,010	514,935	290,914	253,698	150,090	-12.7%
South America	402,254	344,442	334,866	459,995	428,715	122,396	29,747	-35.2%
Canada	157,638	127,682	133,238	120,838	71,439	90,347	47,592	-18.1%
Japan/Korea	37,591	32,196	43,589	50,128	45,682	63,162	87,580	15.1%
Mediterranean	53,016	54,067	53,593	61,435	24,904	18,287	11,602	-22.4%
Central America	34,098	18,118	41,198	41,644	43,761	42,846	40,897	3.1%
Southeast Asia	16,868	10,049	27,274	50,422	36,806	24,045	13,361	-3.8%
South Asia	13,608	5,452	37,480	40,422	18,589	13,450	25,515	11.0%
Caribbean	2	3	27	19,030	48,160	57,223	3	6.5%
Africa	21,392	11,305	5,623	4,379	2,481	5,727	2,518	-30.0%
Australia/New Zealand	244	258	25	97	85	74		n/a
Middle East	18	8	29		10	0	4	-23.3%
Other		0						**n/a**
Grand Total	**1,074,763**	**1,062,499**	**1,120,951**	**1,363,324**	**1,011,546**	**691,254**	**408,910**	**-14.9%**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Iron and steel and auto imports have dominated break bulk imports through New England ports, but autos are now the leading import

Row Labels	2003	2004	2005	2006	2007	2008	2009	CAGR	Cum Share
Iron And Steel	225,263	261,376	192,404	387,086	181,169	161,438	95,417	-13.3%	23.33%
Vehicles, Except Railway Or Tramway, And Parts Etc	154,299	136,114	171,104	172,505	160,685	215,873	187,715	3.3%	69.24%
Edible Fruit & Nuts; Citrus Fruit Or Melon Peel	178,604	178,668	180,903	180,025	172,431	47,670		n/a	69.24%
Wood And Articles Of Wood; Wood Charcoal	140,284	173,323	218,962	196,860	76,959	96,355	28,793	-23.2%	76.28%
Copper And Articles Thereof	174,595	108,194	120,501	157,659	102,785	6,973	159	-68.9%	76.32%
Paper & Paperboard & Articles (inc Papr Pulp Artl)	97,930	80,299	13,007	67,893	71,262	45,249	34,974	-15.8%	84.87%
Beverages, Spirits And Vinegar	239	26	28	64,003	159,641	64,158	83	-16.2%	84.89%
Articles Of Iron Or Steel	32,938	38,708	43,089	33,786	20,846	21,102	16,362	-11.0%	88.90%
Wood Pulp Etc; Recovd (waste & Scrap) ppr & pprbd		28,382	89,682	52,756	25,109			n/a	88.90%
Art Of Stone, Plaster, Cement, Asbestos, Mica Etc.	14,275	6,584	37,022	23,783	18,691	15,266	29,171	12.6%	96.03%
Fish, Crustaceans & Aquatic Invertebrates	8,519	20,573	15,544	8,508	1,538	1,533	3,543	-13.6%	96.90%
Rubber And Articles Thereof	5,784	8,009	6,582	5,666	2,614	4,117	2,533	-12.9%	97.52%
Special Classification Provisions, Nesoi	10,468	144	9,818	36	5,536	275	24	-63.7%	97.52%
Zinc And Articles Thereof	16,148	8,666	0	0	0	3	1	-80.6%	97.52%
Nuclear Reactors, Boilers, Machinery Etc.; Parts	2,660	1,560	3,561	5,075	3,230	1,880	6,445	15.9%	99.10%

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Northern Europe is the major break bulk import trading partner with New England ports, reflecting steel import tonnage

Trade Area	2003	2004	2005	2006	2007	2008	2009
Northern Europe	73,613	84,571	93,530	102,519	85,781	110,142	74,494
Central America	34,094	16,765	30,062	26,632	25,446	38,290	40,897
South America	7,327	3,386	4,918	140,682	9,679		
Japan/Korea	21,568	16,628	22,362	19,073	17,954	19,884	25,493
South Asia	10,480	2,583	30,395	23,460	18,586	13,409	25,500
Southeast Asia	1,199		14,435	22,905	20,955	17,523	4,091
Mediterranean	2,873	2,681	8,900	4,520	8,811	9,046	1,742
Canada	35		2,420				25
Australia/New Zealand	243		25	97	65	74	
Africa			32	25	2		
Caribbean			25				
Grand Total	151,433	126,614	207,103	339,914	187,279	208,367	172,243

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Auto imports lead the break bulk imports at Providence

Row Labels	2003	2004	2005	2006	2007	2008	2009	CAGR
Vehicles, Except Railway Or Tramway, And Parts Etc	139,119	121,077	149,954	143,163	131,710	173,197	140,922	**0.2%**
Copper And Articles Thereof				139,242	9,334			**n/a**
Art Of Stone, Plaster, Cement, Asbestos, Mica Etc.	10,480	2,583	30,395	23,460	18,586	13,411	25,500	**16.0%**
Iron And Steel			12,253	18,041	20,955	17,521	4,001	**n/a**
Articles Of Iron Or Steel		0	7,389	0		12		**n/a**
Wood And Articles Of Wood; Wood Charcoal			1,467	5,110	345			**n/a**
Ships, Boats And Floating Structures	701	2,809	573	369	820	164	410	**-8.6%**
Products Of Animal Origin, Nesoi	591		2,391			1,349		**n/a**
Special Classification Provisions, Nesoi	3		2,420		68	3	16	**30.8%**
Nuclear Reactors, Boilers, Machinery Etc.; Parts	64	14	216	812	443	2	17	**-20.1%**
Nickel And Articles Thereof				1,400				**n/a**
Rubber And Articles Thereof	358							**n/a**
Railway Or Tramway Stock Etc; Traffic Signal Equip						41		**n/a**
Aircraft, Spacecraft, And Parts Thereof						3	3	**n/a**
Aluminum And Articles Thereof		1						**n/a**
Furniture; Bedding Etc; Lamps Nesoi Etc; Prefab Bd							0	**n/a**
Wadding, Felt Etc; Sp Yarn; Twine, Ropes Etc.						0		**n/a**
Leather Art; Saddlery Etc; Handbags Etc; Gut Art							0	**n/a**
Electric Machinery Etc; Sound Equip; Tv Equip; Pts						0		**n/a**
Grand Total	**151,317**	**126,484**	**207,057**	**331,597**	**182,261**	**205,704**	**170,869**	**2.0%**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Northern Europe and Mexico are the key suppliers of imported vehicles

	2003	2004	2005	2006	2007	2008	2009
Vehicles, Except Railway Or Tramway, And Parts Etc	**139,119**	**121,077**	**149,954**	**143,163**	**131,710**	**173,197**	**140,922**
Northern Europe	73,320	81,617	92,961	92,945	79,922	105,977	72,859
Central America	34,094	16,765	30,062	26,632	25,446	38,290	40,897
Japan/Korea	21,568	16,628	20,637	19,064	17,954	19,884	25,493
Mediterranean	2,790	2,681	1,376	4,511	8,388	9,046	1,673
South America	7,326	3,386	4,918	11			
Canada	20						
Art Of Stone, Plaster, Cement, Asbestos, Mica Etc.	**10,480**	**2,583**	**30,395**	**23,460**	**18,586**	**13,411**	**25,500**
South Asia	10,480	2,583	30,395	23,460	18,586	13,409	25,500
Australia/New Zealand						3	

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Iron and steel imports are the key commodities handled at New Haven

Row Labels	2003	2004	2005	2006	2007	2008	2009
Iron And Steel	225,255	261,359	180,086	369,022	160,045	142,942	91,356
Articles Of Iron Or Steel	32,776	37,502	35,284	33,376	20,699	18,140	15,271
Wood And Articles Of Wood; Wood Charcoal	15,021	50,601	70,313	36,455		1,737	39
Copper And Articles Thereof	110,217	34,247	20,619	4,183	4,002	142	
Beverages, Spirits And Vinegar	4			18,805	22,157	19,108	
Zinc And Articles Thereof	16,148	6,663					
Art Of Stone, Plaster, Cement, Asbestos, Mica Etc.	43	2,861	6,357				
Nuclear Reactors, Boilers, Machinery Etc.; Parts	433	101	75		226		4,516
Wood Pulp Etc; Recovd (waste & Scrap) ppr & pprbd			988				
Edible Fruit & Nuts; Citrus Fruit Or Melon Peel					78		
Special Classification Provisions, Nesoi	39				12	23	
Ships, Boats And Floating Structures	15			13			6
Aluminum And Articles Thereof	2		9			2	
Electric Machinery Etc; Sound Equip; Tv Equip; Pts			4				
Grand Total	**399,953**	**393,333**	**313,735**	**461,855**	**207,219**	**182,094**	**111,188**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Lumber imports from Europe and Canada are the key import commodity at New London

Commodity	2003	2004	2005	2006	2007	2008	2009
Wood And Articles Of Wood; Wood Charcoal	117,328	118,775	135,772	132,209	71,631	88,559	28,623
Copper And Articles Thereof	64,111	73,768	99,811	14,217	89,354	6,678	
Zinc And Articles Thereof		2,003					
Textile Art Nesoi; Needlecraft Sets; Worn Text Art						108	48
Nuclear Reactors, Boilers, Machinery Etc.; Parts				108			
Wood Pulp Etc; Recovd (waste & Scrap) ppr & pprbd					20		
Prep Feathers, Down Etc; Artif Flowers; H Hair Art	2						
Grand Total	**181,442**	**194,546**	**235,583**	**146,534**	**161,005**	**95,344**	**28,671**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

The loss of banana imports at Bridgeport has been key

Commodity	2003	2004	2005	2006	2007	2008	2009
Edible Fruit & Nuts; Citrus Fruit Or Melon Peel	178,604	178,665	180,031	180,025	172,352	47,670	
Beverages, Spirits And Vinegar					22,269	14,816	
Vehicles, Except Railway Or Tramway, And Parts Etc		1	1,275	1,609	1,449	191	
Art Of Stone, Plaster, Cement, Asbestos, Mica Etc.	3,531						
Nuclear Reactors, Boilers, Machinery Etc.; Parts		30	872	1,140	965	163	
Edible Vegetables & Certain Roots & Tubers				218	1,457	161	
Articles Of Iron Or Steel		1,013	230	4			
Live Trees, Plants, Bulbs Etc.; Cut Flowers Etc.					121	62	
Railway Or Tramway Stock Etc; Traffic Signal Equip			22	35	40	5	
Copper And Articles Thereof		19	32		44		
Electric Machinery Etc; Sound Equip; Tv Equip; Pts						68	
Wood And Articles Of Wood; Wood Charcoal		1					64
Nickel And Articles Thereof		5			3		
Special Classification Provisions, Nesoi			7				
Paper & Paperboard & Articles (inc Papr Pulp Artl)	1						
Apparel Articles And Accessories, Not Knit Etc.	0			0			
Grand Total	**182,136**	**179,735**	**182,470**	**183,032**	**198,701**	**63,136**	**64**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

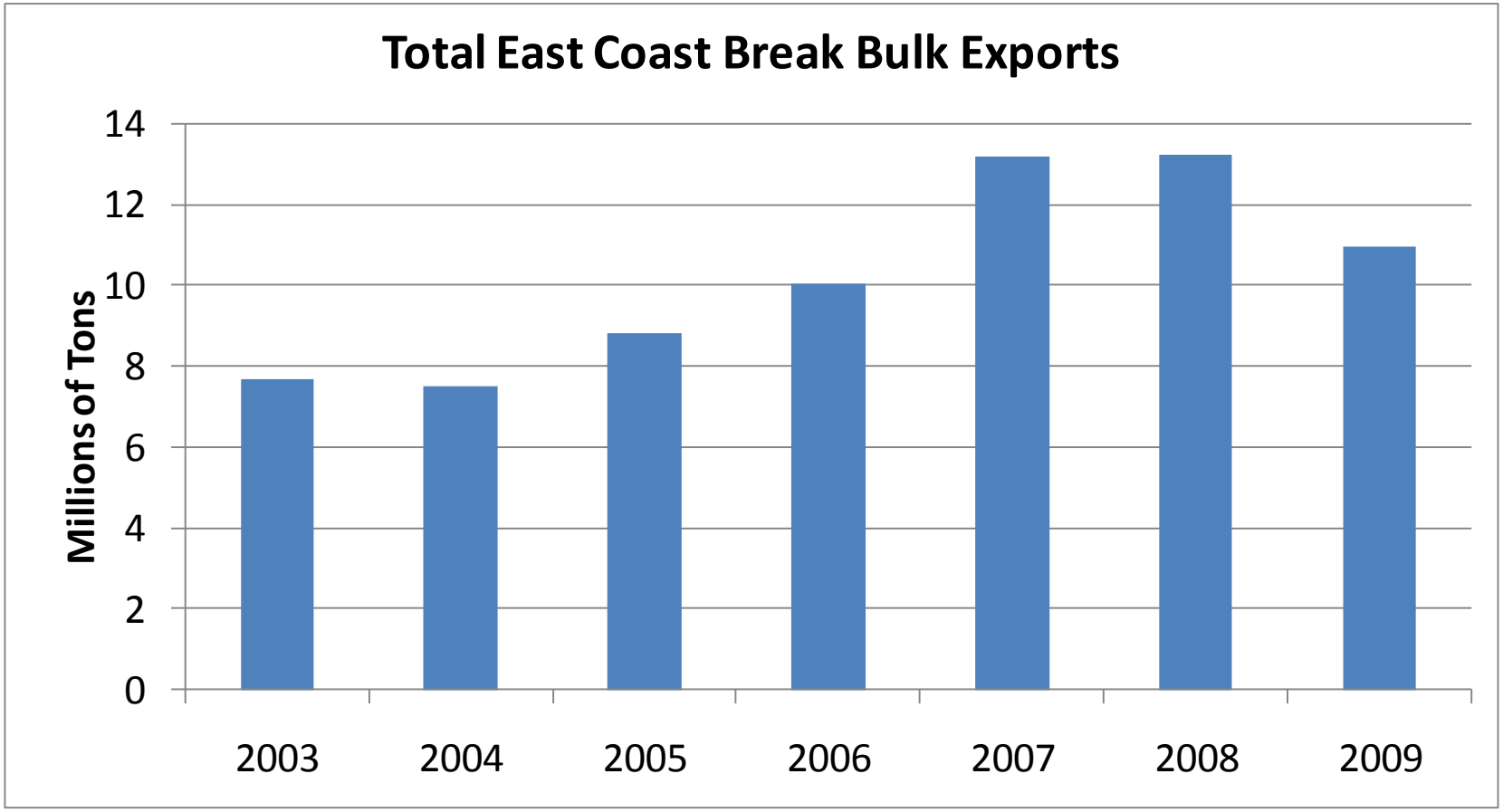
Autos dominate imported break bulk at Boston

Commodities	2003	2004	2005	2006	2007	2008	2009	Cum Share
Vehicles, Except Railway Or Tramway, And Parts Etc	15,160	15,033	19,876	27,733	27,526	42,486	46,793	80.35%
Beverages, Spirits And Vinegar	227	26	24	45,178	115,215	30,234	83	80.49%
Fish, Crustaceans & Aquatic Invertebrates	1,356	13,692	11,051	7,885	1,482	1,299	2,815	85.33%
Footwear, Gaiters Etc. And Parts Thereof	1,803	6,429	10,762	1,813	2,258	363	104	85.51%
Nuclear Reactors, Boilers, Machinery Etc.; Parts	892	715	1,392	2,850	1,592	724	471	86.31%
Art Of Stone, Plaster, Cement, Asbestos, Mica Etc.	221	1,140	260	323	105	1,855	3,671	92.62%
Electric Machinery Etc; Sound Equip; Tv Equip; Pts	277	219	2,019	598	756	643	181	92.93%
Furniture; Bedding Etc; Lamps Nesoi Etc; Prefab Bd	183	188	198	246	746	1,805	1,114	94.84%
Rubber And Articles Thereof	64	711	1,001	1,312	154	31	55	94.93%
Wood And Articles Of Wood; Wood Charcoal	302	61	74	48	1,358	488	67	95.05%
Paper & Paperboard & Articles (inc Papr Pulp Artl)	191	217	334	181	58	569	788	96.40%
Ceramic Products	767	174	214	142	379	364	146	96.66%
Special Classification Provisions, Nesoi	1,337	64	115	25	130	51	7	96.67%
Toys, Games & Sport Equipment; Parts & Accessories	271	221	195	292	281	261	152	96.93%
Iron And Steel	8	16	66	23	169	974	61	97.03%
Articles Of Iron Or Steel	108	52	182	173	147	391	176	97.33%
Prep Vegetables, Fruit, Nuts Or Other Plant Parts	226	17	5	43	183	218	300	97.85%
Printed Books, Newspapers Etc; Manuscripts Etc	116	189	94	77	101	197	98	98.02%
Copper And Articles Thereof	267	161	39	17	52	153	159	98.29%
Optic, Photo Etc, Medic Or Surgical Instrments Etc	22	16	50	40	86	236	333	98.86%
Glass And Glassware	99	89	43	97	65	282	58	98.96%
Tools, Cutlery Etc. Of Base Metal & Parts Thereof	90	124	128	112	141	62	28	99.01%

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Break Bulk Exports

The East Coast break bulk export market has shown an increasing trend through 2008



Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Break bulk exports via East Coast ports

Port	2003	2004	2005	2006	2007	2008	2009	CAGR
New York, NY	1,504,766	1,798,824	2,021,345	2,191,712	3,160,811	2,802,046	2,428,190	8.3%
Savannah, GA	1,039,884	1,026,026	1,122,874	1,304,521	1,872,602	1,827,572	1,578,197	7.2%
Charleston, SC	918,906	753,835	864,937	1,005,212	1,283,807	1,158,592	996,744	1.4%
Baltimore, MD	853,906	774,525	1,113,490	1,072,969	1,543,061	1,615,466	1,111,444	4.5%
Norfolk, VA	766,328	892,483	1,140,901	1,477,180	2,053,670	1,954,357	1,620,506	13.3%
Jacksonville, FL	485,630	556,971	667,412	619,036	751,026	971,591	658,447	5.2%
Philadelphia, PA	445,169	106,222	139,881	149,576	336,514	363,064	94,473	-22.8%
Port Everglades, FL	341,100	317,500	446,642	618,826	682,488	736,441	566,762	8.8%
Eastport, ME	323,548	234,419	298,314	433,109	374,844	317,648	264,345	-3.3%
Brunswick, GA	322,380	379,266	372,265	460,376	381,353	725,063	894,277	18.5%
Newark, NJ	170,332	200,137	186,694	241,687	332,956	358,270	305,193	10.2%
Port Canaveral, FL	126,946	129,278	100,684	99,417	79,679	106,561	99,226	-4.0%
Newport News, VA	123,747	77,382	68,872	38,568	61,214	29,824	10,004	-34.2%
Boston, MA	121,821	162,280	183,651	227,453	241,333	214,461	269,711	14.2%
Portland, ME	70,852	81,372	85,751	77,668	36,305	32,662	7,287	-31.6%
Beaufort-Morehead City, NC	31,714	7,696	3,388	1,817	4,474	3	14,211	-12.5%
Providence, RI	6,874	6,407	238	18,318	1,406	12,539	13,696	12.2%
Portsmouth, NH	3,877	2,141	4,664	3,508	1,566	4,043	6,265	8.3%
New Bedford, MA	3,536	11,641	1,180	9,793	28	38	7,342	12.9%
Fall River, MA	107	167	150	219	1	147	214	12.2%
New London, CT	80	64	1			9		n/a
Bridgeport, CT	52	160	401	569	1,671	278	185	23.6%
New Haven, CT	10	215		10		7	19	12.4%
Gloucester, MA			109	266	23	35		n/a
Grand Total	**7,661,566**	**7,519,118**	**8,823,999**	**10,051,565**	**13,200,845**	**13,230,681**	**10,946,739**	6.1%

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

SE Asia has replaced N. Europe as the key break bulk export trading partner for East Coast ports

Export Trade Route	2003	2004	2005	2006	2007	2008	2009	CAGR
Northern Europe	1,786,097	1,765,132	2,074,970	2,336,428	3,088,043	3,118,451	2,150,654	3.1%
Southeast Asia	1,757,318	1,736,943	2,177,607	2,747,363	3,583,546	2,836,369	3,094,742	9.9%
Mediterranean	1,050,967	956,887	1,117,632	1,128,227	1,568,342	1,589,673	1,068,119	0.3%
Japan/Korea	618,592	527,195	481,381	588,797	616,704	533,526	309,311	-10.9%
South America	560,332	577,896	660,866	736,737	1,078,941	1,313,379	1,043,275	10.9%
Central America	391,787	274,104	317,558	344,588	400,723	513,337	301,994	-4.2%
South Asia	368,306	301,712	351,898	401,061	665,691	610,958	742,264	12.4%
Middle East	366,360	438,246	612,708	535,896	737,429	994,756	723,733	12.0%
Caribbean	328,596	356,157	425,621	545,726	529,703	637,640	652,561	12.1%
Africa	239,527	351,084	360,830	416,574	621,512	787,425	651,171	18.1%
Australia/New Zealand	147,600	184,667	201,041	242,230	260,612	248,578	188,020	4.1%
Canada	43,113	45,122	37,015	22,750	43,476	37,931	15,443	-15.7%
Other	2,970	3,973	4,870	5,189	6,123	8,657	5,451	10.6%
Grand Total	**7,661,566**	**7,519,118**	**8,823,999**	**10,051,565**	**13,200,845**	**13,230,681**	**10,946,739**	**6.1%**

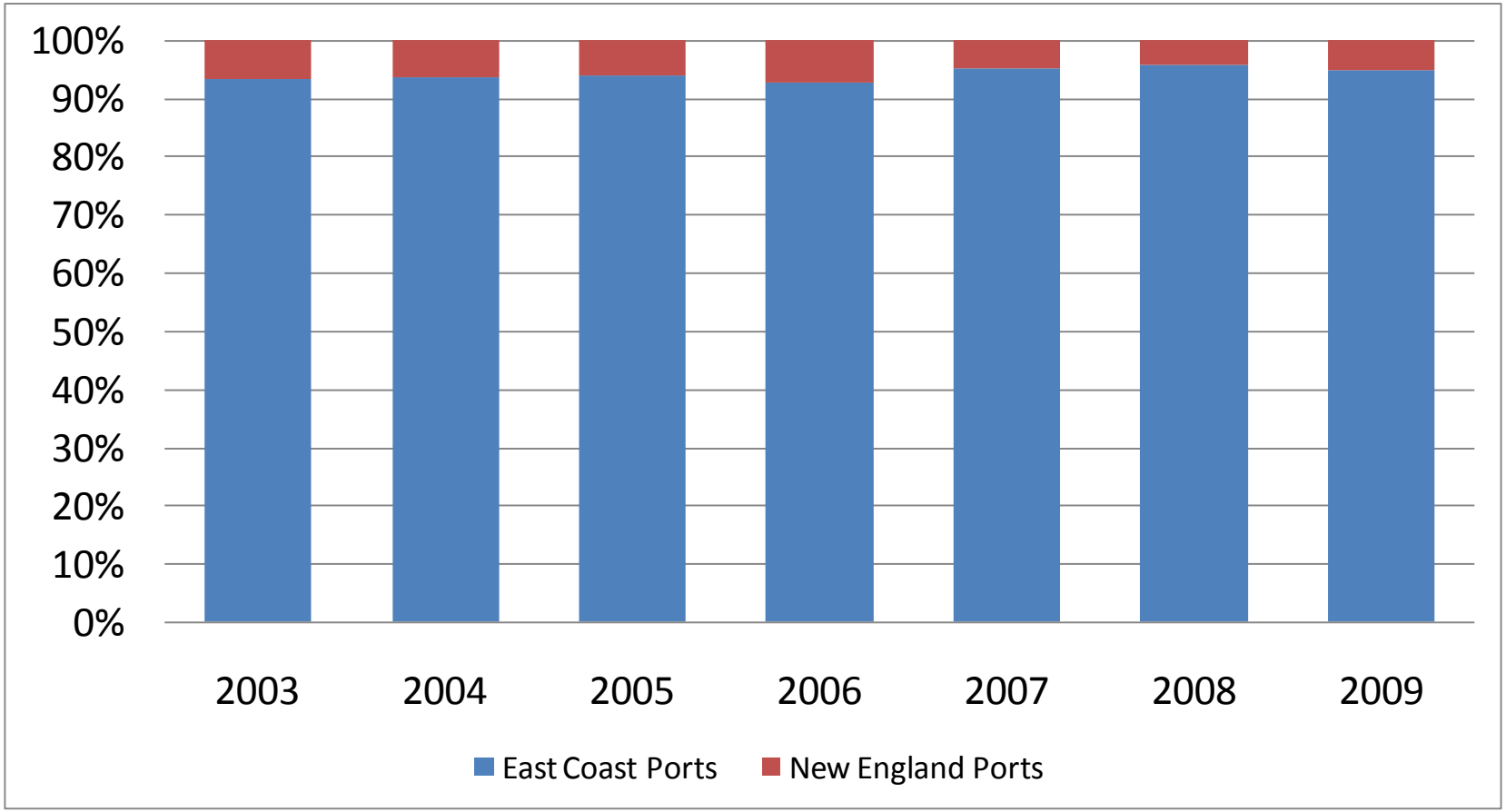
Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Wood pulp and autos are the major break bulk export cargoes via the East Coast

Commodity	2003	2004	2005	2006	2007	2008	2009	CAGR	Cum Share
Wood Pulp Etc; Recovd (waste & Scrap) ppr & pprbd	2,441,963	2,387,876	2,732,732	3,246,278	4,428,096	3,495,580	3,285,482	5.1%	30.01%
Vehicles, Except Railway Or Tramway, And Parts Etc	857,609	954,194	1,287,378	1,478,679	2,065,145	2,404,590	1,528,961	10.1%	43.98%
Iron And Steel	822,595	172,165	316,757	211,415	504,288	750,535	456,791	-9.3%	48.15%
Wood And Articles Of Wood; Wood Charcoal	565,703	734,811	744,456	807,593	1,025,077	927,112	758,420	5.0%	55.08%
Paper & Paperboard & Articles (inc Papr Pulp Artl)	520,540	387,981	627,275	814,296	1,071,738	689,484	565,051	1.4%	60.24%
Nuclear Reactors, Boilers, Machinery Etc.; Parts	396,317	469,119	533,005	599,872	832,561	999,371	684,711	9.5%	66.50%
Meat And Edible Meat Offal	230,102	243,530	269,757	193,833	231,102	272,492	258,771	2.0%	68.86%
Food Industry Residues & Waste; Prep Animal Feed	179,282	170,118	202,811	534,605	579,577	1,034,446	1,293,510	39.0%	80.68%
Prep Vegetables, Fruit, Nuts Or Other Plant Parts	124,472	103,111	106,041	106,869	73,888	107,722	100,468	-3.5%	81.60%
Copper And Articles Thereof	112,690	114,307	100,285	100,494	107,979	83,069	94,647	-2.9%	82.46%
Electric Machinery Etc; Sound Equip; Tv Equip; Pts	92,502	98,085	129,002	142,637	161,119	182,316	127,133	5.4%	83.62%
Prep Cereal, Flour, Starch Or Milk; Bakers Wares	79,550	68,124	96,227	81,068	56,128	81,817	63,983	-3.6%	84.21%
Articles Of Iron Or Steel	75,002	90,939	102,671	124,818	151,290	206,030	134,677	10.2%	85.44%
Milling Products; Malt; Starch; Inulin; Wht Gluten	71,241	179,344	136,654	101,206	146,910	69,630	25,677	-15.6%	85.67%
Manmade Staple Fibers, Incl Yarns & Woven Fabrics	69,387	69,391	22,756	18,105	19,996	36,065	20,999	-18.1%	85.86%
Glass And Glassware	67,583	98,004	65,661	74,295	58,088	67,267	49,035	-5.2%	86.31%
Edible Fruit & Nuts; Citrus Fruit Or Melon Peel	55,872	78,152	33,313	25,451	36,259	46,237	42,204	-4.6%	86.70%
Essential Oils Etc; Perfumery, Cosmetic Etc Preps	50,731	54,043	63,733	52,862	78,383	90,120	60,747	3.0%	87.25%
Tobacco And Manufactured Tobacco Substitutes	50,159	35,896	30,230	48,233	111,856	165,490	130,416	17.3%	88.44%
Rubber And Articles Thereof	46,630	61,162	86,921	75,863	66,810	66,206	51,496	1.7%	88.91%
Miscellaneous Edible Preparations	45,384	55,699	55,816	57,663	69,457	80,822	71,205	7.8%	89.56%
Cotton, Including Yarn And Woven Fabric Thereof	43,873	38,897	75,599	109,925	143,978	112,650	55,717	4.1%	90.07%

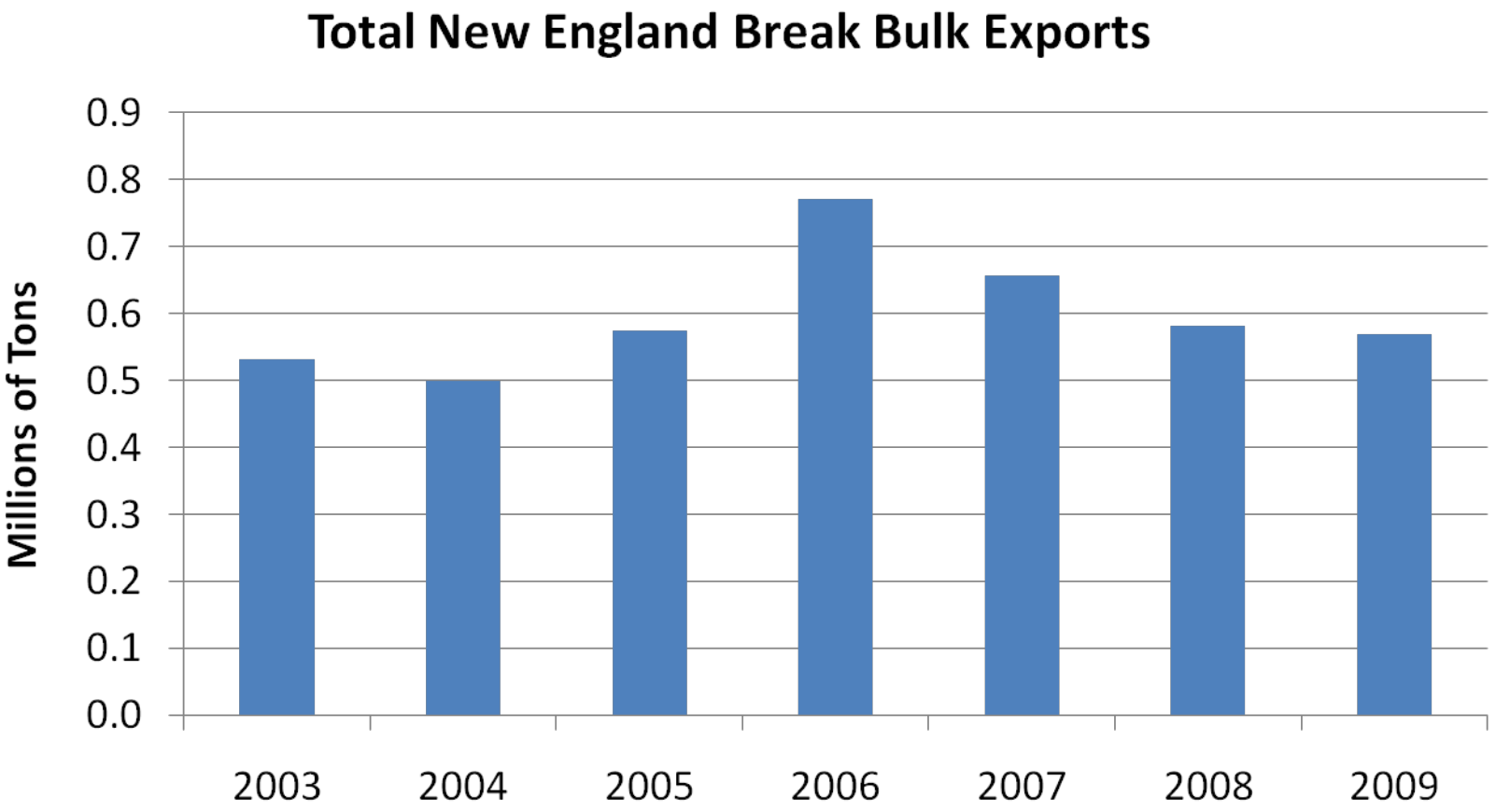
Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Break bulk exports via New England ports are small relative to the East Coast



Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

The New England break bulk export market is very small and has shown no overall trend



Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Boston and Eastport are the leading New England break bulk export ports

Row Labels	2003	2004	2005	2006	2007	2008	2009	CAGR
Eastport, ME	323,548	234,419	298,314	433,109	374,844	317,648	264,345	-3.3%
Boston, MA	121,821	162,280	183,651	227,453	241,333	214,461	269,711	14.2%
Portland, ME	70,852	81,372	85,751	77,668	36,305	32,662	7,287	-31.6%
Providence, RI	6,874	6,407	238	18,318	1,406	12,539	13,696	12.2%
Portsmouth, NH	3,877	2,141	4,664	3,508	1,566	4,043	6,265	8.3%
New Bedford, MA	3,536	11,641	1,180	9,793	28	38	7,342	12.9%
Fall River, MA	107	167	150	219	1	147	214	12.2%
New London, CT	80	64	1			9		n/a
Bridgeport, CT	52	160	401	569	1,671	278	185	23.6%
New Haven, CT	10	215		10		7	19	12.4%
Gloucester, MA		109	266	23	35			n/a
Grand Total	**530,757**	**498,974**	**574,615**	**770,669**	**657,190**	**581,832**	**569,064**	1.2%

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

SE Asia has become the leading trading partner for the New England break bulk export market

Row Labels	2003	2004	2005	2006	2007	2008	2009	CAGR
Japan/Korea	169,048	129,632	140,669	189,017	147,992	165,564	42,995	-20.4%
Southeast Asia	153,396	163,478	203,054	325,465	322,018	202,335	417,653	18.2%
Mediterranean	97,387	82,359	87,003	90,850	56,851	41,396	28,873	-18.3%
Northern Europe	73,278	48,369	110,428	132,874	108,796	142,201	33,887	-12.1%
South Asia	12,175	12,575	3,062	10,317	4,676	3,137	8,873	-5.1%
Canada	9,146	10,372	6,795	4,437	2,533	5,371	7,134	-4.1%
Africa	7,113	12,134	693	10,556	6,434	11,010	23,888	22.4%
South America	5,144	35,784	18,376	2,293	2,454	1,879	948	-24.6%
Middle East	2,460	1,363	1,341	2,296	3,740	6,441	3,566	6.4%
Caribbean	1,267	2,045	2,748	2,005	1,069	607	779	-7.8%
Central America	201	668	331	132	358	1,222	270	5.1%
Australia/New Zealand	142	194	114	427	268	667	198	5.8%
Other	1						1	1.2%
Grand Total	**530,757**	**498,974**	**574,615**	**770,669**	**657,190**	**581,832**	**569,064**	1.2%

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Wood pulp exports and paper scrap/waste lead the New England break bulk exports

Commodity	2003	2004	2005	2006	2007	2008	2009	CAGR	Cum Share
Wood Pulp Etc; Recovd (waste & Scrap) ppr & pprbd	472,457	414,986	515,349	669,681	579,243	482,561	462,392	-0.4%	81.25%
Wood And Articles Of Wood; Wood Charcoal	8,424	8,492	8,661	15,076	17,479	19,810	15,066	10.2%	83.90%
Fish, Crustaceans & Aquatic Invertebrates	5,993	8,402	16,674	21,921	7,556	13,641	24,612	26.5%	88.23%
Iron And Steel	5,670	6,824	988	19,880	3,408	2,254	3,461	-7.9%	88.84%
Paper & Paperboard & Articles (inc Papr Pulp Artl)	5,404	6,182	1,639	1,758	2,448	2,653	3,318	-7.8%	89.42%
Edible Preparations Of Meat, Fish, Crustaceans Etc	3,641	12,042	1,396	7,751	794	551	469	-28.9%	89.50%
Nuclear Reactors, Boilers, Machinery Etc.; Parts	3,002	2,922	3,731	4,463	4,912	5,736	5,114	9.3%	90.40%
Milling Products; Malt; Starch; Inulin; Wht Gluten	2,830	19		96	106	194	3	-68.0%	90.40%
Copper And Articles Thereof	2,666	2,425	1,821	2,583	5,215	3,305	2,570	-0.6%	90.85%
Raw Hides And Skins (no Furskins) And Leather	2,358	2,604	2,205	1,422	1,878	1,232	520	-22.3%	90.94%
Electric Machinery Etc; Sound Equip; Tv Equip; Pts	2,151	2,082	3,823	1,587	1,957	3,255	1,247	-8.7%	91.16%
Vehicles, Except Railway Or Tramway, And Parts Etc	1,972	2,946	2,797	2,841	8,776	19,306	26,629	54.3%	95.84%
Glass And Glassware	1,634	76	118	229	189	260	812	-11.0%	95.98%

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Autos lead the break bulk exports in Providence

Commodity	2003	2004	2005	2006	2007	2008	2009
Iron And Steel	5,046	6,277		18,202			
Glass And Glassware	1,536						
Copper And Articles Thereof	102						
Ships, Boats And Floating Structures	97	86	145	31			403
Vehicles, Except Railway Or Tramway, And Parts Etc	81		54	84	1,213	12,426	12,879
Essential Oils Etc; Perfumery, Cosmetic Etc Preps	10	1					
Art Of Stone, Plaster, Cement, Asbestos, Mica Etc.	3						
Aircraft, Spacecraft, And Parts Thereof		3					
Aluminum And Articles Thereof		41					
Articles Of Iron Or Steel						35	31
Electric Machinery Etc; Sound Equip; Tv Equip; Pts					191		
Nuclear Reactors, Boilers, Machinery Etc.; Parts		0			3	67	382
Spec Wov Fabrics; Tufted Fab; Lace; Tapestries Etc						1	
Tin And Articles Thereof						10	
Wood And Articles Of Wood; Wood Charcoal			38				
Grand Total	6,874	6,407	238	18,318	1,406	12,539	13,696

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Wood pulp dominates the break bulk exports from Eastport, ME

Commodity	2003	2004	2005	2006	2007	2008	2009
Wood Pulp Etc; Recovd (waste & Scrap) ppr & pprbd	321,524	230,642	296,558	430,986	371,388	312,751	260,518
Fish, Crustaceans & Aquatic Invertebrates	1,672	3,342	1,669	2,109	1,510	4,433	3,817
Nuclear Reactors, Boilers, Machinery Etc.; Parts	166				377	330	
Electric Machinery Etc; Sound Equip; Tv Equip; Pts	160	98			159	36	
Leather Art; Saddlery Etc; Handbags Etc; Gut Art	26						
Works Of Art, Collectors" Pieces And Antiques	0						
Aircraft, Spacecraft, And Parts Thereof	0				80		
Aluminum And Articles Thereof					365		
Art Of Stone, Plaster, Cement, Asbestos, Mica Etc.					3		
Articles Of Iron Or Steel		0			30	0	
Carpets And Other Textile Floor Coverings					30		
Essential Oils Etc; Perfumery, Cosmetic Etc Preps					64		
Furniture; Bedding Etc; Lamps Nesoi Etc; Prefab Bd					93		
Glass And Glassware					5		
Iron And Steel					66	97	
Miscellaneous Edible Preparations				10			
Products Of Animal Origin, Nesoi		328					
Railway Or Tramway Stock Etc; Traffic Signal Equip		9					
Rubber And Articles Thereof					2		
Ships, Boats And Floating Structures			5		450	1	9
Soap Etc; Waxes, Polish Etc; Candles; Dental Preps					137		
Toys, Games & Sport Equipment; Parts & Accessories					15		
Vehicles, Except Railway Or Tramway, And Parts Etc					70		1
Wood And Articles Of Wood; Wood Charcoal			82	4			
Grand Total	**323,548**	**234,419**	**298,314**	**433,109**	**374,844**	**317,648**	**264,345**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

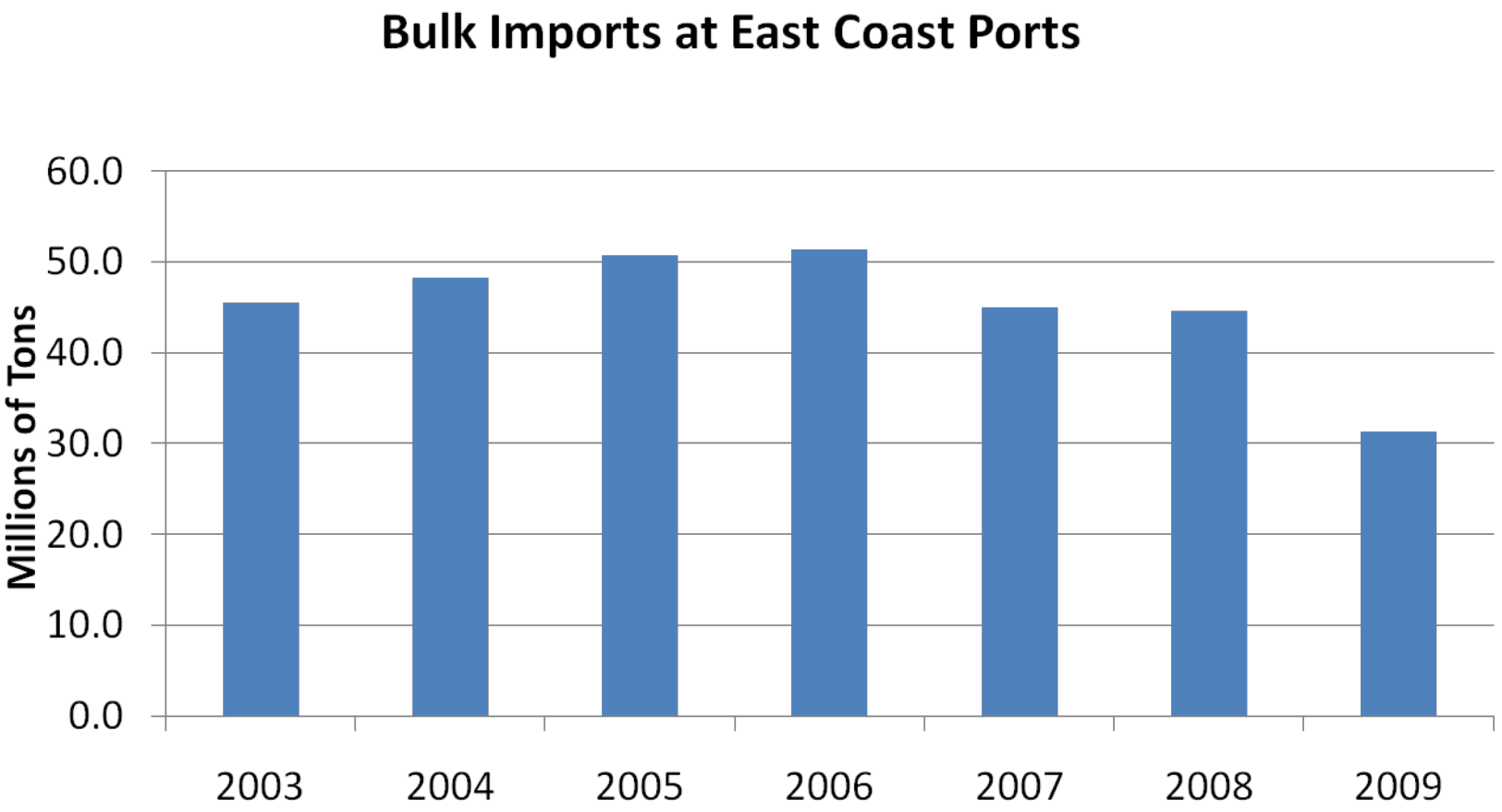
Waste scrap paper is the dominate break bulk export from Boston

Row Labels	2003	2004	2005	2006	2007	2008	2009	CAGR	Cum Share
Wood Pulp Etc; Recovd (waste & Scrap) ppr & pprbd	85,501	121,965	136,195	165,057	172,782	141,422	195,378	14.8%	72.44%
Wood And Articles Of Wood; Wood Charcoal	8,317	8,303	8,376	15,011	17,279	19,289	14,656	9.9%	77.87%
Fish, Crustaceans & Aquatic Invertebrates	4,307	4,877	13,427	16,446	5,971	9,208	13,453	20.9%	82.86%
Copper And Articles Thereof	2,561	2,424	1,797	2,583	5,215	3,301	2,544	-0.1%	83.80%
Paper & Paperboard & Articles (inc Papr Pulp Artl)	2,484	3,380	1,569	1,500	2,394	2,380	2,273	-1.5%	84.65%
Raw Hides And Skins (no Furskins) And Leather	2,169	2,604	2,205	1,422	1,878	1,232	520	-21.2%	84.84%
Electric Machinery Etc; Sound Equip; Tv Equip; Pts	1,795	1,778	895	903	1,335	2,108	726	-14.0%	85.11%
Nuclear Reactors, Boilers, Machinery Etc.; Parts	1,614	1,703	1,591	2,885	3,331	3,548	3,796	15.3%	86.52%
Vehicles, Except Railway Or Tramway, And Parts Etc	1,478	2,442	1,724	1,504	5,724	6,056	13,278	44.2%	91.44%
Articles Of Iron Or Steel	1,296	2,880	2,880	3,565	4,925	5,565	2,804	13.7%	92.48%
Photographic Or Cinematographic Goods	1,189	393	228	308	282	343	528	-12.7%	92.68%
Textile Art Nesoi; Needlecraft Sets; Worn Text Art	1,034	1,739	986	249	78	520	603	-8.6%	92.90%
Prep Cereal, Flour, Starch Or Milk; Bakers Wares	617	15	25	92	23	33	11	-48.9%	92.90%
Dairy Prods; Birds Eggs; Honey; Ed Animal Pr Nesoi	570	396	472	95	3			n/a	92.90%
Iron And Steel	552	430	908	1,379	3,314	1,556	3,006	32.7%	94.02%

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Dry Bulk Import Market

Dry bulk imports at East Coast ports have declined since 2006



Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Baltimore leads the East Coast in dry bulk imports

PORTS	2003	2004	2005	2006	2007	2008	2009	CAGR
Baltimore, MD	7,837,296	8,144,148	8,253,260	8,692,564	6,900,760	8,144,347	4,370,829	-9.3%
Jacksonville, FL	4,516,428	4,956,745	4,546,678	4,916,515	5,670,248	6,592,666	4,132,306	-1.5%
Newark, NJ	3,875,808	3,882,050	4,269,437	3,803,127	3,363,046	3,614,601	2,882,121	-4.8%
Charleston, SC	2,614,148	2,967,454	3,429,940	4,855,958	2,706,887	2,598,655	1,594,045	-7.9%
Savannah, GA	2,201,267	2,827,994	2,888,487	3,775,220	3,753,224	2,807,201	1,711,035	-4.1%
Philadelphia, PA	2,149,500	2,964,841	3,031,772	2,401,329	2,017,046	1,760,984	1,550,451	-5.3%
Wilmington, NC	1,938,078	2,267,279	2,496,591	2,404,950	2,616,429	2,158,902	1,771,997	-1.5%
Fall River, MA	2,057,201	2,081,034	2,086,260	2,226,034	1,970,076	2,001,406	1,671,059	-3.4%
Portsmouth, NH	2,208,491	1,571,548	2,132,162	2,137,742	1,575,860	1,772,915	1,508,610	-6.2%
Port Everglades, FL	2,536,936	2,711,554	2,564,119	2,490,574	1,365,749	636,773	347,272	-28.2%
Norfolk, VA	1,214,476	1,167,534	1,225,010	1,305,614	2,474,439	2,201,115	1,804,309	6.8%
Bridgeport, CT	1,261,451	1,351,525	1,432,653	1,595,112	2,080,926	2,119,469	1,102,097	-2.2%
Providence, RI	1,449,529	1,598,358	2,156,147	1,540,643	1,438,593	1,301,885	552,577	-14.8%
Port Canaveral, FL	1,499,113	1,597,556	1,640,744	1,757,565	1,340,526	1,079,678	990,544	-6.7%
New York, NY	1,137,905	2,057,791	1,604,224	1,583,468	900,919	624,150	1,203,870	0.9%
Boston, MA	1,267,639	1,078,982	1,149,323	343,434	657,364	773,856	1,136,951	-1.8%
Albany, NY	1,488,288	1,088,242	915,746	1,052,983	591,114	782,171	477,316	-17.3%
Wilmington, DE	939,037	906,424	1,257,848	1,027,901	697,261	923,736	482,496	-10.5%
Brunswick, GA	662,254	606,184	785,247	817,797	718,200	521,100	357,628	-9.8%
Portland, ME	504,422	351,181	671,254	447,993	403,061	452,611	250,194	-11.0%
Perth Amboy, NJ	633,187	609,948	449,781	437,236	292,490	321,477	290,876	-12.2%
Chester, PA	487,945	359,776	249,071	394,065	549,426	333,790	169,848	-16.1%
New Haven, CT	200,158	192,988	308,295	285,003	147,769	348,833	497,091	16.4%
Georgetown, SC	261,089	410,413	473,608	397,034	168,035	27,615		n/a
Newport News, VA	152,085	227,862	359,826	302,118	182,595	108,962	42,000	-19.3%
Beaufort-Morehead City, NC	203,380	52,776	70,089	81,927	153,813	206,663	179,359	-2.1%
West Palm Beach, FL	47,412	83,563	156,819	88,838	41,144	34,809	328	-56.3%
Searsport, ME		0	39,646	55,658	69,533	209,784	16,411	n/a
Paulsboro, NJ	81,635	43,371	76,081	14,938				n/a
Camden, NJ	1,006						174,582	136.2%
Miami, FL	9,588	13,943	8,959	26,705	23,807	16,915	6,606	-6.0%
Richmond-Petersburg, VA	412	1,153	8,044	5,581	6,581	27,650	10,374	71.2%
Fort Pierce, FL			1,814	7,031	22,793	18,280	3,307	n/a
New London, CT			13,489	27,237	1	1		n/a
Hopewell, VA				6,000	2,165		11,299	n/a
Belfast, ME					18,000			n/a
Fernandina, FL	41					3,831		n/a
New Bedford, MA			19					n/a
Total	**45,437,207**	**48,174,215**	**50,752,441**	**51,305,891**	**44,919,883**	**44,526,831**	**31,299,790**	**-6.0%**

Salt and stone are the major dry bulk cargo imports on the East Coast

Key Dry Bulk Import Commodities at East Coast Ports

COMMODITY	2003	2004	2005	2006	2007	2008	2009	CAGR
Salt; Sulfur; Earth & Stone; Lime & Cement Plaster	23,633,138	25,476,626	27,577,522	25,241,200	19,381,282	17,464,040	14,030,393	-8.3%
Coal; Briquettes, Ovoids Etc. Mfr From Coal	9,525,219	9,968,919	10,598,414	13,417,214	13,590,431	14,573,033	9,535,933	0.0%
Ores, Slag And Ash	3,965,843	4,154,186	4,272,486	4,759,595	4,414,429	4,823,504	1,472,536	-15.2%
Organic Chemicals	3,045,488	3,238,255	3,055,250	2,323,632	1,914,846	1,501,209	1,492,993	-11.2%
Inorg Chem; Prec & Rare-earth Met & Radioact Compd	2,009,559	2,049,821	1,862,480	1,953,127	2,005,993	2,317,773	1,750,434	-2.3%
Fertilizers	1,115,601	1,095,931	1,064,733	1,069,570	1,763,263	1,534,519	1,039,856	-1.2%
Sugars And Sugar Confectionary	582,937	611,645	785,207	1,019,389	775,355	1,100,070	869,748	6.9%
Ferrous Waste & Scrap; Remelt Scr Iron/steel Ingot	1,002,680	1,076,680	884,624	912,772	217,728	256,457	155,641	-26.7%
Animal Or Vegetable Fats, Oils Etc. & Waxes	258,567	324,086	411,524	419,657	491,538	497,914	550,908	13.4%
Miscellaneous Chemical Products	123,416	96,421	90,377	119,090	297,782	326,266	172,803	5.8%
Plastics And Articles Thereof	105,920	79,990	72,809	69,484	52,787	58,358	46,372	-12.9%
Cereals	67,420	712	35,598	621	13,863	73,239	181,842	18.0%
Oil Seeds Etc.; Misc Grain, Seed, Fruit, Plant Etc	1,418	943	41,416	540	586	450	332	-21.5%
Total	**45,437,207**	**48,174,215**	**50,752,441**	**51,305,891**	**44,919,883**	**44,526,831**	**31,299,790**	**-6.0%**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

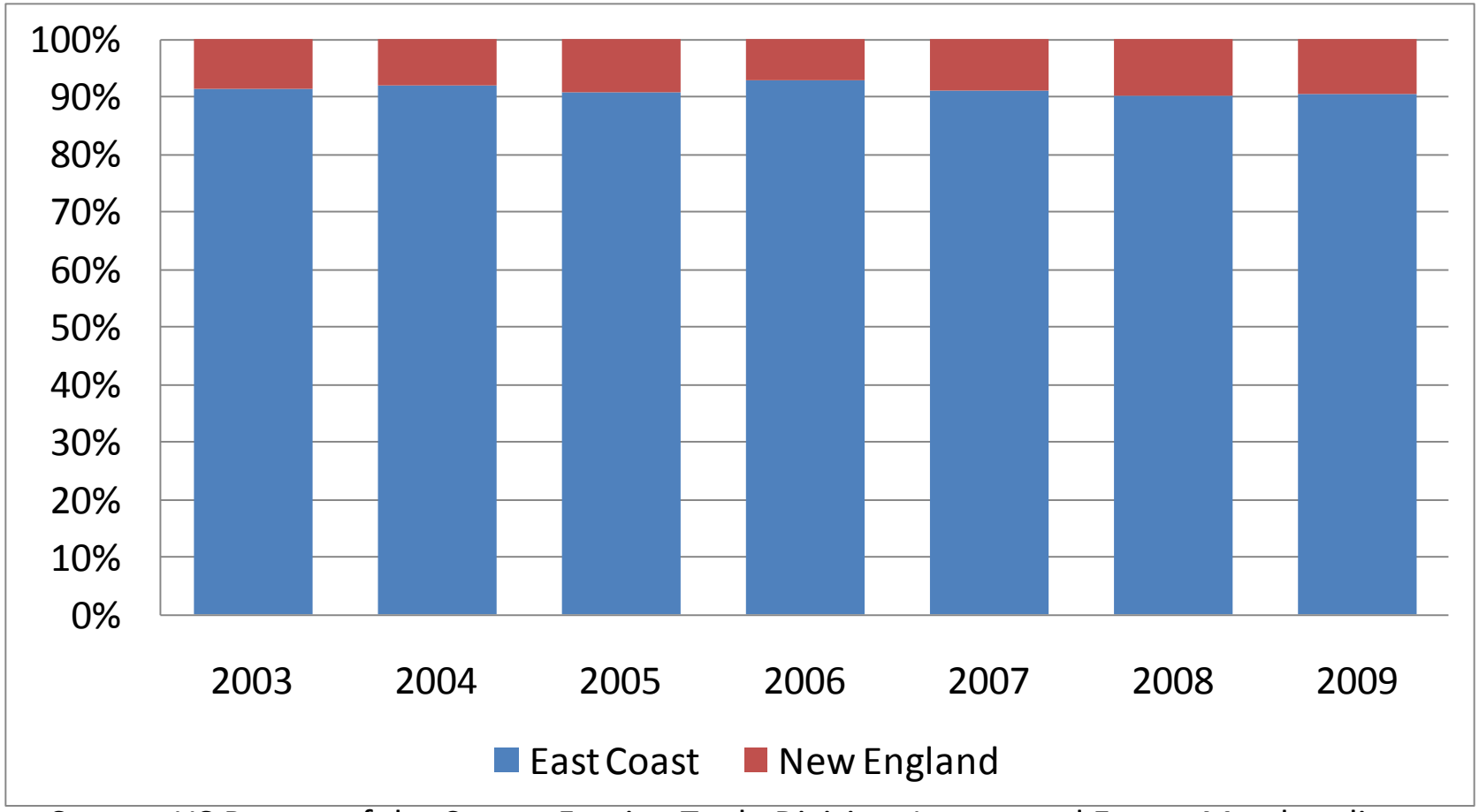
South America and Canada are the major dry bulk trading partners

Trading Partners, Dry Bulk Imports via East Coast Ports

TRADE AREA	2003	2004	2005	2006	2007	2008	2009	CAGR
South America	18,248,701	17,677,298	18,546,283	18,242,017	17,936,081	20,346,305	15,408,808	-2.8%
Canada	8,411,167	10,177,886	9,720,569	10,905,733	10,062,870	8,448,919	4,884,210	-8.7%
Northern Europe	4,355,560	5,195,667	4,861,532	4,653,658	3,420,441	3,516,755	2,160,474	-11.0%
Caribbean	3,837,790	4,592,936	5,053,682	4,148,292	3,562,590	3,625,122	2,425,405	-7.4%
Southeast Asia	2,162,728	2,470,931	3,454,206	5,412,490	4,484,842	3,693,112	2,436,433	2.0%
Mediterranean	4,165,005	4,389,582	5,274,807	4,397,936	2,624,291	1,961,582	1,215,194	-18.6%
Central America	1,595,903	1,299,125	1,492,963	1,649,941	1,472,733	1,640,263	1,633,741	0.4%
Middle East	1,004,956	1,209,602	1,171,232	473,250	245,085	268,088	338,335	-16.6%
Australia/New Zealand	1,084,352	636,597	615,185	646,574	132,228	45,556	120,575	-30.7%
Africa	389,832	425,169	501,527	405,810	434,137	382,668	186,855	-11.5%
Japan/Korea	39,531	11,088	19,074	173,201	384,244	368,657	466,577	50.9%
South Asia	141,682	88,266	41,370	196,989	160,327	229,804	23,175	-26.0%
Other		69	12		13		7	n/a
Grand Total	**45,437,207**	**48,174,215**	**50,752,441**	**51,305,891**	**44,919,883**	**44,526,831**	**31,299,790**	**-6.0%**

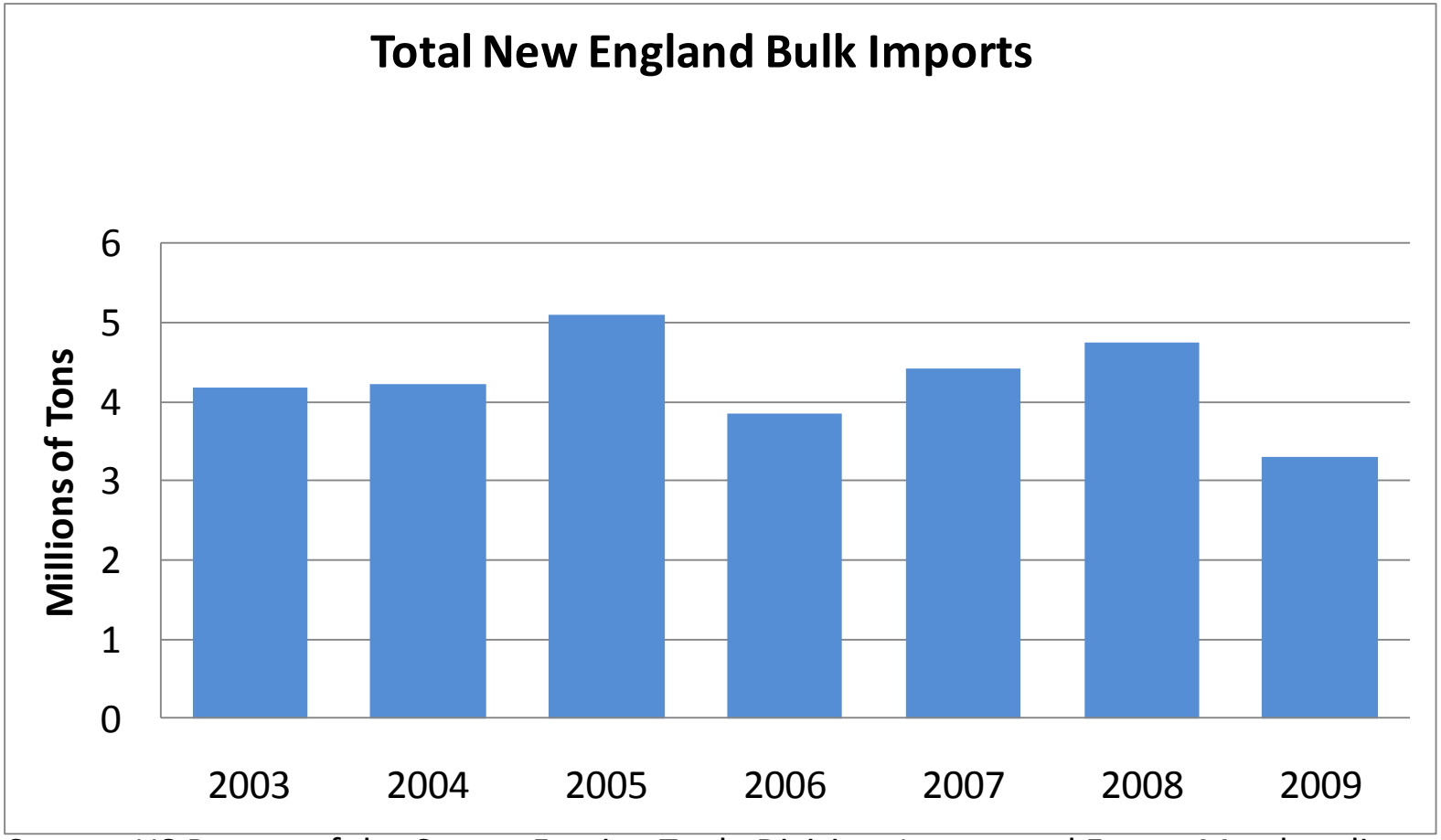
Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Dry bulk imports via New England ports are a small share of total East Coast dry bulk imports



Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Dry bulk imports via New England ports have not shown growth over time



Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Bridgeport, Providence and Boston are the major dry bulk import ports, but dry bulk imports have fallen at Providence

Row Labels	2003	2004	2005	2006	2007	2008	2009	CAGR
Bridgeport, CT	1,261,451	1,351,525	1,432,653	1,595,112	2,080,926	2,119,469	1,102,097	-2.2%
Providence, RI	1,449,529	1,598,358	2,156,147	1,540,643	1,438,593	1,301,885	552,577	-14.8%
Boston, MA	1,267,639	1,078,982	1,149,323	343,434	657,364	773,856	1,136,951	-1.8%
New Haven, CT	200,158	192,988	308,295	285,003	147,769	348,833	497,091	16.4%
Searsport, ME		0	39,646	55,658	69,533	209,784	16,411	n/a
New London, CT			13,489	27,237	1	1		n/a
Belfast, ME					18,000			n/a
Grand Total	**4,178,778**	**4,221,853**	**5,099,552**	**3,847,087**	**4,412,186**	**4,753,828**	**3,305,128**	-3.8%

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Coal and salt are the key import dry bulk cargoes at New England ports

Commodities	2003	2004	2005	2006	2007	2008	2009
Coal; Briquettes, Ovoids Etc. Mfr From Coal	1,557,383	1,743,153	2,078,337	2,125,749	2,742,018	2,984,138	1,344,773
Salt; Sulfur; Earth & Stone; Lime & Cement Plaster	2,523,718	2,386,123	2,898,815	1,659,715	1,523,208	1,588,000	1,845,847
Inorg Chem; Prec & Rare-earth Met & Radioact Compd	23,383	50,225	58,799	38,709	68,177	75,071	34,328
Miscellaneous Chemical Products	56,162	23,179	19,879	16,408	54,212	52,368	38,020
Animal Or Vegetable Fats, Oils Etc. & Waxes	17,518	13,848	20,957	1,021	12,065	51,253	41,004
Ores, Slag And Ash			10,518		8,006	1,728	
Organic Chemicals	51	3,972	4,035	4,204	4,155	58	9
Plastics And Articles Thereof	513	1,298	1,203	1,281	344	1,213	1,146
Fertilizers			6,987				
Oil Seeds Etc.; Misc Grain, Seed, Fruit, Plant Etc	38	45	1	1			1
Cereals		4	19				
Sugars And Sugar Confectionary	12	6	1		1	0	
Grand Total	**4,178,778**	**4,221,853**	**5,099,552**	**3,847,087**	**4,412,186**	**4,753,828**	**3,305,128**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Coal from SE Asia and salt from South America are the major trading partners with NE ports for dry bulk cargo imports

Trade Area	2003	2004	2005	2006	2007	2008	2009	CAGR
Southeast Asia	1,417,214	1,433,836	1,598,281	1,697,674	2,299,856	2,430,008	1,221,652	-2.4%
South America	1,117,358	1,331,797	1,714,474	1,246,531	1,439,763	1,555,680	1,363,220	3.4%
Caribbean	321,430	473,370	777,290	392,568	80,303	82,610	160,677	-10.9%
Mediterranean	464,841	362,049	441,824	165,261	177	264,391	95,516	-23.2%
Canada	176,730	183,104	208,400	254,781	457,470	169,049	140,824	-3.7%
Central America	382,283	289,988	235,927	70,305	97,935	164,478	300,171	-4.0%
Northern Europe	100,438	147,709	123,357	19,966	36,033	87,612	13,386	-28.5%
Australia/New Zealand	198,483					0		n/a
Japan/Korea		0				0	9,535	n/a
South Asia					650		147	n/a
Africa				1				n/a
Grand Total	**4,178,778**	**4,221,853**	**5,099,552**	**3,847,087**	**4,412,186**	**4,753,828**	**3,305,128**	-3.8%

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Providence has experienced a significant decline in coal and salt imports

Commodity	2003	2004	2005	2006	2007	2008	2009
Salt; Sulfur; Earth & Stone; Lime & Cement Plaster	1,134,113	1,171,383	1,515,970	985,709	743,007	390,183	297,372
Coal; Briquettes, Ovoids Etc. Mfr From Coal	295,932	391,629	609,347	530,637	643,092	864,669	242,676
Inorg Chem; Prec & Rare-earth Met & Radioact Compd	19,484	35,345	30,829	24,297	44,488	47,033	12,530
Ores, Slag And Ash					8,006		
Grand Total	**1,449,529**	**1,598,358**	**2,156,147**	**1,540,643**	**1,438,593**	**1,301,885**	**552,577**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Coal is the only dry bulk import handled at Bridgeport

Commodity	2003	2004	2005	2006	2007	2008	2009
Coal; Briquettes, Ovoids Etc. Mfr From Coal	1,261,451	1,351,524	1,432,653	1,595,112	2,080,926	2,119,469	1,102,097
Grand Total	**1,261,451**	**1,351,525**	**1,432,653**	**1,595,112**	**2,080,926**	**2,119,469**	**1,102,097**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

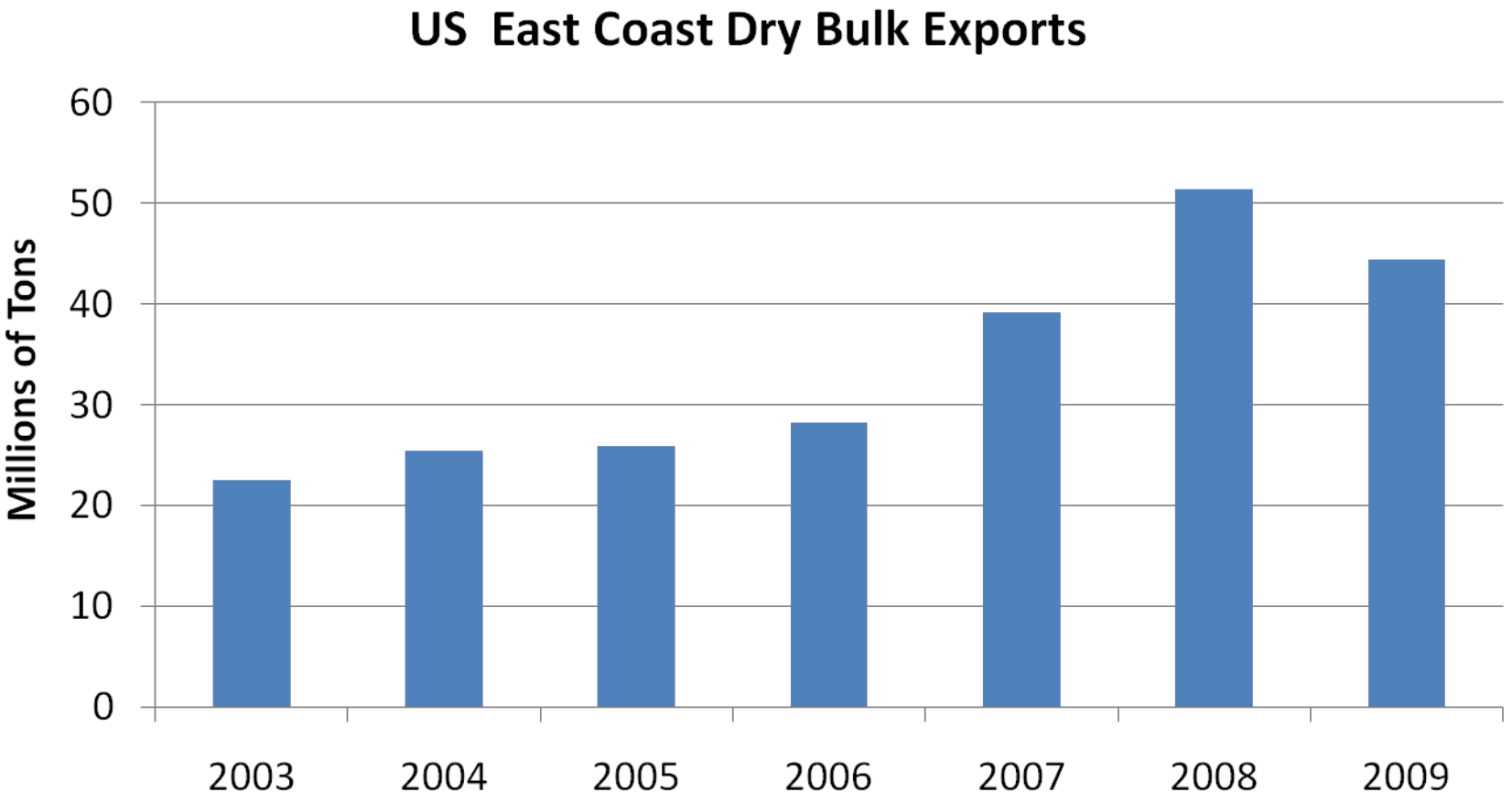
Salt is the dominant dry bulk import at Boston

Commodity	2003	2004	2005	2006	2007	2008	2009
Salt; Sulfur; Earth & Stone; Lime & Cement Plaster	1,193,359	1,035,741	1,093,561	321,104	612,059	691,438	1,080,791
Animal Or Vegetable Fats, Oils Etc. & Waxes	17,518	13,848	20,957	1,021	12,065	51,253	41,004
Miscellaneous Chemical Products	56,162	22,677	19,879	11,619	20,461	16,890	1,421
Inorg Chem; Prec & Rare-earth Met & Radioact Compd	117	5,357	13,674	8,406	12,407	13,006	12,579
Plastics And Articles Thereof	383	1,281	1,203	1,281	343	1,212	1,146
Organic Chemicals	51	24	27	3	28	58	9
Oil Seeds Etc.; Misc Grain, Seed, Fruit, Plant Etc	38	45	1	1			1
Cereals		4	19				
Sugars And Sugar Confectionary	12	6	1		1	0	
Grand Total	**1,267,639**	**1,078,982**	**1,149,323**	**343,434**	**657,364**	**773,856**	**1,136,951**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Dry Bulk Export Market

East Coast dry bulk exports have been increasing



Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

The Virginia Port Authority and the Port of Baltimore are leading dry bulk export ports (primarily coal)

PORT OF EXPORT	2003	2004	2005	2006	2007	2008	2009	CAGR
Norfolk, VA	9,598,477	7,726,815	10,174,488	11,399,581	14,756,247	18,739,603	14,882,679	7.6%
Newport News, VA	3,029,936	5,984,909	4,923,586	4,222,282	7,223,848	11,517,465	12,687,949	27.0%
Baltimore, MD	2,939,404	4,906,416	4,192,883	5,390,937	7,106,554	10,067,115	6,458,961	14.0%
Newark, NJ	1,311,166	1,024,936	1,331,599	1,579,782	1,868,644	2,123,318	1,843,789	5.8%
Philadelphia, PA	511,573	599,043	736,438	634,259	1,148,604	1,133,730	1,321,277	17.1%
Savannah, GA	1,461,690	1,304,753	1,443,271	1,705,454	1,899,439	1,799,308	1,311,030	-1.8%
Boston, MA	413,036	530,344	393,361	335,202	692,031	1,092,860	967,974	15.3%
Beaufort-Morehead City, NC	2,800	56,055	78,453	165	626	895,786	943,259	163.8%
New York, NY	372,620	413,989	506,605	701,026	1,491,916	1,205,978	613,960	8.7%
Hopewell, VA						85,643	593,013	n/a
Albany, NY	293,199	334,303	167,558	244,070	121,507	268,128	385,242	4.7%
Providence, RI	285,121	249,935	215,062	353,474	553,574	442,198	373,713	4.6%
New Haven, CT	192,107	223,478	239,103	272,847	356,840	412,578	317,312	8.7%
Port Everglades, FL	56,948	70,052	87,211	108,385	128,702	153,997	272,348	29.8%
Charleston, SC	312,798	470,711	300,710	393,110	583,566	435,635	250,345	-3.6%
Brunswick, GA	330,878	276,299	162,429	186,418	377,442	242,691	227,575	-6.0%
West Palm Beach, FL	319,090	258,340	195,606	86,195	198,916	129,537	175,202	-9.5%
Portsmouth, NH	143,095	233,985	189,850	220,071	85,469	136,238	163,468	2.2%
Miami, FL	153,077	119,515	129,513	150,424	92,541	195,307	155,265	0.2%
Wilmington, DE	9,864	2,550	2,919	10,221	71,396	37,265	98,868	46.8%
Calais, ME	41,425	47,075					90,489	13.9%
Jacksonville, FL	29,864	59,467	32,376	70,237	40,099	45,244	53,387	10.2%
Wilmington, NC	31,415	44,969	41,523	35,299	48,464	33,552	51,587	8.6%
Bridgeport, CT	9	10		23	41		49,556	319.1%
Camden, NJ	17,147	254	550	473	135	278	28,378	8.8%
Chester, PA	26,974	21,500	21,938	25,481	28,962	41,220	8,801	-17.0%
Fort Pierce, FL	1,247	6,693	4,915	18,496	20,546	17,599	8,674	38.2%
Fernandina, FL	3,334	1,843	2,362	2,421	2,804	2,900	5,383	8.3%
New London, CT	4	5,450					1,077	155.4%
Port Canaveral, FL	434	6,830	1,183	4,441	122,036	1,735	1,044	15.8%
Richmond-Petersburg, VA	11,489	19,550	20,489	6,883	7,097	143,728	954	-33.9%
Perth Amboy, NJ	465,195	357,496	229,972	40,247	37,967	4,356	70	-76.9%
Portland, ME	97,221	67,577	87	24,547	19,388	307	60	-70.8%
Gloucester City, NJ	175	7	0				1	-61.4%
Eastport, ME	27	8	11		73,418	15		n/a
Paulsboro, NJ		10,236	3,050		16,245	1,230		n/a
Gloucester, MA					850			n/a
Georgetown, SC	79		7	26				n/a
Searsport, ME	41		0		52	7		n/a
New Bedford, MA						73		n/a
Fall River, MA	3	22						n/a
Total	**22,462,962**	**25,435,414**	**25,829,110**	**28,222,479**	**39,175,965**	**51,406,625**	**44,342,691**	**12.0%**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Northern Europe and the Med are the major trading partners for the East Coast dry bulk exports

TRADE AREA	2003	2004	2005	2006	2007	2008	2009	CAGR
Northern Europe	7,556,110	7,030,553	7,935,843	9,238,883	12,730,432	17,832,161	14,001,632	10.8%
Mediterranean	6,424,238	5,521,002	7,936,448	10,862,866	14,910,023	16,947,428	11,028,517	9.4%
South America	2,316,286	2,899,044	2,733,731	3,164,534	4,162,545	5,573,581	6,537,089	18.9%
Southeast Asia	2,388,458	2,224,334	1,367,687	732,410	1,202,659	1,295,328	3,521,034	6.7%
South Asia	61,601	881,894	1,101,128	829,506	1,242,800	2,506,724	3,429,261	95.4%
Japan/Korea	1,610,543	4,740,238	2,842,785	910,165	1,267,243	2,960,794	2,572,960	8.1%
Africa	542,708	357,357	245,181	401,316	1,391,760	1,391,141	918,623	9.2%
Canada	658,476	578,963	529,710	692,937	1,018,020	1,120,536	871,751	4.8%
Caribbean	207,462	280,451	352,183	582,200	561,375	636,998	665,263	21.4%
Central America	609,919	805,184	649,999	664,870	552,597	990,735	651,398	1.1%
Australia/New Zealand	57,784	37,446	24,316	18,910	26,110	40,677	77,178	4.9%
Middle East	29,152	50,695	109,822	122,720	110,307	110,379	67,839	15.1%
Other	225	28,253	275	1,163	94	141	145	-7.1%
Total	**22,462,962**	**25,435,414**	**25,829,110**	**28,222,479**	**39,175,965**	**51,406,625**	**44,342,691**	**12.0%**

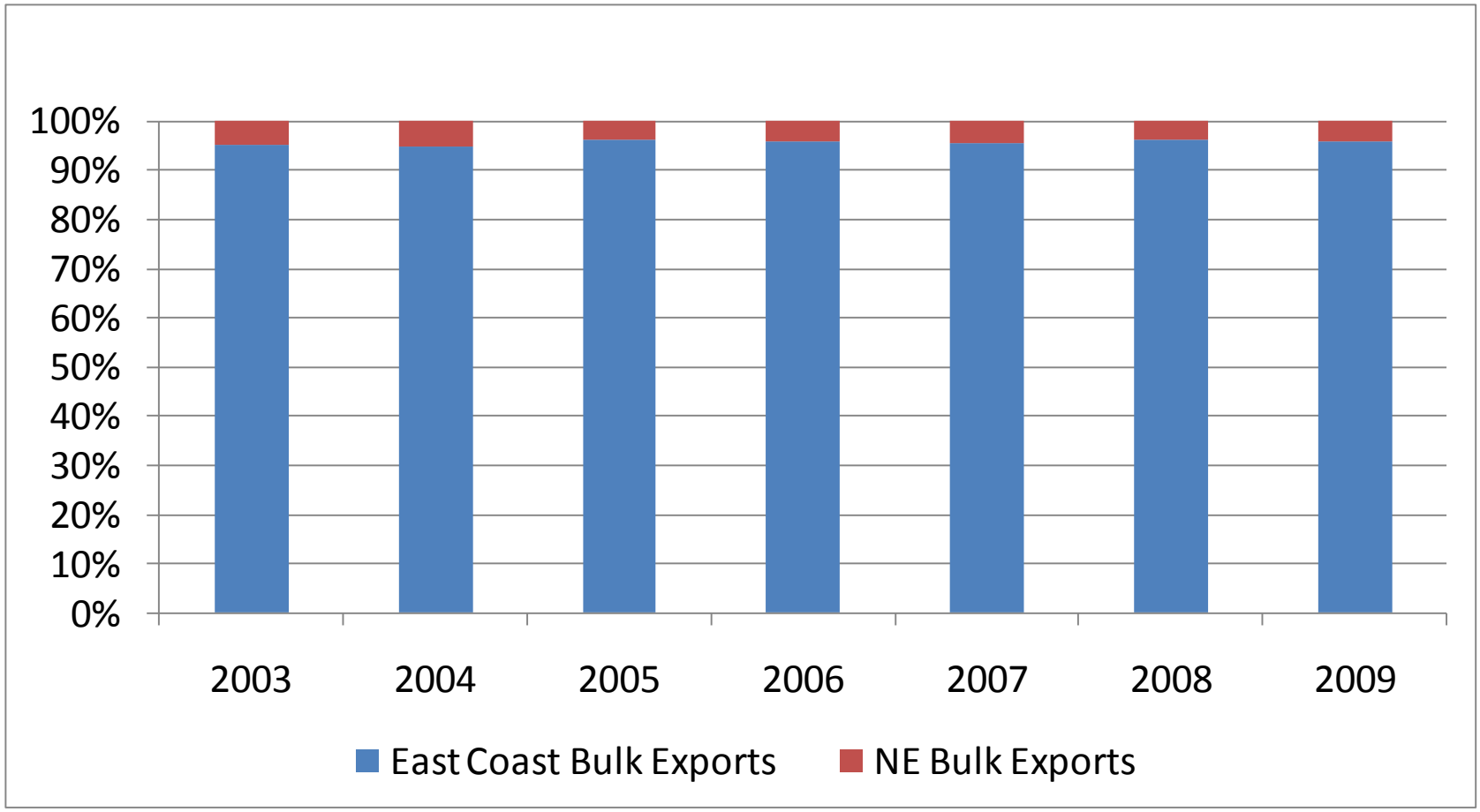
Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Coal and scrap are the leading dry bulk export commodities via East Coast ports

COMMODITY	2003	2004	2005	2006	2007	2008	2009	CAGR
Coal; Briquettes, Ovoids Etc. Mfr From Coal	14,567,511	17,978,025	17,738,551	18,920,655	26,555,859	37,137,909	31,415,183	13.7%
Ferrous Waste & Scrap; Remelt Scr Iron/steel Ingot	3,757,381	3,466,110	3,421,523	3,682,239	5,117,125	6,086,208	6,473,260	9.5%
Fertilizers						1,771,804	1,511,027	n/a
Oil Seeds Etc.; Misc Grain, Seed, Fruit, Plant Etc	653,146	479,020	934,094	713,733	775,126	642,290	987,416	7.1%
Cereals	399,651	297,130	645,699	1,588,737	2,569,292	1,791,551	981,029	16.1%
Salt; Sulfur; Earth & Stone; Lime & Cement Plaster	1,315,622	1,199,860	1,334,964	1,605,811	1,727,752	1,065,361	851,443	-7.0%
Inorg Chem; Prec & Rare-earth Met & Radioact Compd	94,712	174,316	200,108	111,828	129,740	558,002	574,331	35.0%
Plastics And Articles Thereof	426,047	528,766	368,996	407,516	589,836	586,974	548,132	4.3%
Animal Or Vegetable Fats, Oils Etc. & Waxes	256,748	220,078	218,466	280,762	300,993	387,656	335,883	4.6%
Miscellaneous Chemical Products	150,350	105,963	151,834	249,789	468,400	710,204	220,350	6.6%
Sugars And Sugar Confectionary	353,361	288,879	218,441	123,567	237,973	180,543	213,524	-8.1%
Organic Chemicals	374,592	555,299	427,899	430,627	642,461	455,552	204,139	-9.6%
Ores, Slag And Ash	113,841	141,968	168,534	107,214	61,409	32,572	26,974	-21.3%
Grand Total	**22,462,962**	**25,435,414**	**25,829,110**	**28,222,479**	**39,175,965**	**51,406,625**	**44,342,691**	**12.0%**

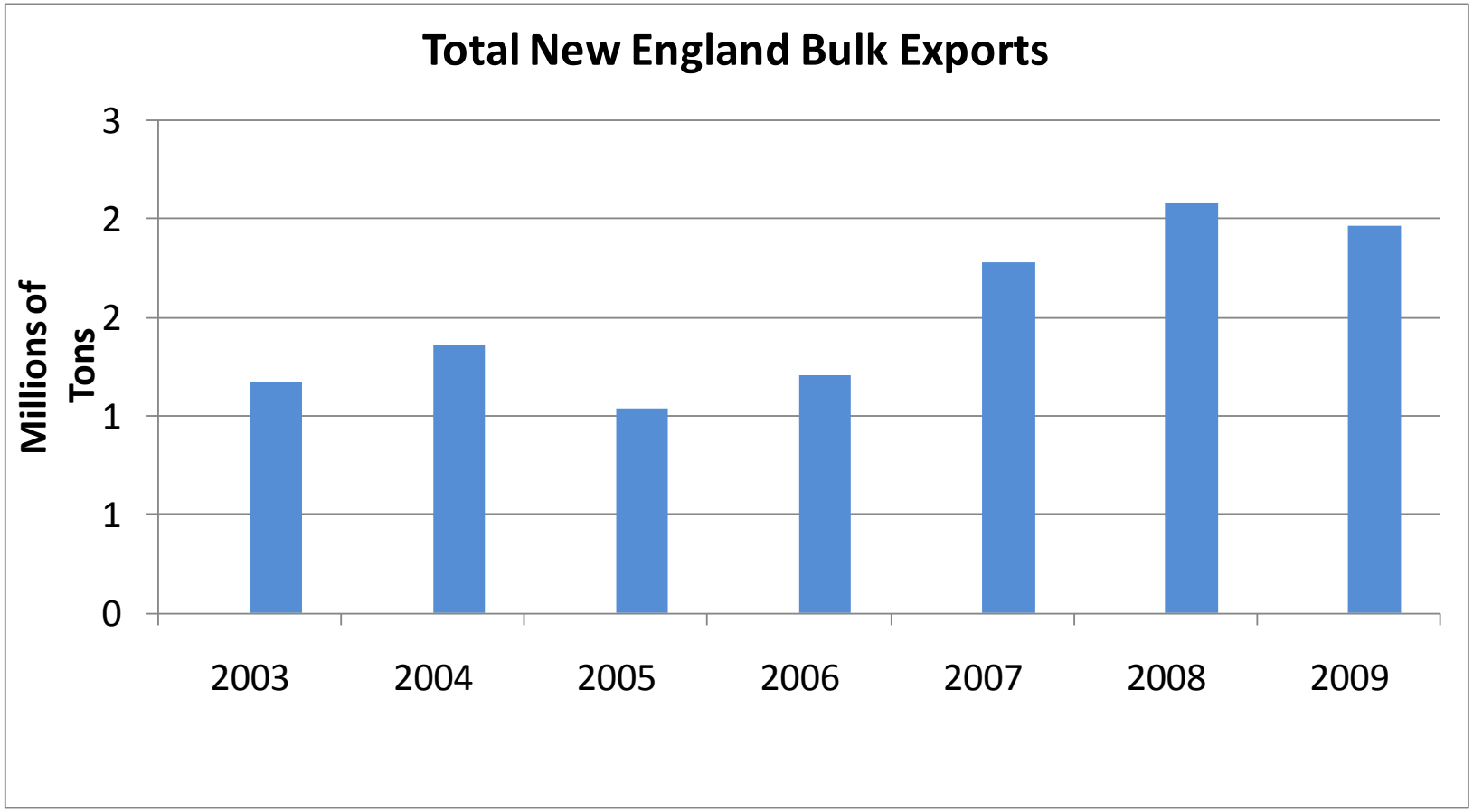
Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

New England dry bulk exports are small in comparison to East Coast dry bulk exports



Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

New England dry bulk exports have shown growth since 2006



Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Boston leads the New England dry bulk exports

Ports	2003	2004	2005	2006	2007	2008	2009	CAGR
Boston, MA	413,036	530,344	393,361	335,202	692,031	1,092,860	967,974	15.3%
Providence, RI	285,121	249,935	215,062	353,474	553,574	442,198	373,713	4.6%
New Haven, CT	192,107	223,478	239,103	272,847	356,840	412,578	317,312	8.7%
Portsmouth, NH	143,095	233,985	189,850	220,071	85,469	136,238	163,468	2.2%
Portland, ME	97,221	67,577	87	24,547	19,388	307	60	-70.8%
Calais, ME	41,425	47,075					90,489	13.9%
Eastport, ME	27	8	11		73,418	15		n/a
Bridgeport, CT	9	10		23	41		49,556	319.1%
New London, CT	4	5,450					1,077	155.4%
Gloucester, MA					850			n/a
Searsport, ME	41		0		52	7		n/a
New Bedford, MA						73		n/a
Fall River, MA	3	22						n/a
Grand Total	**1,172,090**	**1,357,884**	**1,037,474**	**1,206,165**	**1,781,664**	**2,084,276**	**1,963,650**	9.0%

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

The Med is the key trading partner for dry bulk exports from New England

Trade Routes	2003	2004	2005	2006	2007	2008	2009	CAGR
Mediterranean	143,245	344,771	520,804	972,636	1,455,111	1,709,318	1,135,112	41.2%
Southeast Asia	565,665	289,418	239,290	56,019	52,737	126,272	162,684	-18.8%
South Asia	379	45,019	185,003	448	157,251	99,619	268,288	198.5%
Japan/Korea	196,178	195,771	79	22,829	16,178	58,193	201,265	0.4%
Central America	144,846	211,069	36,394	121,777	27,354	42	19	-77.4%
South America	53,006	189,107	47,314	20,209	50,545	54,730	24,577	-12.0%
Canada	61,794	52,447	264	223	29	339	165,938	17.9%
Northern Europe	3,393	4,326	1,698	11,581	21,649	35,450	2,523	-4.8%
Caribbean	2,477	6,009	6,025	152	1	1	2,564	0.6%
Australia/New Zealand	7	14,176	4	69	21	121	146	65.9%
Africa	6	5,529	38	6	122	25	112	62.2%
Middle East	1,094	240	562	217	667	166	422	-14.7%
Grand Total	**1,172,090**	**1,357,884**	**1,037,474**	**1,206,165**	**1,781,664**	**2,084,276**	**1,963,650**	**9.0%**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Scrap is the leading dry bulk export from New England ports

Commodities	2003	2004	2005	2006	2007	2008	2009
Ferrous Waste & Scrap; Remelt Scr Iron/steel Ingot	1,077,910	1,256,014	1,008,062	1,137,276	1,684,506	2,011,715	1,747,692
Coal; Briquettes, Ovoids Etc. Mfr From Coal	41,539	47,147					164,861
Animal Or Vegetable Fats, Oils Etc. & Waxes	26,092	22,892	24,618	21,629	28,422	36,995	36,224
Organic Chemicals	70	14,577	23	15,269	31,676	53	93
Plastics And Articles Thereof	3,671	5,741	4,472	5,274	9,027	9,853	9,552
Salt; Sulfur; Earth & Stone; Lime & Cement Plaster	922	488	19	22,153	17,141	609	67
Miscellaneous Chemical Products	1,224	154	185	2,737	10,123	23,791	1,582
Sugars And Sugar Confectionary	20,161	5,069	11	57	13	70	2
Inorg Chem; Prec & Rare-earth Met & Radioact Compd	491	352	85	1,163	588	441	3,243
Cereals	1	5,450		10	5	44	11
Fertilizers						552	237
Ores, Slag And Ash				577	14	52	87
Oil Seeds Etc.; Misc Grain, Seed, Fruit, Plant Etc	9			20	150	101	
Grand Total	**1,172,090**	**1,357,884**	**1,037,474**	**1,206,165**	**1,781,664**	**2,084,276**	**1,963,650**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Scrap exports are the key dry bulk export from Boston

Commodities	2003	2004	2005	2006	2007	2008	2009
Ferrous Waste & Scrap; Remelt Scr Iron/steel Ingot	408,214	512,126	386,161	312,454	681,069	1,081,407	929,475
Plastics And Articles Thereof	2,808	3,258	4,165	5,031	8,832	9,064	9,523
Organic Chemicals	66	14,189	23	15,269	127	22	22
Coal; Briquettes, Ovoids Etc. Mfr From Coal							24,815
Inorg Chem; Prec & Rare-earth Met & Radioact Compd	469	244	85	1,163	536	441	3,224
Animal Or Vegetable Fats, Oils Etc. & Waxes	218	306	2,764	269	91	455	39
Miscellaneous Chemical Products	1,135	138	134	179	152	252	505
Salt; Sulfur; Earth & Stone; Lime & Cement Plaster	124	82	19	181	1,042	609	43
Fertilizers						552	237
Ores, Slag And Ash				577	14	52	78
Oil Seeds Etc.; Misc Grain, Seed, Fruit, Plant Etc				20	150		
Sugars And Sugar Confectionary		2	11	57	13	7	2
Cereals	1				5		11
Grand Total	**413,036**	**530,344**	**393,361**	**335,202**	**692,031**	**1,092,860**	**967,974**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Scrap exports dominate the exports from New Haven

Commodities	2003	2004	2005	2006	2007	2008	2009
Ferrous Waste & Scrap; Remelt Scr Iron/steel Ingot	192,104	223,478	239,103	272,847	346,900	389,039	317,312
Miscellaneous Chemical Products					9,940	23,539	
Organic Chemicals	3						
Inorg Chem; Prec & Rare-earth Met & Radioact Compd	0						
Plastics And Articles Thereof	0						
Grand Total	**192,107**	**223,478**	**239,103**	**272,847**	**356,840**	**412,578**	**317,312**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Scrap is the major dry bulk export from Providence

Commodities	2003	2004	2005	2006	2007	2008	2009
Ferrous Waste & Scrap; Remelt Scr Iron/steel Ingot	285,120	249,935	215,062	353,474	522,074	442,198	373,713
Organic Chemicals					31,501		
Plastics And Articles Thereof	1						
Grand Total	**285,121**	**249,935**	**215,062**	**353,474**	**553,574**	**442,198**	**373,713**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

IMPLICATIONS OF CARGO MARKET OVERVIEW

The New England Ports have a small share of the East Coast break bulk and dry bulk markets

- East Coast dry bulk imports are driven by coal and salt/stone
- Coal is the key dry bulk import at Bridgeport, while salt is the major import at Boston and Providence
- Coal is the major export from the East Coast ports
- Scrap is the leading dry bulk export from New England ports, and Providence

Several break bulk commodities have grown over time and represent potential opportunities for Rhode Island ports

- Overall, break bulk imports have not shown growth over the past decade
- Key break bulk cargoes that have shown growth over time are:
  - Break bulk fruit imports
  - Auto imports and exports
    - Davisville handles imports of new vehicles
    - ProvPort handles exported Previously Owned Vehicles
  - Pulp imports
  - Scrap paper exports
- Autos are the major break bulk imports and exports through Providence
  - Census Foreign Trade data reports "Providence" – includes Davisville and ProvPort
- Paper scrap exports are a key break bulk export from Boston
- Pulp is the major break bulk export from Eastport
- Steel is the major import via New Haven

THE CURRENT SITUATION AT RHODE ISLAND PORTS

Interviews were conducted to assess markets, facility descriptions, outlook of current cargoes handled at the Port of Davisville and Providence and to identify terminal constraints at Rhode Island ports

- Terminal operators in Rhode Island were interviewed:
  - Port of Davisville:
    - Port of Davisville, managed by the Quonset Development Corporation
    - Port tenants
  - ProvPort:
    - Tenants
    - ProvPort management
  - Future market opportunities/tenants for RI ports assessed
- To assess cruise market potential, Martin Associates interviewed the Newport & Bristol County Convention & Visitors Bureau regarding Newport cruise operations

Port of Davisville

Current Conditions

This section provides and overview of the current facilities in the State of Rhode Island as well as the outlook for the base cargoes handled at these port facilities.

Port of Davisville – Current Operations

- Davisville Waterfront District is comprised of 289.5 acres:
  - 239.1 acres are developed or developable
  - 50.4 acres are undevelopable
- Port of Davisville is served by two piers:
  - Pier 1 – built with load capacity of 500 lbs/sq ft
  - Pier 2 – filled cofferdam structure with load capacity of 1,000 lbs/sq ft
  - 29 ft channel – controlling depth
  - 31 ft alongside
- Port of Davisville currently has two tenants:
  - North Atlantic Distribution (NORAD) – automobiles:
    - Leases 160 acres – 50-year lease:
      - Last 35 acres currently being developed
  - Seafreeze – cold storage/seafood:
    - 15,000 ton freezer
    - 3-acre lease

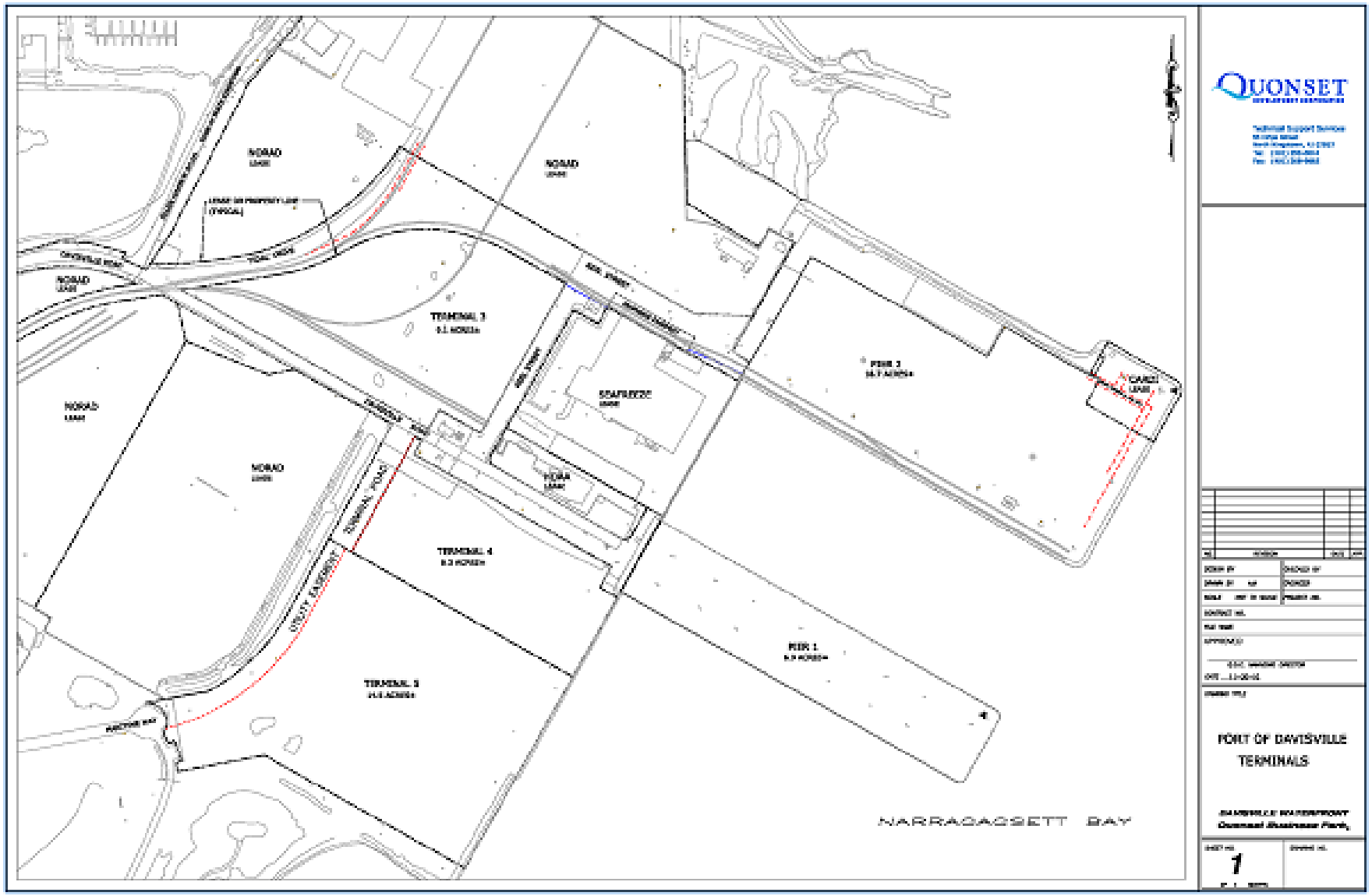
Port of Davisville received $22.3 million TIGER Grant for port development and improvements

Planned Grant Expenditures:

- $4 million – rehabilitate Piers 1 & 2
- $10.4 million – purchase and install mobile crane and crane platform
- $4 million – pave Terminals 4 & 5
- $1 million – rail projects
- $3 million – road projects

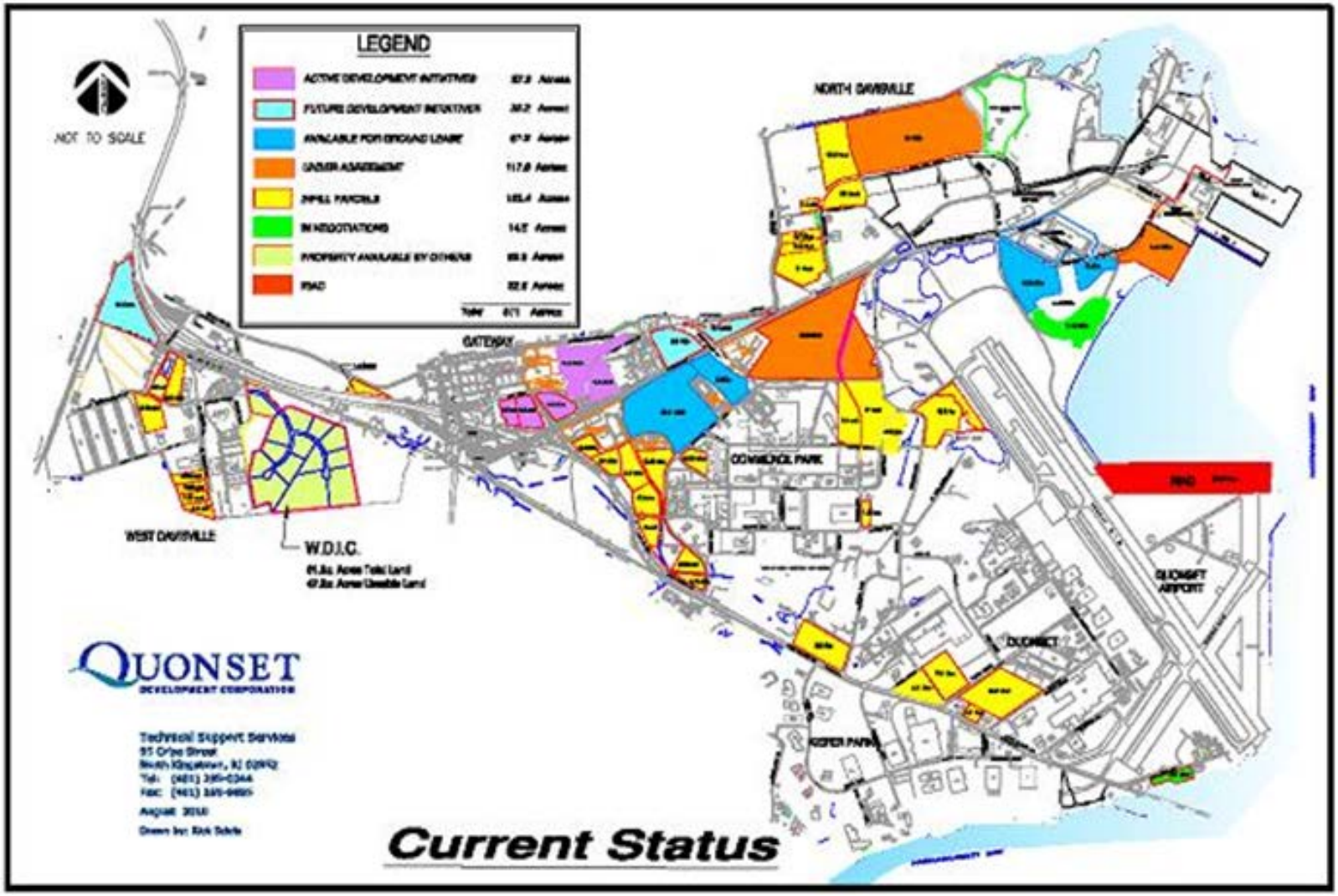
As of spring 2011, all projects other than upgrades to Terminal 4 & 5 completed or scheduled for completion

Port of Davisville: piers and tenant lease holds



Source: Quonset Development Corporation

Available sites at Quonset Business Park/Port of Davisville (sites under agreement with Deepwater Wind in orange) Limited Space to grow base opportunities or attract new opportunities



Source: Quonset Development Corporation

Automobiles

- Davisville is 3rd largest auto port in the Northeast (8th in North America):
  - 135,575 import units in 2010
    - Excludes domestics
  - Handles VW, Audi, Porsche, Subaru, Bentley and Ford
- By comparison:
  - New York handled 330,767 import autos
  - Baltimore handles 275,000 import autos
  - Boston handled 16,146 import autos

Automobiles (cont'd)

- Auto markets served via Davisville:
  - VW/Audi:
    - Market stretches from Maine to North Carolina and reaches into the Midwest
  - Porsche:
    - Market is New England to North Carolina to Midwest
  - Subaru:
    - New England market
    - ½ imported from Japan – ½ manufactured in Lafayette, IN and railed to Quonset/Davisville
  - Bentley:
    - 1,500-2,000 cars per year destined for eastern half of US
    - Requires inside storage
  - Ford:
    - Produced domestically and railed to Quonset/Davisville
    - New England market
- Ocean Carriers serving Davisville include:
  - NYK, K Line, Mitsui and VAG (VW leased ships)
  - 2,000-3,000 cars discharged daily

Automobiles (cont'd)

- Infrastructure is in place and expanding to handle high volume throughput at Davisville. **North Atlantic Distribution, Inc**. (NORAD) is actively marketing new accounts to expand business at Davisville:
  - 3 NORAD processing facilities are in operation totaling 180,000 ft^2 with a fourth building under construction.
  - Rail market accounts for 22% of the inbound automobile market:
    - 100% of Ford inbound (domestic) – 35,000 Units
    - 50% of Subaru inbound (domestic) – 20,000 Units
    - 5% stock transfers – i.e. cars to San Diego if needed
    - Can accommodate 30 rail cars at a time (50 autos/car)
  - Nearly all imported and domestic automobiles are distributed by truck to markets in New England and the eastern United States:
    - 18,000-19,000 trucks per month:
      - 8-9 autos per truck
      - 5 autos per truck if enclosed

Challenges for future growth of Auto imports in Davisville

- Tenant actively marketing new accounts to expand business at Davisville:
  - Targeting accounts from other competing ports

- There are issues facing the future of automobiles in Davisville:
  - Ability to fund dredging projects with non-Federal funds is key, since the use of Federal Funds will require US Army Corps of Engineers involvement, which will further impact the exemption from the harbor maintenance tax:
    - Deeper water will allow larger ships to call the port and increase throughput:
      - This would require in an estimated $7 million investment by the state
    - Currently the port is exempt from the Harbor Maintenance Tax, which equates to a savings of $12.50 per $10,000 of cargo value
    - The savings are important in the port choice of auto processors and importers/exporters
    - If the channel is deepened with Federal Funds, then the cargo will be subject to the Harbor Maintenance Tax, reducing the competitive advantage of Davisville

  - State funding of the deepening would preserve the exemption from the Harbor Maintenance Tax
    - Appropriations from the Legislature
    - Proceeds from Municipal or State bonds
    - Private sector financing

- Port of Davisville plans to deepen to 32’ portions of channel accessing the turning basin. It will propose financing via a FY 2013 revenue bond and a modest increase in tariff fees

- It plans to conduct proposed dredging during the October 2012 to January 2013 “dredging window”

Frozen Seafood

- Seafreeze owns and operates an on-dock freezer at Davisville:
  - It is the largest frozen-at-sea fish producer on the East Coast:
    - 15,000 ton capacity
    - The only competition is Cape May, NJ
  - It sells sea- and land-frozen fish and seafood to US and world markets:
  - 80 employees:
    - 45 on three boats

Frozen Seafood (cont'd)

- Frozen seafood is received in Davisville over the dock as well as by truck and rail from US and world markets:
  - Between 60-70% of the inbound products are delivered by water:
    - Over the dock on own boats (3) plus two other supplying boats:
      - Seafood frozen aboard ships
    - Containerized imports discharged at other US ports and trucked to Davisville
  - About 20-30 truck loads are shipped in and out of the freezer per day:
    - 40,000 lbs/load, some LTL
  - Rail cars are used for shipments to/from the West Coast:
    - 150,000 lbs/load
  - Typical dwell time for products in the freezer is 5-6 months

Frozen Seafood (cont'd)

- Outbound markets are primarily international:
  - 95% of the exports are containerized:
    - 70-80% export containers via NY or Boston
  - The single largest market is Alaska:
    - Outbound – squid used as bait for cod
    - Inbound – cod
- Business is growing 15-20% annually, which could result in capacity constraints under existing operating practices:
  - To increase capacity, the dwell time of the cargo could be reduced or the composition of the cargo now occupying space in the freezer can be changed to focus on import operations, rather than domestic storage
- *Could the cold storage facility provide a potential site for import of perishable fruit and meats?*

ProvPort/Port of Providence Current Conditions

ProvPort is a privately operated marine terminal in Providence

- ProvPort occupies about 105 acres:
  - On-dock rail with 3 rail spurs
  - 20 acres of open lay down area
  - 300,000+ ft^2 of enclosed warehouse space:
    - Includes indoor rail spur
    - Adjacent to pier face and on-dock rail lines
- Potential expansion possibilities exist at the site at southern end of terminal:
  - adjacent to Ports America – (see Port Tenants map)

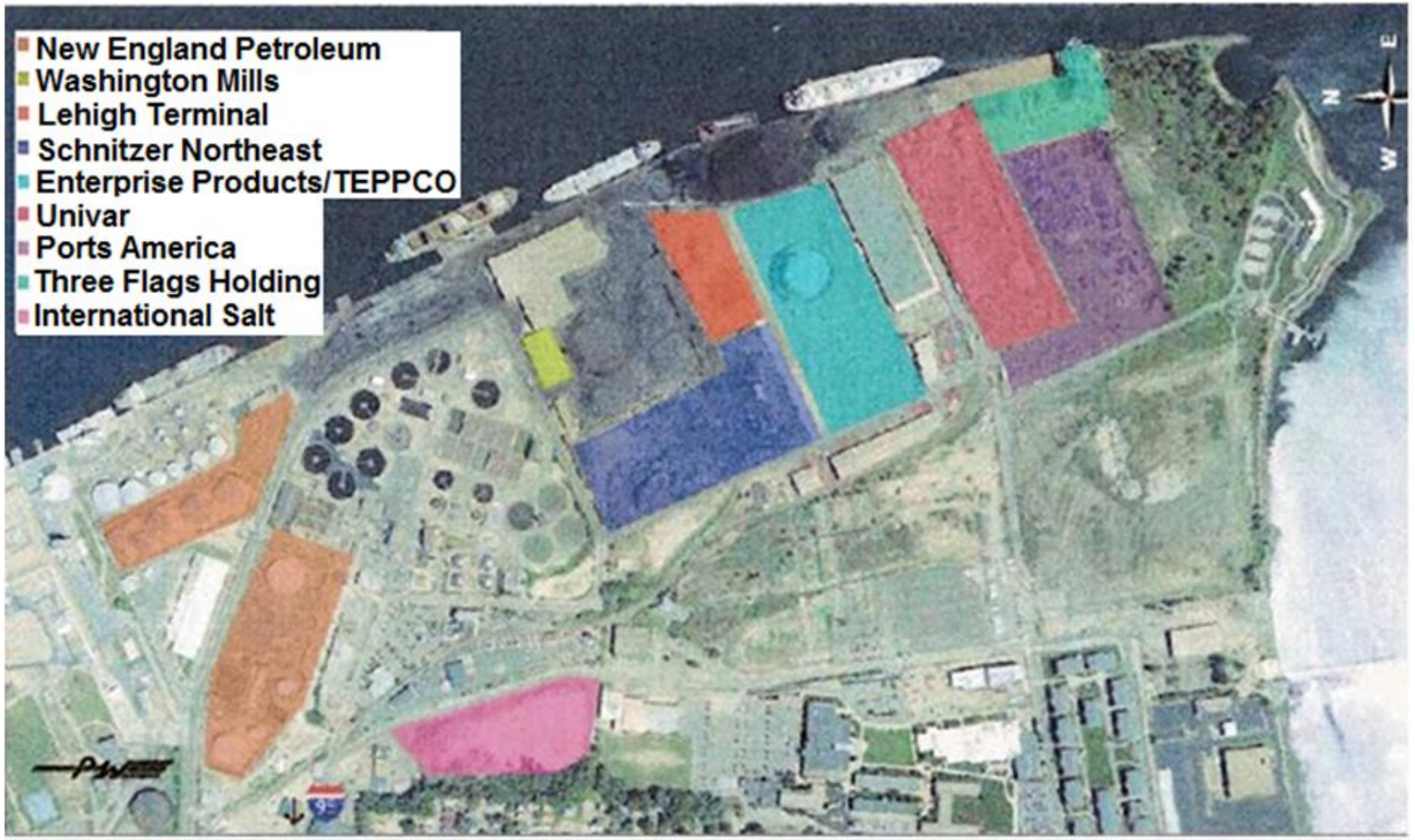
ProvPort has over 1 mile of berthing, capable of working 6 ships at one time

- Berth #1:
  - 29 ft @ 7 ft off dock wall
  - 30 ft with fixed fendering (11 ft)
  - 31 ft @ 20 ft off dock wall
- Berth #2:
  - 29 ft @ 7 ft off dock wall
  - 32 ft @ 13 ft off dock wall
  - 33 ft @ 20 ft off dock wall
- Berth #3:
  - 26 ft @ 7 ft off dock wall
  - 31 ft @ 13 ft off dock wall
  - 35 ft @ 20 ft off dock wall
- Berth #4:
  - 35 ft @ 7 ft off dock wall
  - 38 ft @ 13 ft off dock wall
  - 40 ft when 20 ft off dock wall
- Berth #5:
  - 35 ft @ 7 ft off dock wall
  - 38 ft @ 13 ft off dock wall
  - 40 ft when 20 ft off dock wall
- Berth #6:
  - 35 ft @ 7 ft off dock wall
  - 37.5 ft @ 13 ft off dock wall
  - 40 ft when 20 ft off dock wall

ProvPort received $10.5 million TIGER Grant to enhance cargo handling capability

- Grant will contribute towards the purchase of 2 cranes (about $11 million each):
  - Cranes will be mounted on barges for movement throughout the Bay:
    - Cranes will be purchased in Europe
    - Barges will be purchased in the US
- Cranes will support existing cargoes and expand capabilities for new markets

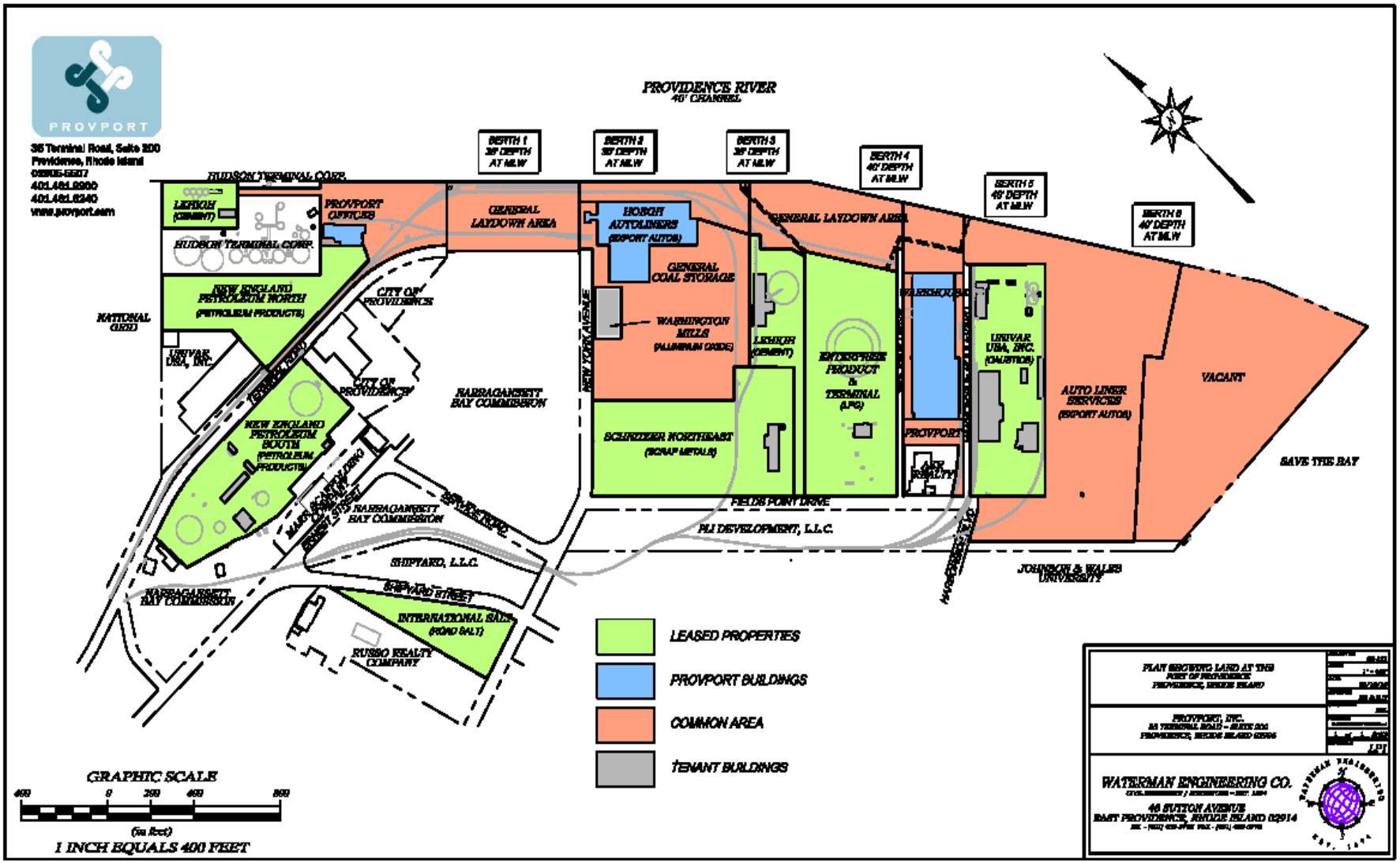
Location of ProvPort Tenants



*New England Petroleum is a customer of Motiva and Motiva is not a tenant of ProvPort

Source: ProvPort

ProvPort Lease Plan



Source: ProvPort

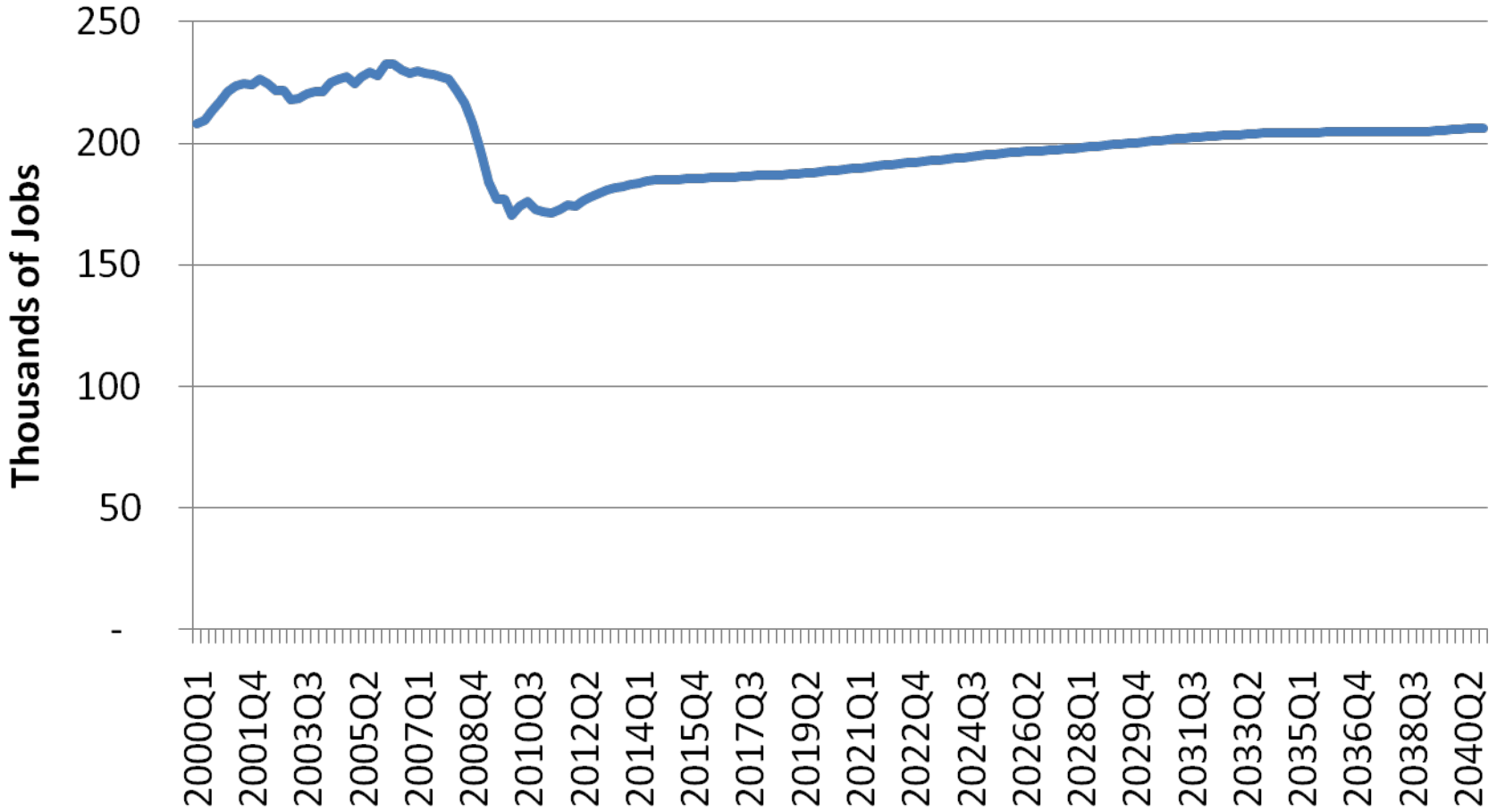
Washington Mills imports aluminum oxide and ferrosilicon for manufacturing of abrasive materials

- Leases a 26,000 ft^2 warehouse with a storage capacity of 28,000 tons
- Annual imports average 50,000 tons per year
- Products are discharged from ships, stored on-dock until needed:
  - Maintains inventory at all times at ProvPort
- Products are trucked to North Grafton, MA for manufacturing:
  - 85-90% of finished products destined for US markets
  - 10-15% exported in containers, primarily through New York and Boston (West Coast ports have been used)
- No change in market is seen in the near-term
- There are no terminal/facility constraints for the aluminum oxide operations in the near future

Lehigh Cement receives and stores cement at ProvPort for regional distribution

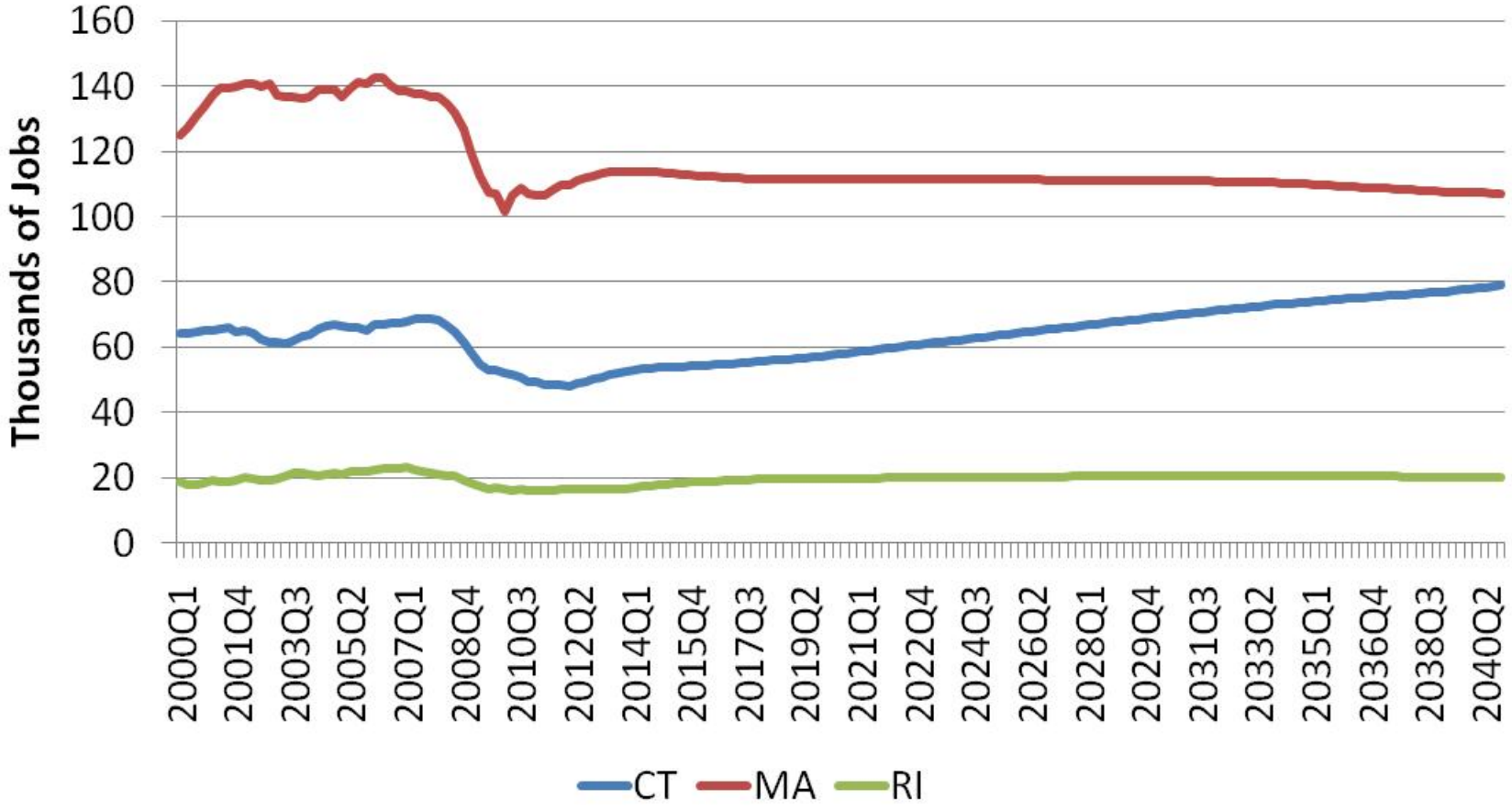
- Leases a 45,000 ton capacity storage dome
- ProvPort reports an average of 67,000 tons of cement were handled between 2007 and 2010 – dependent on market conditions, specifically construction activity in Rhode Island and Southern Massachusetts
- Theoretically, annual throughput capacity is estimated at 1 million tons.
- This operation is not water dependent:
  - Cement arrives by rail from plants in PA, MD and Upstate NY
  - Cement moves out by truck to customers in a 60-75 mile radius
- No facility constraints at this time for cement operations
- The following chart shows the projected level of construction activity in Rhode Island
  - This suggests that recovery in the local construction industry will be slow

Construction in Southern New England has been impacted by the recession – Moody's.com projects a very slow recovery in new construction activity in Southern New England



Projected Construction employment in the States of RI, MA and CT– Source: Moodys.com

Construction in Southern New England has been impacted by the recession – Moody's.com projects RI market will remain steady in the future while CT market is projected to grow – MA market is not projected to recover



Projected Construction employment in the States of RI, MA and CT– Source: Moodys.com

Schnitzer Northeast – scrap metal

- 7 acres of open storage area are leased by Schnitzer
- 500,000-600,000 tons of scrap handled annually:
  - ProvPort reports an average of 572,000 tons were handled in the last 4 years
- Theoretical capacity estimated at 1½-2 million tons
- Scrap is delivered to ProvPort by truck, rail and barge and is shipped out on ships
- 5% annual growth is anticipated in the near-term
- Sufficient capacity as terminal is operating at less than 50% of capacity:
  - However, this has been a dominant export cargo from New England ports historically

Enterprise Products (formerly TEPPCO) receives imported LPG from Algeria

- Enterprise operates a 420,000 barrel (bbl) storage tank at ProvPort:
  - Inventory turns every 5 weeks in winter
  - Inventory turns every 2 months in summer
- 196,000 tons of LPG are imported annually on average:
  - Sole customer controls the markets:
    - Source, destinations and costs
    - Has the market insight
- No growth in throughput anticipated in mid term
- Capacity adequate to handle future growth potential

Univar – caustic soda 50%

- An average of 47,000 tons are imported annually
- Univar key markets are:
  - Food industry
  - Personal care
  - Pharmaceuticals
- Projecting 9-10% growth in 2011:
  - Committed to aggressive growth in New England:
    - General growth
    - acquisitions
- Terminal capacity adequate to handle future anticipated growth

Ports America handles used cars for export

- Leases 12 acres for automobile storage and handling
- 20,000 previously owned vehicles (POV's) exported in 2009:
  - New England is the primary originating market
  - Automobiles also originate from as far as Ohio and Canada
- 40 ship calls at ProvPort in 2009:
  - Hoegh Autoliners provides vessel service
  - 75% of export market is to Africa
  - 25% of export market is to the Mediterranean
- Market is growing
- Ports America has experienced constraints at ProvPort:
  - Only 4 of the 6 berths can handle auto ships (due to water depth restrictions alongside)
  - Land constrained to expand POV business

International Salt imports salt for roads

- Leases storage area at ProvPort and also has an off-port facility
- An average of 236,000 tons were handled between 2007 and 2010
  - ProvPort reported 339,000 tons in 2010
- Market area is Southeastern New England:
  - Rhode Island and portions of Massachusetts
  - Most customers are located within a 50-mile radius
- Morton reported salt storage pile height restrictions is the capacity constraint:
  - Salt pile height is restricted to prevent blocking views by neighbors
  - Demand driven by weather conditions

Implications for Current Base Cargo at Rhode Island Ports

- Auto business at Davisville represents a significant potential growth opportunity
- Can Port of Davisville or ProvPort compete in the perishable fruits and meat market?
- Capacity exists at ProvPort to support the future projected growth of the base commodities

CARGO MARKET OPPORTUNITIES

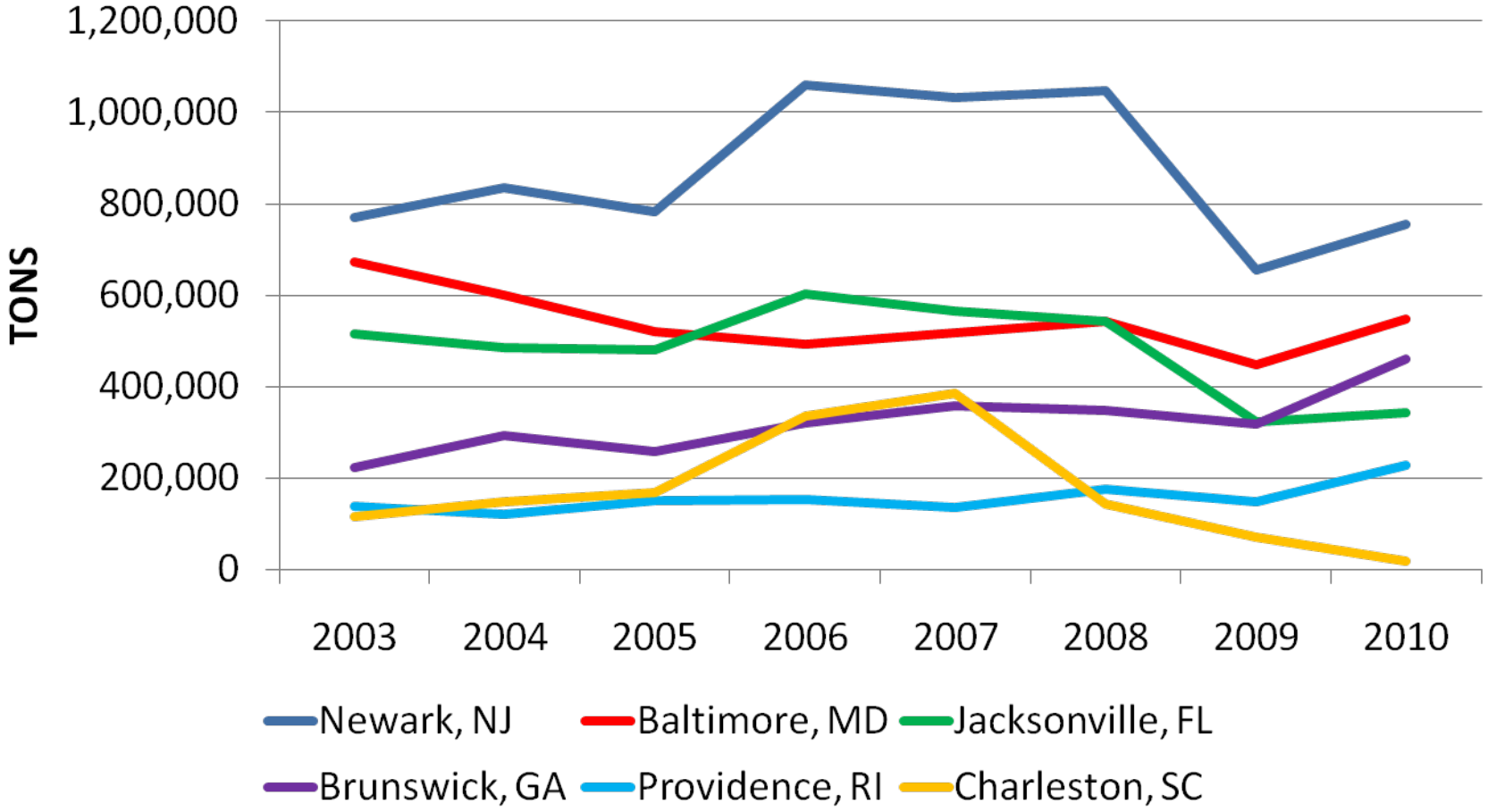
In this section, potential market opportunities are analyzed to determine the ability of Rhode Island Ports to capture a share of these markets. These markets include increasing the Rhode Island participation in the Atlantic automobile import and export market, the participation in the wind energy markets, particularly the off shore markets, and the potential to develop short sea shipping opportunities through the development of a container feeder operation.

Potential Auto Markets – The Competitive Environment

Potential opportunities for Davisville – Automobiles

- Auto import, export and domestic mixing operations for new autos at Davisville have been growing
- Major competition is:
  - New York/Newark
  - Boston
  - Baltimore
  - Philadelphia

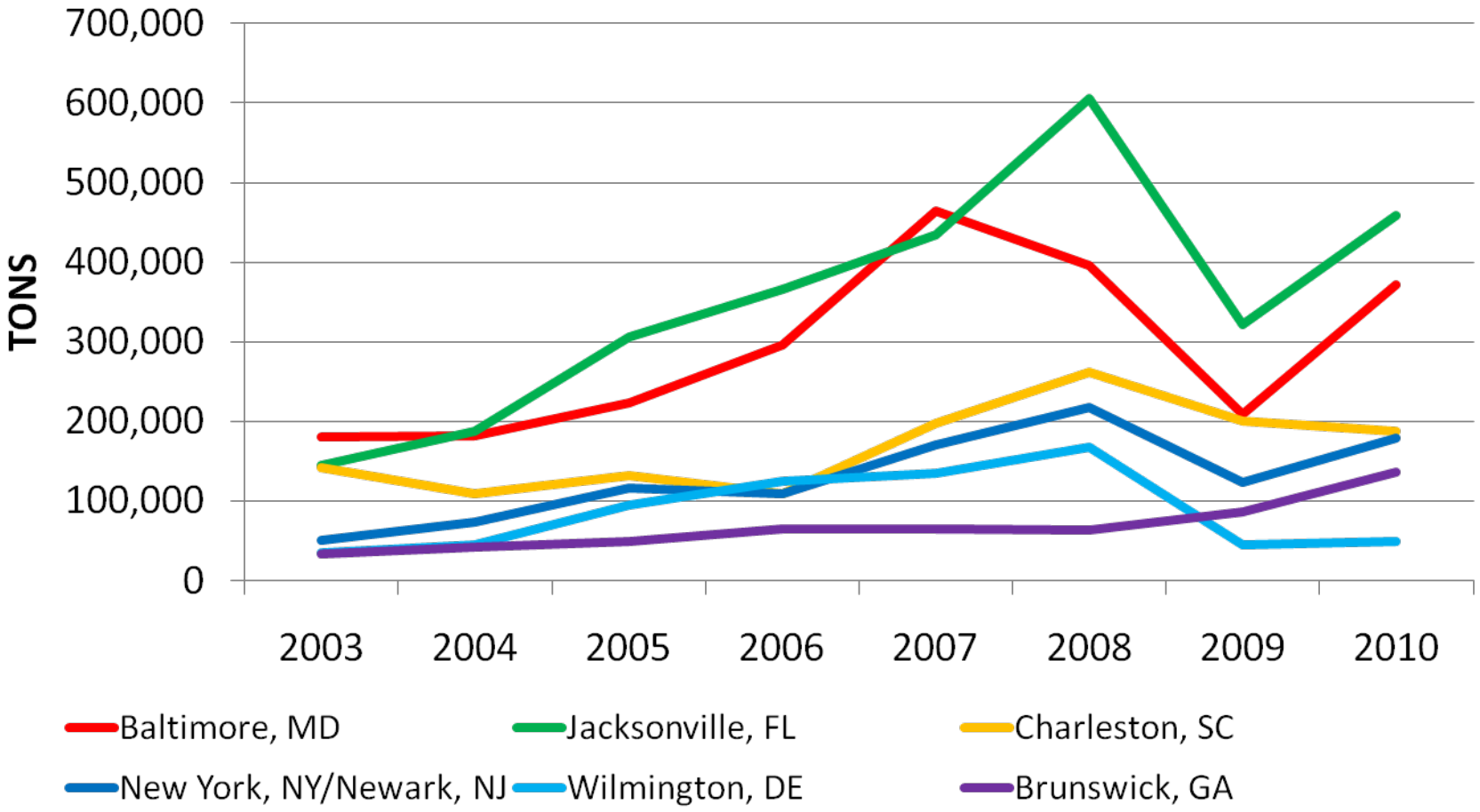
Auto imports have declined at all major Atlantic Coast ports, except for Rhode Island – With the exception of Newark, the gap in auto import share by port is narrowing, and Davisville (Providence) has gained market share over time



Note: Does not include domestic autos handled at mixing facilities located at the ports

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

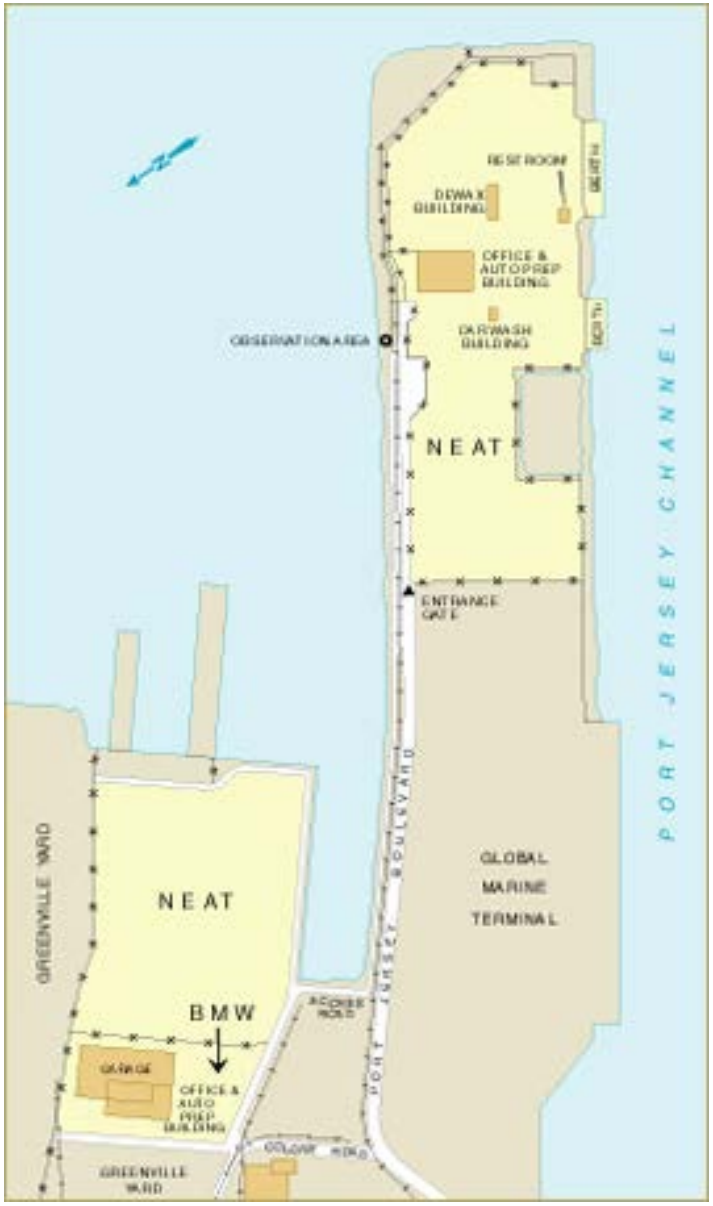
Auto exports via major Atlantic Ports have been growing until the recession, and the declines are most apparent at Jacksonville and Baltimore – Rhode Island Ports should focus on increasing export autos



Note: Does not include domestic autos handled at mixing facilities located at the ports

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Automobile Terminals at Port Authority of New York/New Jersey



Source: Port Authority of New York/New Jersey

- NEAT (North East Auto Terminal):
  - 130 acres
  - 1,800 ft. of berthing
  - 32 ft. depth
- MOTBY terminal has been purchased by PANY/NJ and will likely be used as a container terminal, not auto terminal

Auto Facilities at the Port of Philadelphia

- Pier 98 is operated by Philly RO/RO Partners
- Glovis imports and processes 150,000 Hyundai's and Kia's
- PRPA invested $1 million and Philly RO/RO partners invested $3.7 million
- Holt Logistics' subsidiary, Greenwich Terminals, leases the terminal, and Holt Logistics negotiated the deal with Glovis
- "Word on the street" is that PRPA receives less than $10.00 per car:
  - Most ports receive $20-30/auto in revenue
  - Philadelphia essentially bought the business from Baltimore

South Jersey Port Corporation – Paulsboro Site offers a potential for auto import terminal development

- Targeting off shore wind energy support, RO/RO and break bulk
- Phase I of Facility upgrade (Being developed through bond issued by SJPC):
  - 2 berth facility
  - Rail loop
  - 75 acres of open storage

- Phase II:
  - Third berth and barge berth
  - 125 additional acres of outside storage

- Conrail connecting to NS and CSX
- 40 ft. of water, possible 45 ft.
- Looking for private sector investor for Phase II

Auto facilities at the Rhode Island Ports

- Port of Davisville:
  - 4,500 linear feet of berthing space
  - Two piers (each 1,200 feet in length)
  - 29 ft controlling depth - mean low water (MLW)
  - On-dock rail
  - 31.3 acres for auto storage
  - 120+ acres for processing
  - No Harbor Maintenance Tax
  - Volkswagen/Audi, Porsche, Subaru, Bentley accounts
  - Ford uses Davisville for domestic distribution:
    - 25,000 cars will be railed by Norfolk Southern initially
    - Volume projected to 75,000 cars per year
  - The absence of the Harbor Maintenance tax is a key competitive advantage for the Port of Davisville. If federal dredging were required, the Port may be subject to the Harbor Maintenance Tax.
  - Therefore, deepening should focus on state or private sector funding

- Port of Providence:
  - 12 acres for auto storage
  - 4 of 6 berths capable of docking RO/RO vessels

Auto throughput potential

- The import market has been in decline, but opportunities should focus on:
  - Discussion with Glovis, the logistics company handling the Hyundai Kia imports throughout the United States:
    - Philadelphia is the current port now used by Glovis, and the PRPR has “a very low” throughput charge, and as a result this could be a difficult account to attract
- Auto business at Boston and New York/New Jersey is a also a potential target, given the growth in containerized cargo at New York/New Jersey and the recent purchases of the Port Authority of the MOTB terminal for future container operations
- Further focus by Davisville on exports as well as the continued development of the domestic distribution business
- It is essential to remain free of the Harbor Maintenance Tax (HMT), and focus should also be on higher value autos to maximize the absence of the Harbor Maintenance Tax

Perishable Cargo Market – Atlantic Coast Overview

Potential opportunities for Providence – Fresh Fruit

- Historically, Bridgeport handled imported break bulk bananas for Turbana
- This market has demonstrated a stable growth over time, and is a labor-intensive port cargo activity, as shown in the table on the following page
- Turbana left Bridgeport for Philadelphia in 2008, and had been identified as a potential customer for Davisville previously by Martin Associates
- Interviews were conducted with several break bulk fruit importers and cold chain logistics providers to identify potential market for Providence and Davisville

Wilmington and Philadelphia dominate the fresh fruit market

Ports	2003	2004	2005	2006	2007	2008	2009
Wilmington, DE	635,932	665,899	680,069	587,993	616,374	491,085	485,461
Philadelphia, PA	701,278	631,064	480,318	469,482	419,886	492,643	536,803
Bridgeport, CT	178,604	178,665	180,031	180,243	173,810	47,831	
Port Everglades, FL	3,061	4,298	4,695	4,657	30,274	174,918	120,426
Port Canaveral, FL	23,660	3,907	5,489	11,014	48,681	52,272	45,334
Newark, NJ	9,728	7,205	857	1,539	703	1,032	600
Norfolk, VA	426	5,393	1,070	101	8	27	47
New York, NY	1,887	322	131	373	61	100	59
Charleston, SC	1,411	588	95	62	82	15	8
New Bedford, MA			1,609				
Jacksonville, FL	1,225	9			17		
Baltimore, MD	78		17	718	311	44	27
Savannah, GA	299	318	41	74	52	1	18
Boston, MA	2	8	2	36	17	137	93
Newport News, VA	26	36	17				
New Haven, CT					78		
Portland, ME	18						
Grand Total	**1,557,634**	**1,497,713**	**1,354,441**	**1,256,292**	**1,290,353**	**1,260,105**	**1,188,876**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Potential opportunities for Rhode Island – Fresh Fruit

- Imported fruit tends to be income inelastic, and has shown steady growth over time at Atlantic Coast ports
- Key break bulk imports of fruit handled on the Delaware River:
  - Wilmington, DE:
    - Dole
    - Chiquita
    - Chilean grapes
    - Australian apples, kiwis
    - Tangerines from Spain
  - Gloucester City, NJ:
    - Del Monte Fresh Fruit
  - Philadelphia:
    - Chilean Fresh Fruit
    - Frozen meat from Australia and New Zealand
    - Break bulk bananas – Turbana, Banacol
- Davisville has privately owned on-dock temperature controlled facility now handling frozen seafood

Potential opportunities for Providence – Fresh Fruit

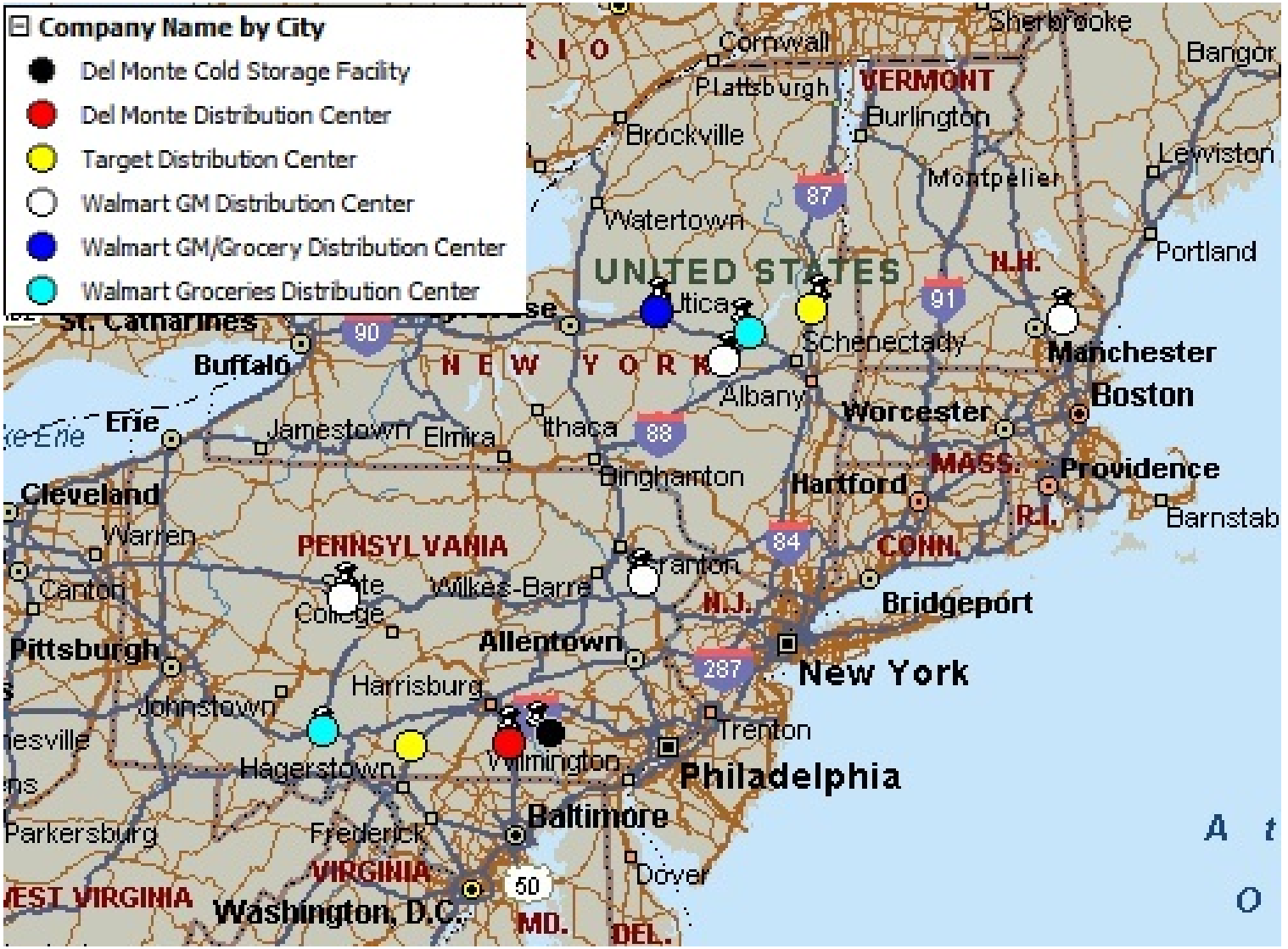
- The ports along the Delaware River have dominated the perishable goods market as the result of a highly developed infrastructure:
  - Chilled warehouse capacity exists not only on port property, but also in the area that is used for storage and distribution of domestic perishables
  - Temperature truck rates are very favorable, as the imported fresh fruit provides a backhaul for inbound trucks delivering perishables to the Philadelphia/New York market region
  - There is an established relationship with the major importers in South America and the terminal operators and agents in the Delaware River region
- Interviews with the key importers further indicated that the Delaware River ports serve the entire Northeastern market and the ability to serve the large grocery store distribution centers (DC's), in particular the Wal*Mart, Target and Del Monte perishable goods DC's, is critical in the development of a perishable goods import operation

Market Potential for the Rhode Island Ports to Serve Key Grocery Store Distribution Centers

- First, the Mid Atlantic and New England locations of the major distribution centers associated with Wal*Mart grocery operations, Target and Del Monte were identified, as shown on the following map

- The locations of Wal*Mart grocery distribution centers, and the Target distribution center in the Utica and Schenectady area are located closer to Providence than the Delaware River Ports, and could potentially provide a market to attract a fresh fruit importer into Davisville/Providence

Location of Major Grocery/Fresh Fruit Distribution Centers for Wal*Mart, Target and Del Monte



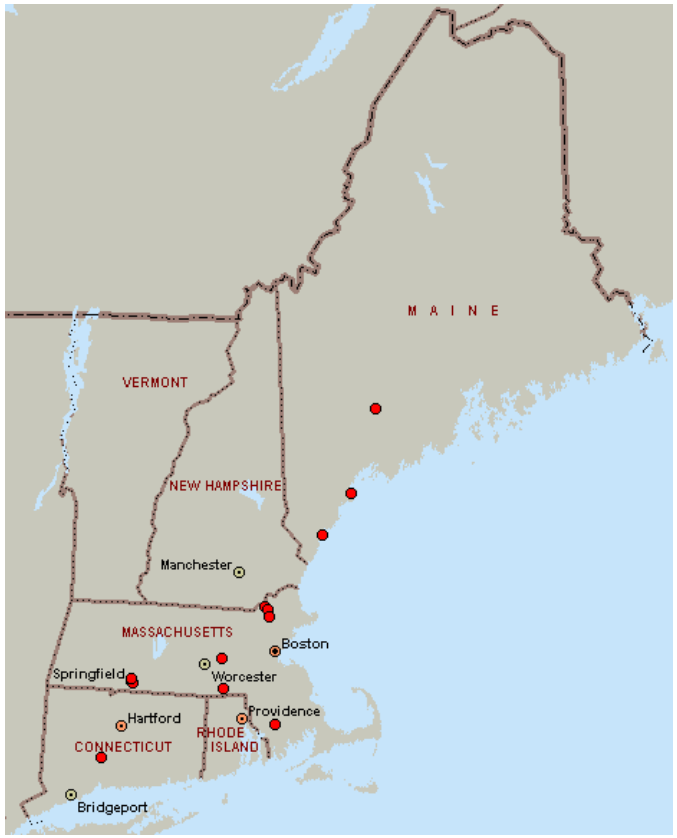
Source: Martin Associates

Market Potential for the Rhode Island Ports to Serve Key Grocery Store Distribution Centers

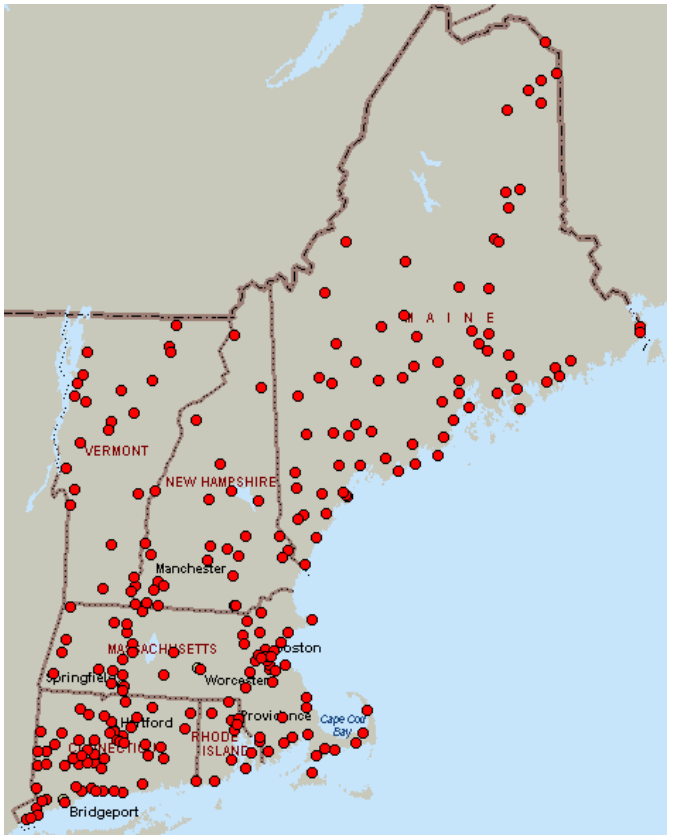
- In addition to proximity to the "Big Box" Grocery distribution centers, the proximity to other chain store grocery store distribution centers is also important in marketing to an import fruit/perishable goods operator for a Rhode Island Port location
- The map on the following page also identifies the location of the chain grocery store distribution centers in New England, as well as the non-chain independent single store distribution centers

Location of New England Grocery Store Distribution Center Locations

Grocery Store – Major Chains



Grocery Store - Independent Single Store DC's



Source: Martin Associates

Implications for the development of Fruit Import Terminal Operations in Rhode Island

- The market analysis regarding the development of an import perishable operations appears to present potential for the Rhode Island Ports
- Further analysis is necessary to develop detailed logistics costs, as well as to target potential tenants and terminal operators
- Initially, market efforts should focus on:
  - Dole
  - Del Monte
  - Chiquita
  - Banacol
  - Holt Logistics - the key terminal operator on the Delaware River

Break Bulk Steel Market

Iron and steel imports are the key commodities handled at New Haven

Row Labels	2003	2004	2005	2006	2007	2008	2009
Iron And Steel	225,255	261,359	180,086	369,022	160,045	142,942	91,356
Articles Of Iron Or Steel	32,776	37,502	35,284	33,376	20,699	18,140	15,271
Wood And Articles Of Wood; Wood Charcoal	15,021	50,601	70,313	36,455		1,737	39
Copper And Articles Thereof	110,217	34,247	20,619	4,183	4,002	142	
Beverages, Spirits And Vinegar	4			18,805	22,157	19,108	
Zinc And Articles Thereof	16,148	6,663					
Art Of Stone, Plaster, Cement, Asbestos, Mica Etc.	43	2,861	6,357				
Nuclear Reactors, Boilers, Machinery Etc.; Parts	433	101	75		226		4,516
Wood Pulp Etc; Recovd (waste & Scrap) ppr & pprbd			988				
Edible Fruit & Nuts; Citrus Fruit Or Melon Peel					78		
Special Classification Provisions, Nesoi	39				12	23	
Ships, Boats And Floating Structures	15			13			6
Aluminum And Articles Thereof	2		9			2	
Electric Machinery Etc; Sound Equip; Tv Equip; Pts			4				
Grand Total	**399,953**	**393,333**	**313,735**	**461,855**	**207,219**	**182,094**	**111,188**

Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Potential opportunities for Providence – Imported Iron and Steel

- Despite the volume of steel handled at New Haven, steel imports are highly cyclical, and driven by regional construction activity and the proximity to steel mills
- Steel mill production is concentrated in Eastern Ohio and Western Pennsylvania, and these markets are served via:
  - The Delaware River Ports
  - Mississippi River System
  - Great Lakes ports of Cleveland and Burns Harbor

Implications of market potential for imported steel

- The overall steel market in New England is dominated by New Haven
- The US and the New England Steel market is very cyclical, and is dependent upon economic conditions as well as US Trade policies, such as the Section 201 steel import quotas imposed in March 2002 and removed at the end of December 2003
- In New England, construction drives the imported steel tonnage, and long term projections for new construction in Rhode Island are not robust
- It is not recommended that the imported steel market be given high priority for port development at Rhode Island Ports

Wind Energy Market

Potential opportunities for Providence – wind energy/offshore support

- There is a potential for the development of a support base for offshore wind energy farms
- Rhode Island Ports could potentially serve as:
  - Import port for blades, nacelles and towers
  - Laydown area for assembly
  - Location for manufacturing facility
  - Provide support base for the offshore wind farms
- Two wind farm operators have interest in Davisville:
  - Deepwater Wind
    - In discussions with Port
    - Have 3 sites under agreement
  - Cape Wind
    - Has looked at Davisville
    - Considering Davisville as secondary support base in addition to New Bedford
- ProvPort also in discussions to handle materials for wind turbines

Offshore wind farms – potential for support base

- In April, 2009, the Department of the interior finalized the framework for renewable energy production of the US Outer Continental Shelf:
  - Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) is the federal agency responsible for overseeing the safe, environmentally responsible development of energy and mineral resources on the Outer Continental Shelf and contends with all aspects of offshore federal leasing and renewable energy projects
  - FERC is an independent agency regulating interstate transmission of electricity, natural gas and oil. Regarding electricity:
    - Regulates transmission and wholesale sales of electricity in interstate commerce
    - Reviews siting applications for electric transmission projects under limited circumstances
- There is a strong interest throughout the country for developing offshore wind farms

Offshore wind farms (cont'd)

- No offshore wind farms are currently in operation in the United States:
  - More than 2,000 megawatts of offshore wind projects have been proposed around the country
- The National Renewable Energy Lab estimates the potential wind energy off the Atlantic coast alone totals more than 1,000 gigawatts:
  - Represents 25% of total US electricity demand
  - US total wind energy potential is greater than the country's entire current electricity demand

Proposed offshore wind farms and those under study are concentrated on the North Atlantic – Several Great Lakes ports are also focusing on demonstration programs for offshore wind farms

Source: Offshorewind.net

Proposed offshore wind farms

- Deepwater Wind:
  - Proposing two offshore wind farms off of the coast of Rhode Island:
    - 200 5-6mw wind turbines 20 miles off RI
    - Smaller 30mw (max) farm off Block Island
- Cape Wind Associates:
  - Proposed constructing an offshore wind farm in Nantucket Sound
  - Consist of 130 wind turbines over 24 square miles
  - Would power about 200,000 homes

Proposed offshore wind farms (cont'd)

- Bluewater Wind:
  - Proposed constructing an offshore wind farm about 11 miles east of Rehoboth Beach, Delaware
  - Consist of 60 large wind turbines
  - Signed into law in June, 2008:
    - Approves a 25-year power purchase agreement to allow Delmarva Power to buy up to 200 megawatts of electricity
  - Could begin delivering energy to Delaware customers by 2012
- Other offshore wind farms are proposed off the coasts of New Jersey, New York, Maryland, Texas, as well as Lake Erie and Lake Ontario

Wind turbine fabrication in the US

- The share of US – made parts in wind turbines increased from 30 percent in 2005 to nearly 50% in 2008
- The companies assembling nacelles in the US grew from 1 in 2004 to 5 in 2008; 5 additional foreign plants plan to build US plants
- There are 11 blade manufacturers and 16 tower manufacturers that either have plants or plan to build plants in the US
- Wind turbine imports grew from $60 million in 2004 to $2.5 billion in 2008:
  - 2007 was $2.4 billion indicating more US production
- The goal of the major wind energy manufacturers, however, is to produce all wind energy products in the US in the next five years, thereby reducing the need for wind energy imports via US ports
- Ports will become the staging area for offshore farms, reducing the role as an import facility

Location of wind turbine manufacturing plants

Source: energy.sourceguides.com

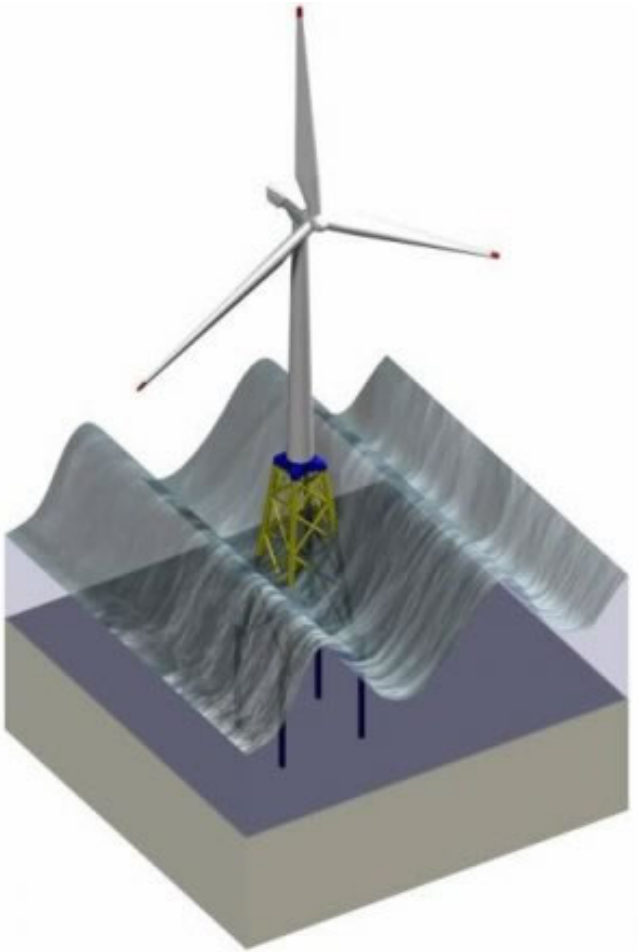
Deepwater Wind – offshore wind farms

- Deepwater is looking to develop a landside operations base in Davisville to support offshore wind turbine farms:
  - 200 5-6mw wind turbines 20 miles off RI – 5 yr build out starting 2014
  - Smaller 30mw (max) farm off Block Island – 1 yr build out in 2012/2013
  - 350mw farm 20 miles off Ocean City/Avalon, NJ – later time frame
  - Off Long Island – no details
- 117 acres in 3 noncontiguous parcels under agreement:
  - 80 acres are usable
  - Assembly and/or manufacturing operations are being considered – decision will be based in part on what can be accommodated on the 80 acres
- Pier 2 dock can handle inbound cargo weight and vessel calls:
  - Significant upgrades will be made to Pier 2 as a result of TIGER Grant
  - Use of Pier 2 will impact automobile market:
    - Which is growth market

Deepwater Wind – offshore wind farms (cont'd)

- Deepwater could receive turbines and components for assembly:
  - Turbines (400-450 tons each)
  - Turbine housing (nacelles)
  - Jackets – 4-leg structures (350-400 tons) supporting windmills:
    - 120 ft legs tapered to maximum 20 ft diameter
    - Would require a 90 ft x 120 ft laydown area
    - Final assembly done at sea
    - Platform or transition piece:
      - A deck connecting the lower portion of the legs for stabilization and reducing vibrations

Type of wind Turbine that may be used by Deepwater Wind



Source: Offshorewind.net

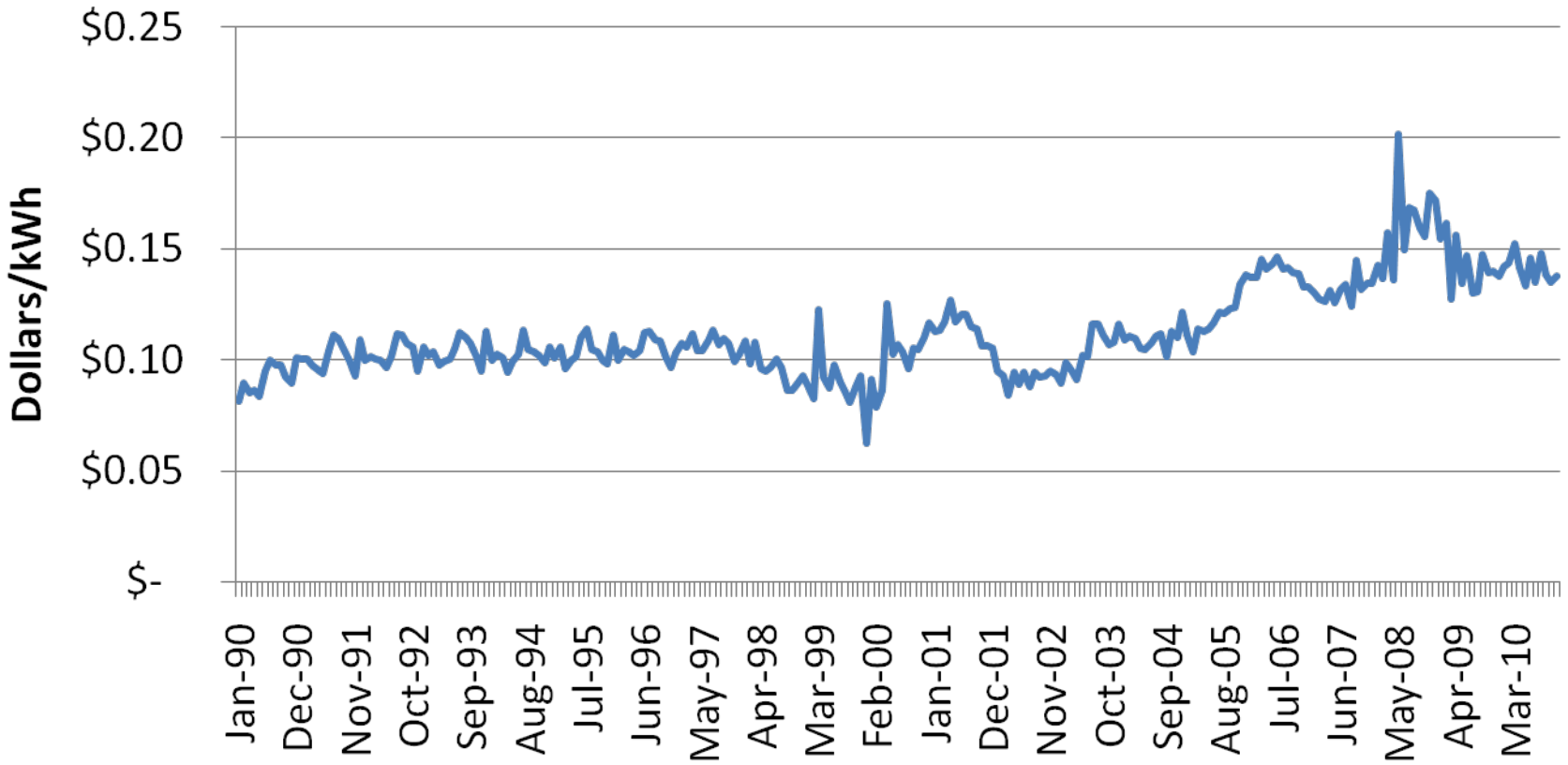
Deepwater Wind – offshore wind farms (cont'd)

- Steel coil could be imported if limited manufacturing is established on-site:
  - Coil would be barged from Providence and/or railed into Davisville
  - Currently evaluating trade-off between wind energy assembly vs. manufacturing
- Current plan is to move components outbound over a barge dock at Terminal 5:
  - Components will be rolled/wheeled from land to barge:
    - This process would consider a NASA type rocket mover/transporter
- Several development scenarios in the Moffatt and Nichol master plan report include windmills – the development projects associated with the wind turbine market include:
  - Improvements for berth at Terminal 5:
    - QDC/Port considering vessel dock at T5 for inbound moves
    - Cost of full build-out of pier similar to Pier 2 up to $60 million
  - $7 million for dredging at Terminal 5

Cape Wind – offshore wind farms

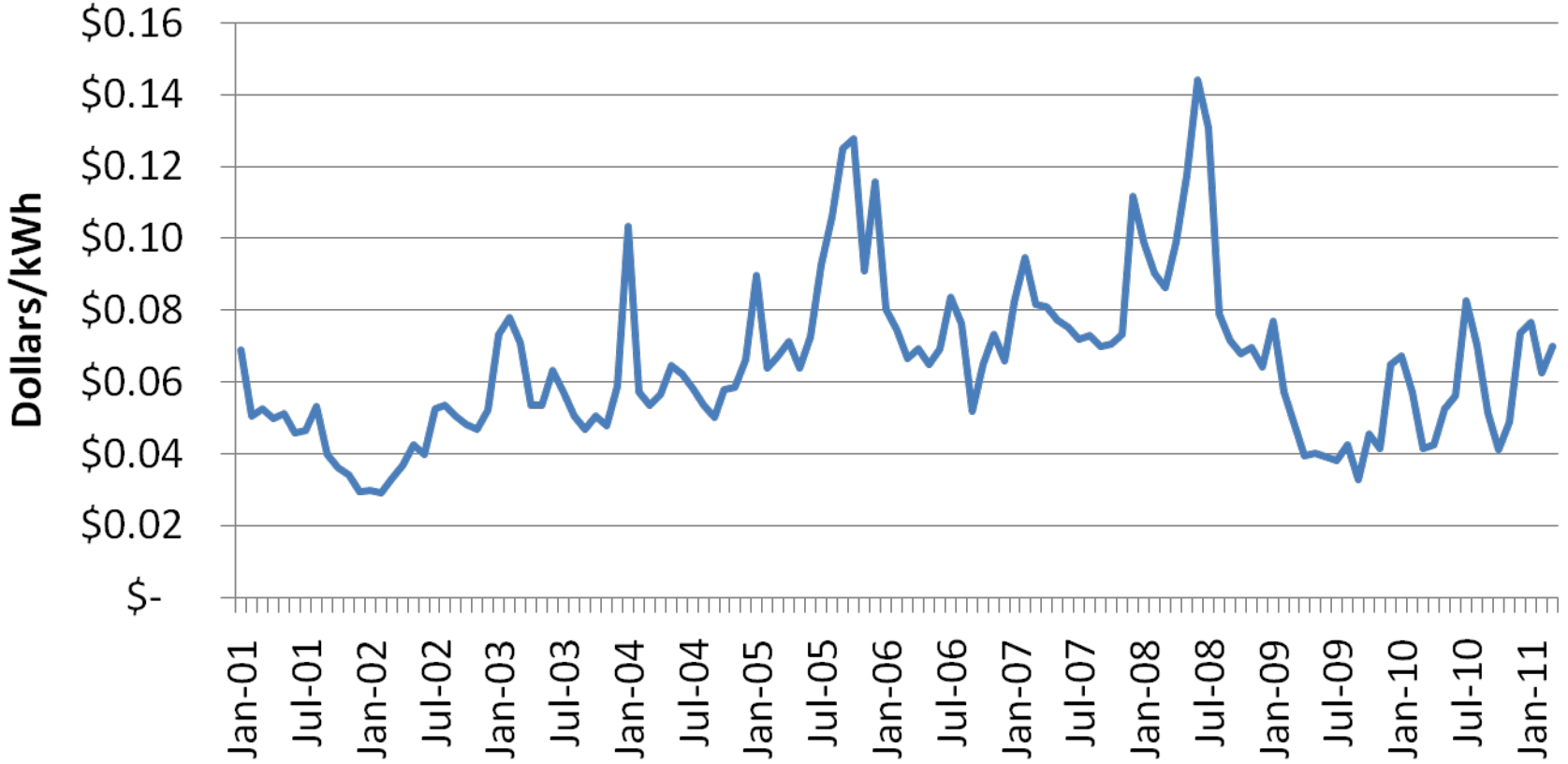
- Maximum 420 mw farm off Cape Cod – 130 turbines
- Cape Wind operation linked to Port of New Bedford:
  - Developing/expanding 20 acre South Terminal for wind turbines:
    - A multi-purpose terminal:
      - May be used to store containers
      - May be used for other market as they develop
      - Cape Wind not sure if 20 acres will be enough for its needs
    - Looking at Quonset as a supplemental operation if needed:
      - Will be at New Bedford regardless
- Future farms off the East Coast could use this/these operation(s)

The success of the potential wind power market is dependent on being able to sell electricity at a competitive cost – retail electricity prices in RI began to rise in 2002 – the average 2010 price was $0.14 per kWh



Source: US Energy Information Administration

Similarly wholesale electricity prices in the New England pool have trended higher between 2002 and 2008 but the price has dropped since then averaging $0.05 /kWh in the last 24 months



Source: US Energy Information Administration

The wind power market is uncertain, and investment in wind energy support and facilities should be placed on the private sector, not the State

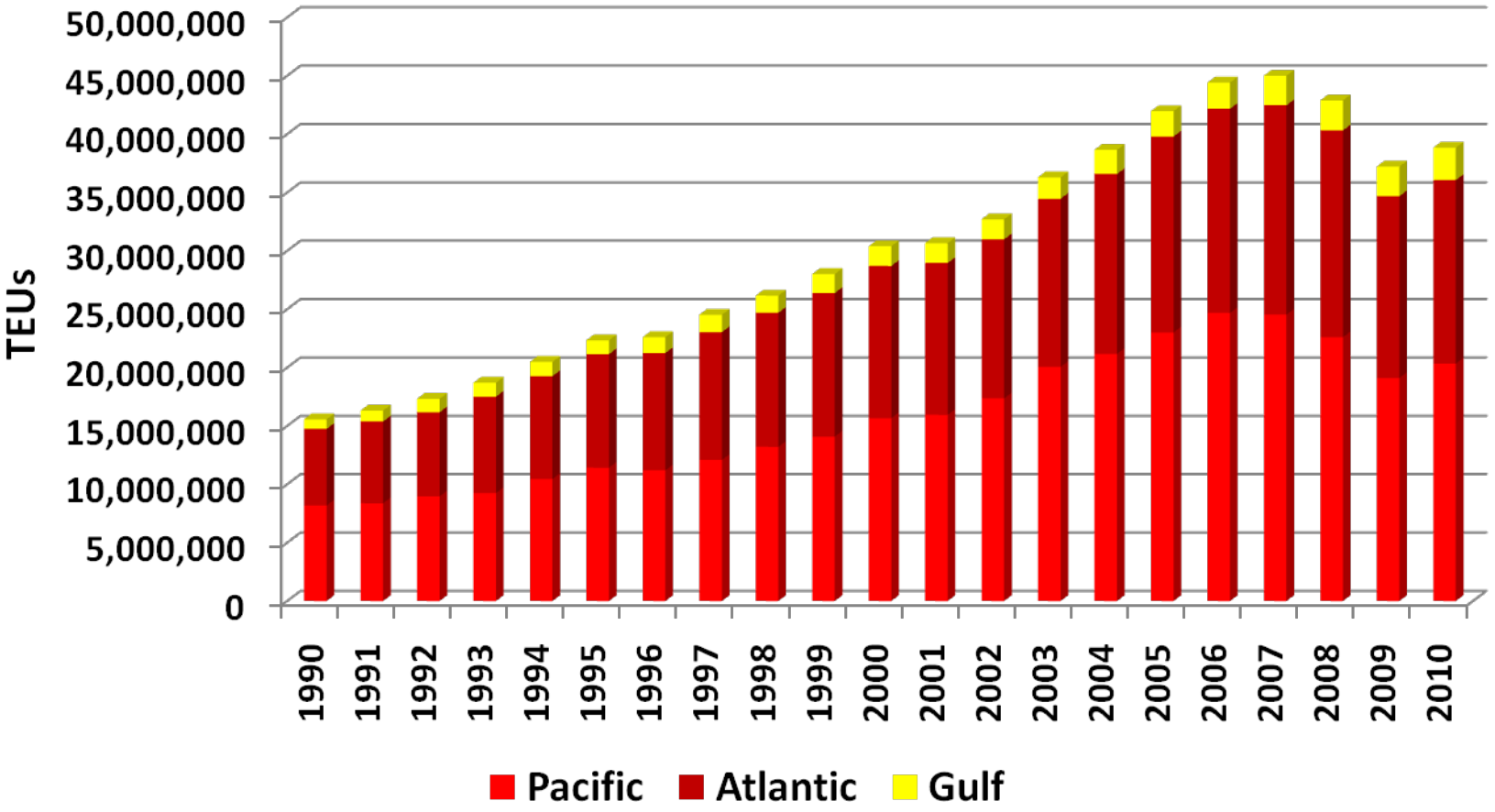
- Price of offshore generated electricity is projected to be significantly higher than alternative price onshore:
  - Deepwater estimates the wholesale price of its electricity to be in the mid-teens
  - Wholesale prices from conventional electricity generation, as indicated on the previous charts, are significantly less
- Offshore projects appear to be in jeopardy until commitments can be made as to purchases of electricity
- Furthermore, delivery infrastructure (grids) will be required, and investment in this infrastructure is uncertain
- Future development is uncertain at this time due to current electricity prices
- Rhode Island Ports should only invest in facilities after commitments have been established. Furthermore, private sector investment and partnership should be a pre-requisite for any terminal development in support of the wind energy programs
- Martin Associates suggests due diligence by the State on the wind energy potential and cautions on the potential impact on the import/export auto market
- New technologies are under investigation that may replace wind energy attraction:
  - Wave energy
  - Thermal-gradient energy production focusing on under temperature gradients

Container Feeder Operations Potential For Rhode Island Ports

US containerized imports and exports peaked in 2007

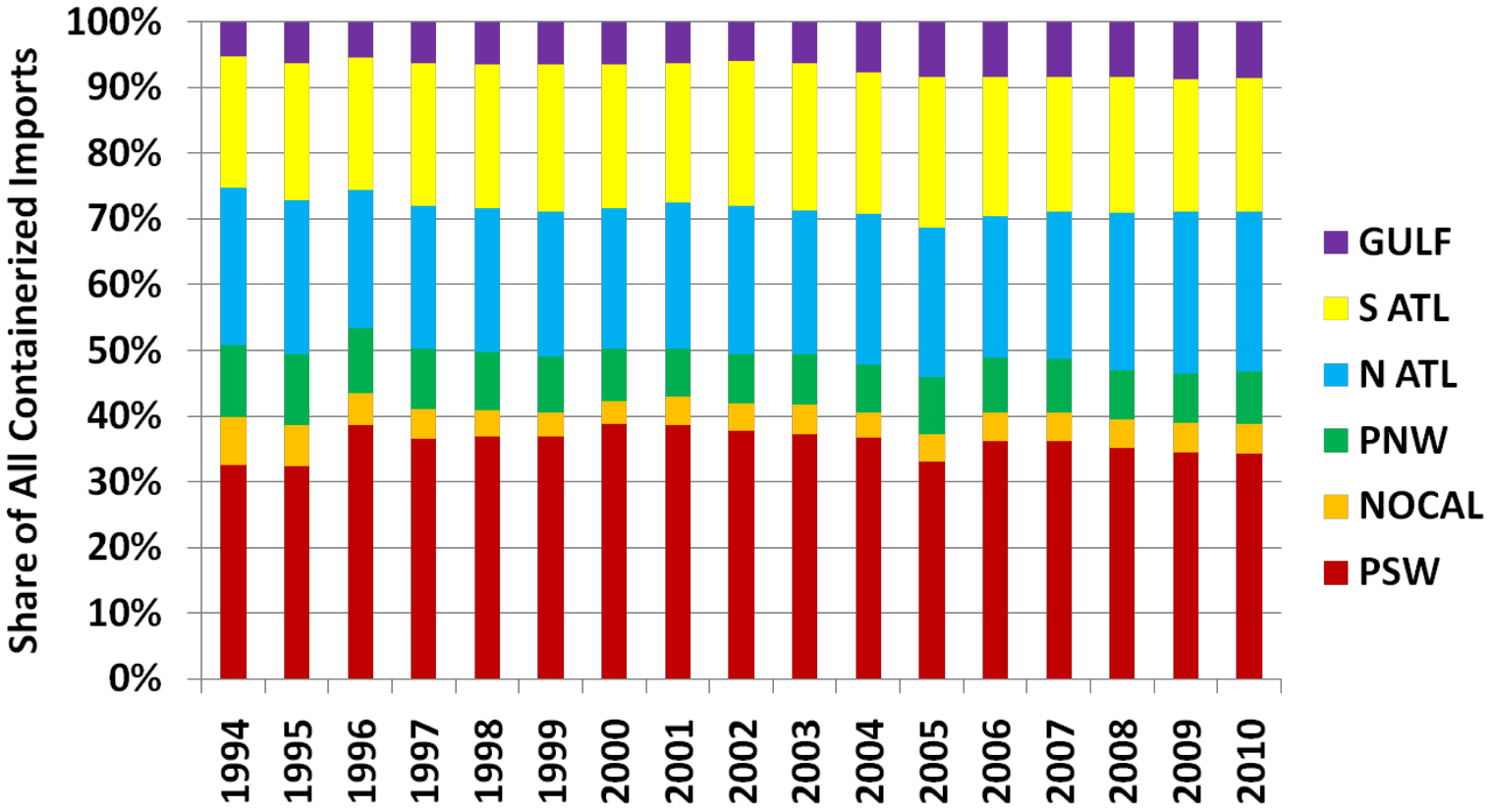
4.7% Annual Growth 1990-2010

4.8% Annual Decline 2007-2010



Source: American Association of Port Authorities

Southern California Ports (PSW) handle about 35% of all import tonnage, reaching a peak in 2001 – this share has been falling since 2002



Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

Changes In Logistics Patterns

As demonstrated, within the West Coast Ports, the San Pedro Bay Ports of Los Angeles and Long Beach handle about 35% of the imported Asian containerized cargo. This dominance of the Asian trade by the West Coast Ports, and in particular the Ports of Los Angeles and Long Beach, particularly in the late 1990's through 2002, was driven by the fact that importers viewed theses ports as the major port linkage in the supply chain of imported cargo. Prior to the mid to late 1990's, the steamship lines determined the port routings and importers were essentially "port blind" as they selected an ocean carrier, and the carrier decided which port the cargo would be discharged and how the cargo would be delivered to the customer. However, as the concentration of large importers such as Wal*Mart, Target, Cost Plus, etc. increased in the late 1990's, these importers invested in large distribution centers in the Los Angeles/Long Beach area to serve as points in the importers' logistic supply chains. As these importers gained bargaining power in terms of contract negotiations with the ocean carriers, they were able to "demand" a San Pedro Bay port routing from the carriers. Hence, with the development of the distribution centers and cross dock operations in the San Pedro Bay region, the concentration of imported Asian containers at the Ports of Los Angeles and Long Beach increased. Furthermore, the railroads providing intermodal services at the San Pedro Bay Ports further increased investment in rail trackage and intermodal yards to facilitate the flow of containers from the Los Angeles area to the key Midwestern and Eastern consumption centers such as Chicago, Memphis, St. Louis, New York, Atlanta, Columbus, etc. This concentration of containerized cargo import activity continued to increase until several events occurred.

Changes In Logistics Patterns (continued)

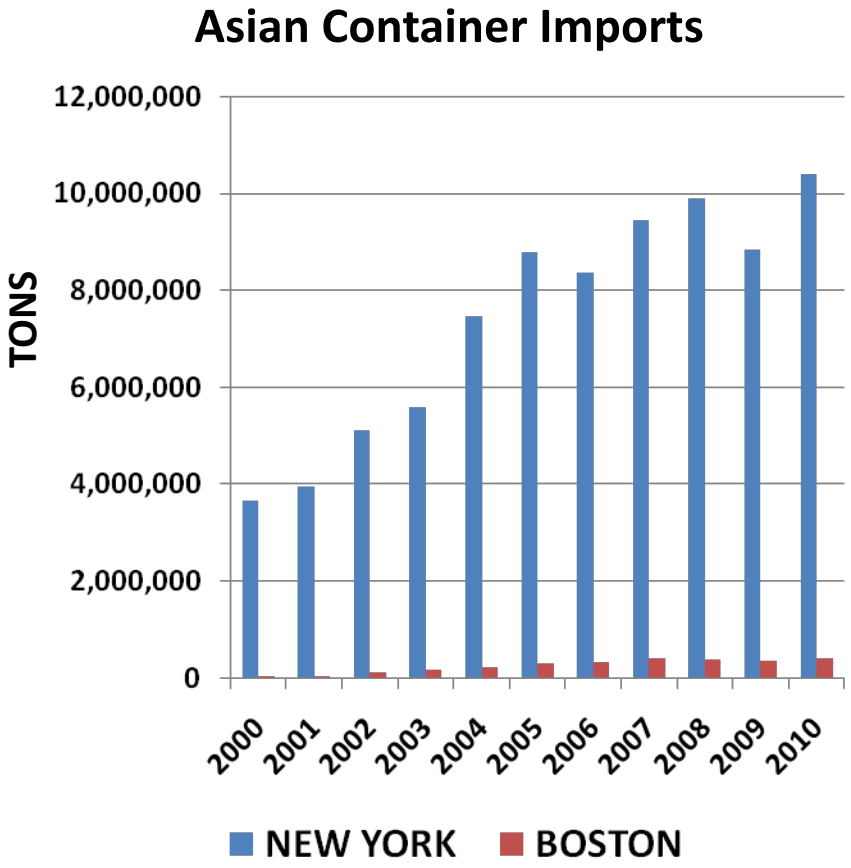
These events are the impact of 9/11 on the distribution supply chain, the 2002 West Coast Port shutdown, and major congestion issues that arose in 2004 due to rail meltdowns at the San Pedro Bay ports. As a result of these events, there has been an increased focus on diversification of containerized cargo via various US Ports. This is evident by the growth in container volume at the North Atlantic, South Atlantic and Gulf Coast ports. The growth of all water service from Asia to the East Coast and Gulf Coast ports has been increasing significantly since 2002. There are two all water routings that are available for all water services – the use of the Panama Canal and the use of the Suez Canal. Each of the routings provides advantages and disadvantages to the use of the intermodal cargo (railed from the West Coast ports). For example, the current dimensions of the Panama Canal limit the size (width and depth) of the vessels that can transit the Canal, and also the transit time using an all water service to an East Coast port and then a rail move to a Midwestern consumption point is longer than using an intermodal move via a West Coast Port. This longer transit time from Asia results in increased inventory carrying costs, and is more pronounced for higher value cargo than for lower value cargo. In addition, ocean carriers prefer to internalize the revenue for the entire trip from Asia to the East Coast rather than sharing the revenue with a rail carrier from the West Coast to an East Coast consumption point.

Implications for the State of Rhode Island

However, changes are in play to improve the current negatives of using the Panama Canal. The Canal will be enlarged by 2014, allowing for the transit of much larger container vessels, which in turn tend to have a lower per unit operating cost than smaller container vessels. In addition, the ocean carriers are introducing more direct all-water services that are improving the transit times using all water routings from Asia.

With respect to the Suez Canal, the dimensions of this canal do not limit the size of the container ships that can transit, but there is some concern over political instability in the region. The Suez routing from Asia to the East Coast is longer than via the Panama Canal, but as production centers shift to South Asia and India, this routing can in some cases provide very competitive transit times to the use of the trans-pacific routings and the use of intermodal moves from the West Coast to the East Coast. In addition, ocean carriers are increasing India-Europe express services, with the use of Mediterranean ports for transshipment centers for cargo destined further to the US and Europe. The Suez routing is becoming particularly attractive as the production centers are shifting into India and Vietnam. Supporting this growth in production centers in India is the fact that the Indian Government, along with private sector interests, are investing heavily in port infrastructure to accommodate the growth in India. Indian Government investment is estimated at $110 billion and private sector investment is estimated at another $8.5 billion.

New York is the leading container port in the US Northeast Region handling imports into the New England/Rhode Island region



Source: US Bureau of the Census Foreign Trade Division, Import and Export Merchandise

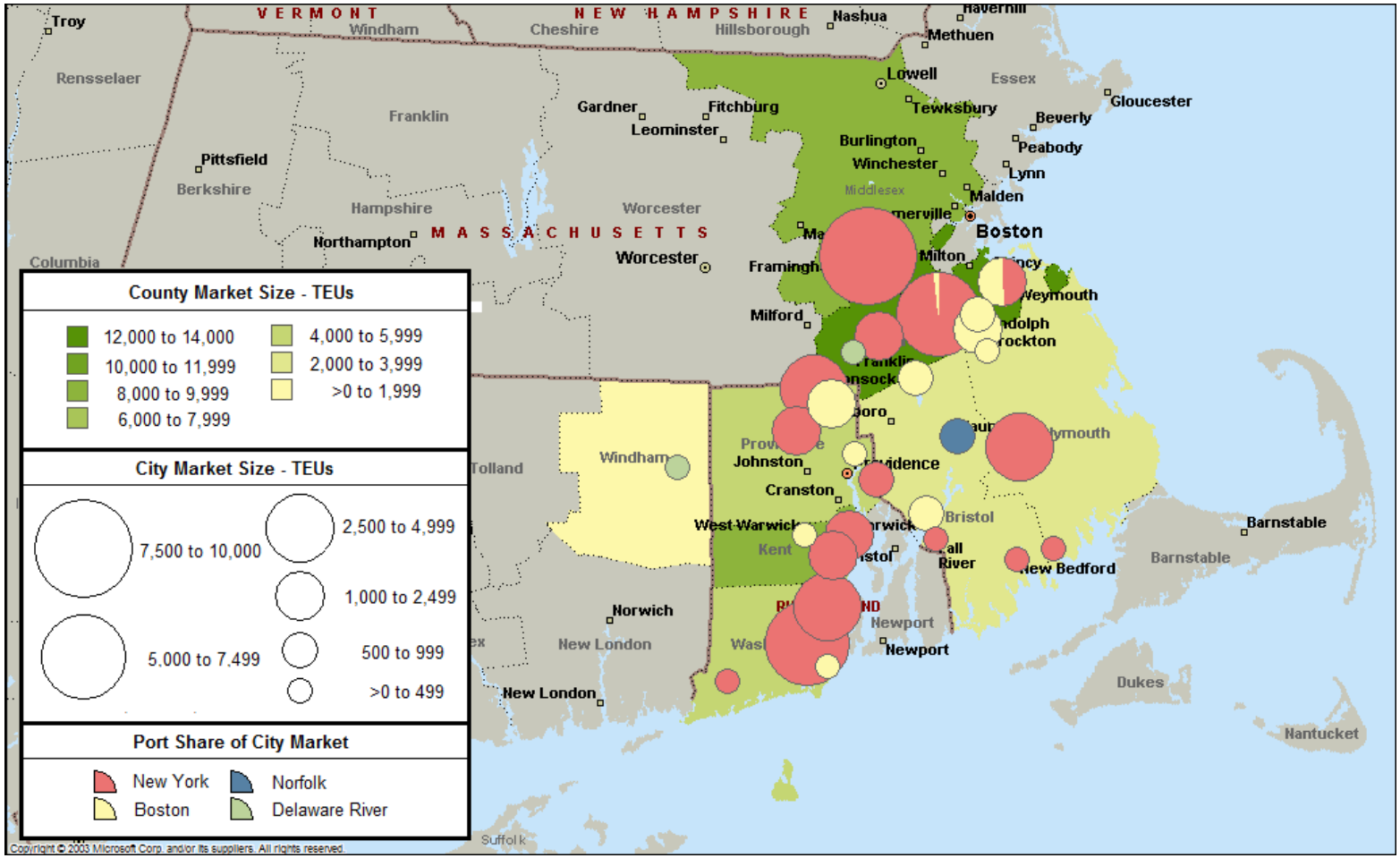
- The Asian market is the largest containerized import trading partner with the US and the principal source of imported goods destined for DCs
- Direct ocean carrier container service into the Ports of New York and Boston provide gateways for Asian imports into the New England market – and a route for exports back to Asia
- The size of the New York market implies a potential import market that could sustain a barge feeder service into New England

The marine terminals located at the Port Authority of New York and New Jersey are the terminals supplying New England with imports, particularly Asian imports

Martin Associates used data provided by the Port of Davisville. This data provides an estimate of the location of importers/exporters by city within New England, and the Ports serving those importers. As the following map shows, the green shaded areas on the map indicate the location of importers/exporters at the county level. The circles on the map indicate the size of the import/export market by city, while the color shades in the circles indicate the ports now used to serve the import/export markets in New England. As this chart shows, New York is the key port used to serve the New England market. This market is currently served by truck. The market is quantified in terms of TEUs which is a standard measure of container volume, representing twenty foot equivalent units.

The question now becomes, could a barge feeder service between New York marine terminals and a terminal located at the Rhode Island Ports be competitive to the current truck routing, and provide a lower carbon footprint?

The map shows strong market concentrations on the I-95, I-495 and Rt 128 corridors



Source: PIERS data provided by Port of Davisville – Joint QDC/PANYNJ assessment of barge feeder market - PIERS data provided PANYNJ for September, 2006-August, 2007

Furthermore, the analysis of imports and exports shows New York handles 80% of SE New England's Imports and Exports

SOUTHEAST NEW ENGLAND IMPORT MARKETS (TEUs)

O/D LOCATION	NEW YORK	BOSTON	NORFOLK	TOTAL
Natick, MA	9,114			9,114
Canton, MA	5,256			5,256
N. Kingstown, RI	3,400			3,400
Woonsocket, RI	3,370			3,370
Avon, MA		2,313		2,313
E. Greenwich , RI	2,068			2,068
Norfolk, MA	1,878			1,878
W. Kingston, RI	1,742			1,742
E. Braintree, MA	815	861		1,676
Cumberland, RI		1,610		1,610
Warwick, RI	1,486			1,486
Taunton, MA			931	931
Mansfield, MA		913		913
Swansea, MA		892		892
Randolph, MA		782		782
Seekonk, MA	683			683
Mattapoisett, MA	445			445
Total	**30,257**	**7,371**	**931**	**38,559**

SOUTHEAST NEW ENGLAND EXPORT MARKETS (TEUs)

O/D LOCATION	NEW YORK	BOSTON	DELAWARE RIVER	TOTAL
W. Kingston, RI	3,699			3,699
Middleboro, MA	2,584			2,584
Lincoln , RI	1,102			1,102
Canton, MA	320	86		406
Fall River , MA	397			397
N. Kingstown, RI	380			380
Narragansett, RI		256		256
Franklin, MA			249	249
Dayville, CT			232	232
Pawtucket, RI		194		194
W. Warwick, RI		141		141
New Bedford, MA	100			100
Bradford, RI	79			79
Brockton, MA		74		74
Total	**8,661**	**751**	**481**	**9,893**

Source: PIERS data provided by Port of Davisville – Joint QDC/PANYNJ assessment of barge feeder market - PIERS data provided PANYNJ for September, 2006-August, 2007

Feeder/short sea services are designed to serve smaller port markets where no direct carrier service exists

- The feeder/short sea concept consists of smaller vessels that connect load center ports such as New York with secondary ports
- The feeder operation is designed to compete with rail and truck services from the load center ports to the smaller markets

The barge feeder concept is not new!

- Feeder services between Halifax and New England developed in the 1980's to take advantage of constraints at US North Atlantic ports
- Carriers discharged New England-bound import containers in Halifax rather than in New York and returned export containers to Halifax
- The feeder/short sea operations changed hands several times during this period:
  - Hapag-Lloyd began a weekly ship feeder service between Halifax and the Ports of Portsmouth, NH (later replaced with Portland, ME) and Boston
  - Halship took over this service between August, 2005 ending one year later
  - Columbia Coastal Transit replaced Halship with a barge feeder service
  - Eimskip was the last operator on this service providing a ship feeder service from April, 2007 through December, 2007

The barge feeder concept is not new! (cont'd)

- Columbia Coastal operated a weekly container-on-barge feeder service between the Ports of New York and Boston However, the service was discontinued in August, 2010:
    - Volumes declined sharply in the last three years due to lower truck rates
    - New all water services were introduced into Boston , which eliminated need for the feeder operations
    - The feeder service was operating at a 50% utilization rate:
        - 100-150 containers per week
        - The cargo consisted mostly of heavy weight refrigerated containers, which could not move over the road

Renewed interest exists for a barge feeder operation between New York and Rhode Island Ports

- Columbia Coastal has been working with Port of Davisville to develop NY-RI barge feeder
- Columbia Coastal has been targeting potential customers
  - Lowe's – DC in Plainfield, CT
  - Ocean State Job Lot – DC in Quonset Business Park
  - Wal*Mart – DC in New Hampshire
  - Bostitch
  - Connecticut Fibers – W Kingston, RI
  - Rand-Whitney/Kraft Group – Pawtucket, Worcester

Over 48,000 TEUs of cargo have been identified to be destined or originate in South Eastern New England. These importers/exporters currently use the Port of New York /New Jersey

- If one-half of the 48,000 TEU market could be captured by a barge feeder operation, this would equate to a 24,000 TEUs annually that could move via barge/feeder operations
- Assuming a weekly service, this suggests a weekly service moving about 400-450 TEUs per call
- The next step in the analysis is to evaluate the competitive costs of using the barge feeder vs. the current truck routing to and from the terminals at the Port of New York/New Jersey

The transportation cost analysis for the barge/feeder operation consisted of the following steps

- The locations of the import and export volume to and from the Southeastern New England cities were identified from PIERS data provided by the Quonset Point Development Corp
- The Martin Associates' Trucking Cost Model was used to estimate the trucking costs between origins and destinations and the marine terminals at the Port Authority of New York/New Jersey:
  - Based on actual trucking rates provided to Martin Associates, and converted to per mile basis
  - Between the Port of New York and SE New England cities for the direct truck routing
  - For the barge feeder operation, the truck cost model was used to estimate the inland cost between the Port of Davisville/Providence and the key New England cities
  - Google Maps was used to identify the respective mileages
- Two scenarios were developed to reflect head haul and backhaul truck flows:
  - Headhaul truck is the primary routing, where the truck originates in New York/New Jersey and moves to the import destinations (New England cities)
  - Backhaul traffic represents the return truck movement from the New England region to New York/New Jersey. This rate is discounted from the head haul rate to attract return cargo
- The barge cost between New York and a Rhode Island site cost was provided by Columbia Coastal. The cost includes the barge loading and unloading charges at New York/New Jersey marine terminals and at a site in Rhode Island
- The results are presented in the following two tables

For imports moving into New England (headhaul move) the direct trucking cost from marine terminals in New York to New England import consumption points is, on average, $120 per container lower than a barge feeder service

ESTIMATED DIRECT TRUCKING AND FEEDER COSTS FOR LINEHAUL CONTAINERS FROM THE PORT OF NEW YORK AND SE NEW ENGLAND

O/D LOCATION	NEW YORK Truck Cost	DAVISVILLE Truck Cost	DAVISVILLE Barge Cost	DAVISVILLE Total Cost	BARGE SAVINGS
Avon, MA	$ 880	$ 396	$ 570	$ 966	$ (86)
Brockton, MA	$ 859	$ 398	$ 570	$ 968	$ (109)
Canton, MA	$ 823	$ 368	$ 570	$ 938	$ (115)
E. Braintree, MA	$ 883	$ 395	$ 570	$ 965	$ (82)
Fall River , MA	$ 779	$ 326	$ 570	$ 896	$ (117)
Franklin, MA	$ 823	$ 359	$ 570	$ 929	$ (105)
Mansfield, MA	$ 795	$ 340	$ 570	$ 910	$ (115)
Mattapoisett, MA	$ 831	$ 376	$ 570	$ 946	$ (115)
Middleboro, MA	$ 836	$ 388	$ 570	$ 958	$ (122)
Natick, MA	$ 813	$ 393	$ 570	$ 963	$ (150)
New Bedford, MA	$ 815	$ 361	$ 570	$ 931	$ (115)
Norfolk, MA	$ 834	$ 356	$ 570	$ 926	$ (92)
Randolph, MA	$ 875	$ 388	$ 570	$ 958	$ (83)
Seekonk, MA	$ 748	$ 298	$ 570	$ 868	$ (119)
Taunton, MA	$ 785	$ 330	$ 570	$ 900	$ (115)

O/D LOCATION	NEW YORK Truck Cost	DAVISVILLE Truck Cost	DAVISVILLE Barge Cost	DAVISVILLE Total Cost	BARGE SAVINGS
Bradford, RI	$ 656	$ 320	$ 570	$ 890	$ (234)
Cumberland, RI	$ 774	$ 241	$ 570	$ 811	$ (37)
E. Greenwich , RI	$ 715	$ 252	$ 570	$ 822	$ (107)
Lincoln , RI	$ 772	$ 310	$ 570	$ 880	$ (108)
N. Kingstown, RI	$ 705	$ 250	$ 570	$ 820	$ (116)
Narragansett, RI	$ 699	$ 273	$ 570	$ 843	$ (144)
Pawtucket, RI	$ 754	$ 299	$ 570	$ 869	$ (116)
Swansea, MA	$ 769	$ 319	$ 570	$ 889	$ (120)
W. Kingston, RI	$ 686	$ 274	$ 570	$ 844	$ (157)
W. Warwick, RI	$ 707	$ 269	$ 570	$ 839	$ (132)
Warwick, RI	$ 728	$ 265	$ 570	$ 835	$ (108)
Woonsocket, RI	$ 777	$ 324	$ 570	$ 894	$ (117)
Dayville, CT	$ 692	$ 338	$ 570	$ 908	$ (217)
Average	**$ 779**	**$ 329**		**$ 899**	**$ (120)**

Source: Martin Associates

For export moves from New England, (the backhaul scenario) the direct trucking cost from the New England cities to New York/New Jersey is, on average, $232 lower than a barge feeder service

ESTIMATED DIRECT TRUCKING AND FEEDER COSTS FOR BACKHAUL CONTAINERS FROM SE NEW ENGLAND TO NEW YORK (25% TRUCKING DISCOUNT)

O/D LOCATION	NEW YORK Truck Cost	DAVISVILLE Truck Cost	DAVISVILLE Barge Cost	DAVISVILLE Total Cost	BARGE SAVINGS
Avon, MA	$ 660	$ 297	$ 570	$ 867	$ (207)
Brockton, MA	$ 644	$ 299	$ 570	$ 869	$ (224)
Canton, MA	$ 617	$ 276	$ 570	$ 846	$ (228)
E. Braintree, MA	$ 662	$ 296	$ 570	$ 866	$ (204)
Fall River , MA	$ 585	$ 245	$ 570	$ 815	$ (230)
Franklin, MA	$ 617	$ 269	$ 570	$ 839	$ (222)
Mansfield, MA	$ 596	$ 255	$ 570	$ 825	$ (229)
Mattapoisett, MA	$ 623	$ 282	$ 570	$ 852	$ (229)
Middleboro, MA	$ 627	$ 291	$ 570	$ 861	$ (234)
Natick, MA	$ 610	$ 294	$ 570	$ 864	$ (255)
New Bedford, MA	$ 612	$ 270	$ 570	$ 840	$ (229)
Norfolk, MA	$ 625	$ 267	$ 570	$ 837	$ (212)
Randolph, MA	$ 656	$ 291	$ 570	$ 861	$ (205)
Seekonk, MA	$ 561	$ 223	$ 570	$ 793	$ (232)
Taunton, MA	$ 588	$ 247	$ 570	$ 817	$ (229)

O/D LOCATION	NEW YORK Truck Cost	DAVISVILLE Truck Cost	DAVISVILLE Barge Cost	DAVISVILLE Total Cost	BARGE SAVINGS
Bradford, RI	$ 492	$ 240	$ 570	$ 810	$ (318)
Cumberland, RI	$ 581	$ 181	$ 570	$ 751	$ (170)
E. Greenwich , RI	$ 536	$ 189	$ 570	$ 759	$ (223)
Lincoln , RI	$ 579	$ 232	$ 570	$ 802	$ (223)
N. Kingstown, RI	$ 528	$ 188	$ 570	$ 758	$ (229)
Narragansett, RI	$ 525	$ 205	$ 570	$ 775	$ (250)
Pawtucket, RI	$ 565	$ 225	$ 570	$ 795	$ (229)
Swansea, MA	$ 577	$ 240	$ 570	$ 810	$ (233)
W. Kingston, RI	$ 515	$ 205	$ 570	$ 775	$ (260)
W. Warwick, RI	$ 530	$ 202	$ 570	$ 772	$ (242)
Warwick, RI	$ 546	$ 199	$ 570	$ 769	$ (223)
Woonsocket, RI	$ 583	$ 243	$ 570	$ 813	$ (230)
Dayville, CT	$ 519	$ 254	$ 570	$ 824	$ (305)
Average	**$ 584**	**$ 247**		**$ 817**	**$ (232)**

Source: Martin Associates

Implications of the competitive analysis of the development of a barge feeder operation

Under the current pricing structure, including feeder rate, stevedoring/terminal handling and inland drayage from a Rhode Island port to and from the key New England consumption and production markets for export cargo, the feeder operation is more costly, averaging about $175-200 per container more than direct trucking to and from New York. In addition, the feeder operation would add days to the current delivery time via truck to and from New York/New Jersey, as the barge feeder would operate weekly given the estimated volumes. Given the longer transit times via barge, the barge rates would have to be reduced significantly to provide a cost incentive to the beneficial cargo owners to utilize the feeder service. ***The focus on heavy weight containers is needed. These types of cargo include alcoholic beverages and machinery.***

In order for this type of operation to have a potential to succeed, the barge rate must be reduced by about $200-250 per container. This would require a significant reduction in stevedoring charges, and perhaps the use of a roll-on/roll-off operation (RO/RO), rather than lift- on/lift-off operations. (LO/LO) This RO/RO operation would require a RO/RO ramp, but would eliminate the need for shore side cranes, and reduce the stevedoring and terminal charges.

A detailed market study is needed to understand the logistics of the New England beneficial cargo owners, as well as the composition of the containerized cargo moving to and from the New England regions. Similarly, an engineering study would be required to develop costs to service either a RO/RO or LO/LO.

The volumes identified indicate that a terminal space would be required to handle up to 24,000 TEUs annually. Assuming a low dwell time, and 3,000 TEUs per acre per year throughput, about 8 acres would be required to handle such a service.

CRUISE SHIP OPPORTUNITIES: NEWPORT

The Newport cruise market is served by international and domestic Lines

- Aida
- American Canadian Car.
- Celebrity
- Costa
- Cruise West
- Crystal
- Great Lakes
- Holland America
- MCS
- Norwegian Caribbean
- P & O
- Phoenix
- Princess
- Regent Seven Seas
- Silver Sea
- The World

Newport has an active cruise market as described by the Newport & Bristol County Convention & Visitors Bureau

- 71 cruises made a Newport port-of-call in 2010 – 70% between Sep 1-Nov 1
- American Canadian Caribbean is the only cruise line that docks in Newport:
  - Operates 184 ft vessels with a capacity of 96 passengers
  - With a draft of 6'6" it is able to dock at Ft. Adams
  - The vessel is home ported in Warren, RI
- All other lines anchor off Newport and tender passenger between ship and Perotti Park in downtown Newport – a 15 minute transit:
  - Passengers queue up on ship up to 2 hrs to disembark on a tender
  - Passengers queue up onshore up to 1 hr for the return

Newport has an active cruise market

- Newport is the only destination for passengers:
  - 10% stay aboard ship
  - 30% take package tours
  - 60% wander around Newport on their own
- A new dock would eliminate tendering making city access easier perhaps enticing the remaining 10% ashore:
  - Improve movement of passengers on to and off of the ships
  - Reduce tendering costs

Docking options are limited in Newport

- The Newport waterfront and downtown area are fully developed with no waterfront land available to develop a cruise terminal:
  - No berthing capacity available other than for potential docking dolphins offshore connecting passengers to the shore via a “T” dock
- There is strong community opposition for expanding cruise capabilities in Newport:
  - No new development on the waterfront:
    - “Not in my back yard”
    - Impeding views
  - Yachting crowd most vocal group opposing cruise activity altogether:
    - Cruise ships anchor in regatta waters

There are limited alternative locations for potential cruise berthing to serve the Newport tourist market

- Quonset/Davisville is a less attractive port-of-call:
  - It is not a tourist destination
  - It is an industrial area
  - And is not pedestrian friendly
- Ft. Adams is a possible location, but not possible because….
  - It is a historic landmark
  - It cannot accommodate large cruise ships at this time – length and draft issues
  - And there is community opposition
- The only option may be using Navy land on Aquidneck Island in Middletown – north of Newport and south of Portsmouth – if made available:
  - Currently the Navy is opening Burma Road along west side of Aquidneck Island from northern Newport through Middletown into southern Portsmouth through Navy property
  - At this time no land is being released:
    - The Navy may consider what to do with surplus land in the future:
      - Two piers – in great disrepair
      - Land west of Burma Road
      - Community would oppose any development “across the street”

Cruise implications

- The cruise market is limited:
  - Newport is the only cruise destination/market
  - Limited berthing capability exists at Newport
  - Community opposition exists for expansion of cruise business
- Additional traffic from existing cruise business could be enhanced with the construction of mooring dolphins and a “T” berth in Newport to eliminate tendering

Summary of growth opportunities

- Base market opportunities:
  - Automobile market shows potential growth
  - Water depth could become an issue, and if the harbor deepening were to be undertaken by the federal government, then the competitive advantage of Davisville as an auto port would be eroded due to the imposition of the Harbor Maintenance Tax.
- Aggressively market perishable import market
- Investigate more fully the development of container feeder service:
  - About 24,000 TEU container market potential

Potential state investments to support existing marine cargo terminals

- Maintenance dredging of Davisville docks - $7 million for 250,000 cubic yards
- Developing dock at Terminal 5 (for wind turbines) requires state-funded dredging :
  - 60,000 ft^3 along berth
  - 240,000 ft^3 in the basin
  - $40-60 million project
- Corps of Engineers-funded dredging of the channel would require partial funding by the State:
  - This would also result in the imposition of the federal Harbor Maintenance Tax which will increase the costs to users of RI ports, and removes the competitive advantage of Davisville in the auto market

Potential state investments to support future terminal operations should they develop

- RO/RO Ramp – $1.75 million
  - To support potential container feeder operations
    - If RO/RO feeder operation were to develop
    - Traditional RO/RO vessels have ramps incorporated in their design and do not require use of a ramp
- Chill Facility – $2 million
  - To support potential fresh fruit import market
    - Public and/or private sector investment
    - Estimated $100 per sq ft investment for facility
- Reefer Plugs – $5,000 per unit
  - To support chill facility operations – optional
  - To support container feeder operations if refrigerated containers are handled
- Cruise Ship Dock – $12.5 million
  - "T" dock for passenger embarking/debarking
  - Two mooring dolphins
  - Assumes location is in relative proximity to deep water to accommodate ships (i.e. off of Goat Island)

Potential sites to consider for future development using public/private partnerships should Davisville and ProvPort become constrained

- P & W quay – East Providence:
  - 35 acres on 40 ft of water
  - Waterfront would have to be bulkheaded
- Cumberland Farms – Providence:
  - 10-acre site
  - Pier could be built out to 38-40 ft.
  - Building on-site can not be demolished due to historical designation
  - Additional adjacent sites could be merged to make 24-acre terminal:
    - Rhode Island Recycling – 5 acres
    - Verizon Maintenance Depot – 6 acres
    - Tow truck operation – 3 acres
- Former Chevron site – East Providence:
  - Has been on the market for 20 years for commercial or residential development
- Expansion of ProvPort
- Cruise dock/terminal on Aquidneck Island

ECONOMIC IMPACTS OF NEW MARKET OPPORTUNITIES

Potential Market Opportunities

- Base Cargo:
  - Auto units could grow from 200,000 units to 300,000 units (good possibility)
- Potential Opportunities:
  - Develop of a break bulk fruit operation (will require aggressive marketing)
  - Possible container barge feeder operations – 24,000 TEUs (will require significant reduction in barge rate/stevedoring charges and a Ro/Ro operation)
  - Wind energy 130 units – uncertainty, and should include significant infrastructure investment by private sector. State should not invest until private sector commitment.

Potential economic impacts to Providence were developed for each of the opportunities

Martin Associates' ProvPort Economic Impact Model was adjusted to reflect the potential annual economic impact of the identified opportunities. This study was conducted for ProvPort in 2006, and included the development of local models to estimate induced and indirect economic impacts of the direct operations at marine terminals in Providence. Specific terminal models were developed for ProvPort operations. In addition, Martin Associates has developed more than 300 economic impact studies for most ports in the United States and we were able to use direct impact models to estimate the types of impacts that could be anticipated from the growth in new automobile exports and imports, the development of fruit import operation similar to the size of operations of a terminal in the Delaware River, and the development of a barge feeder operation. Our wind energy models for Gulf Coast and Pacific Northwest ports were used to estimate the impacts of the potential wind energy imports, but not manufacturing/assembly.

Potential Impacts of Opportunities - Annual

	100,000 Potential Autos	130 Units Wind Energy	24,000 TEU Barge Feeder	Break Bulk Fruit
JOBS				
Direct	183	154	52	58
Induced	187	152	57	59
Indirect	65	28	6	5
Total	435	334	115	122
PERSONAL INCOME (millions)				
Direct	$8.4	$6.8	$2.6	$2.7
Respending/Local Consumption	$18.9	$15.2	$5.8	$5.9
Indirect	$2.7	$1.2	$0.2	$0.2
Total	$30.0	$23.2	$8.6	$8.8
BUSINeSS REVENUE (millons)	$79.1	$34.2	$7.2	$6.5
LOCAL PURCHASES (millions)	$6.3	$2.7	$0.6	$0.5
STATE AND LOCAL TAXES (millions)	$3.5	$2.6	$1.0	$1.0

Source: Martin Associates