

Northeast Diesel Collaborative Partners Meeting

Progress, Challenges and Opportunities for a Cleaner and Prosperous
Northeast



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• Massport Perspectives, Challenges and Opportunities

- Massport Overview
 - Background
 - Climate Change
 - Sustainable Planning and Design
- Logan Airport
 - ConRAC
 - Fuel Switching / Conversion
 - Tenant Equipment
- Port of Boston
 - ECA compliance
 - Diesel Retrofit Program
 - Fish Pier Berth Electrification
 - Conley Terminal Improvements
 - Conley Clean Truck Program



Massport Properties

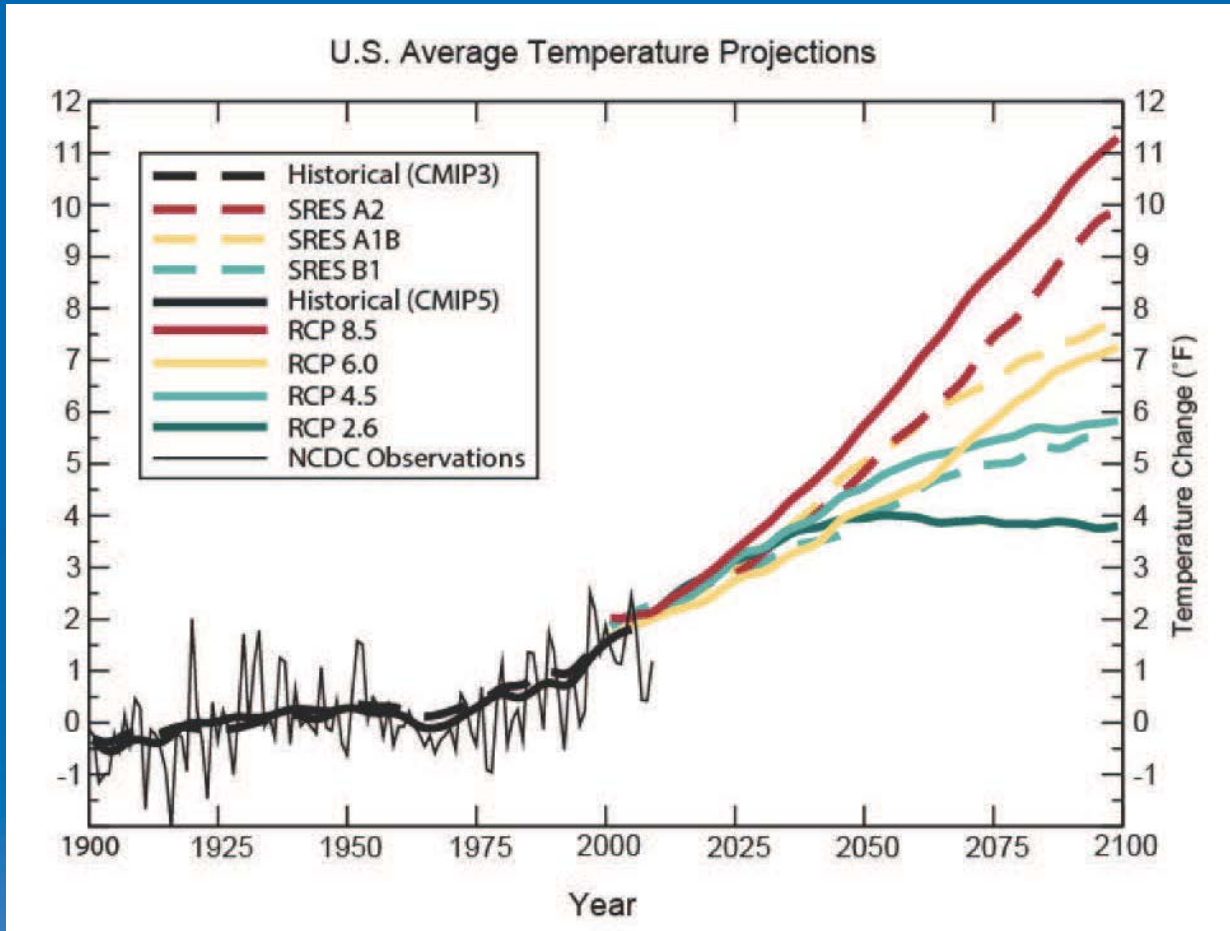


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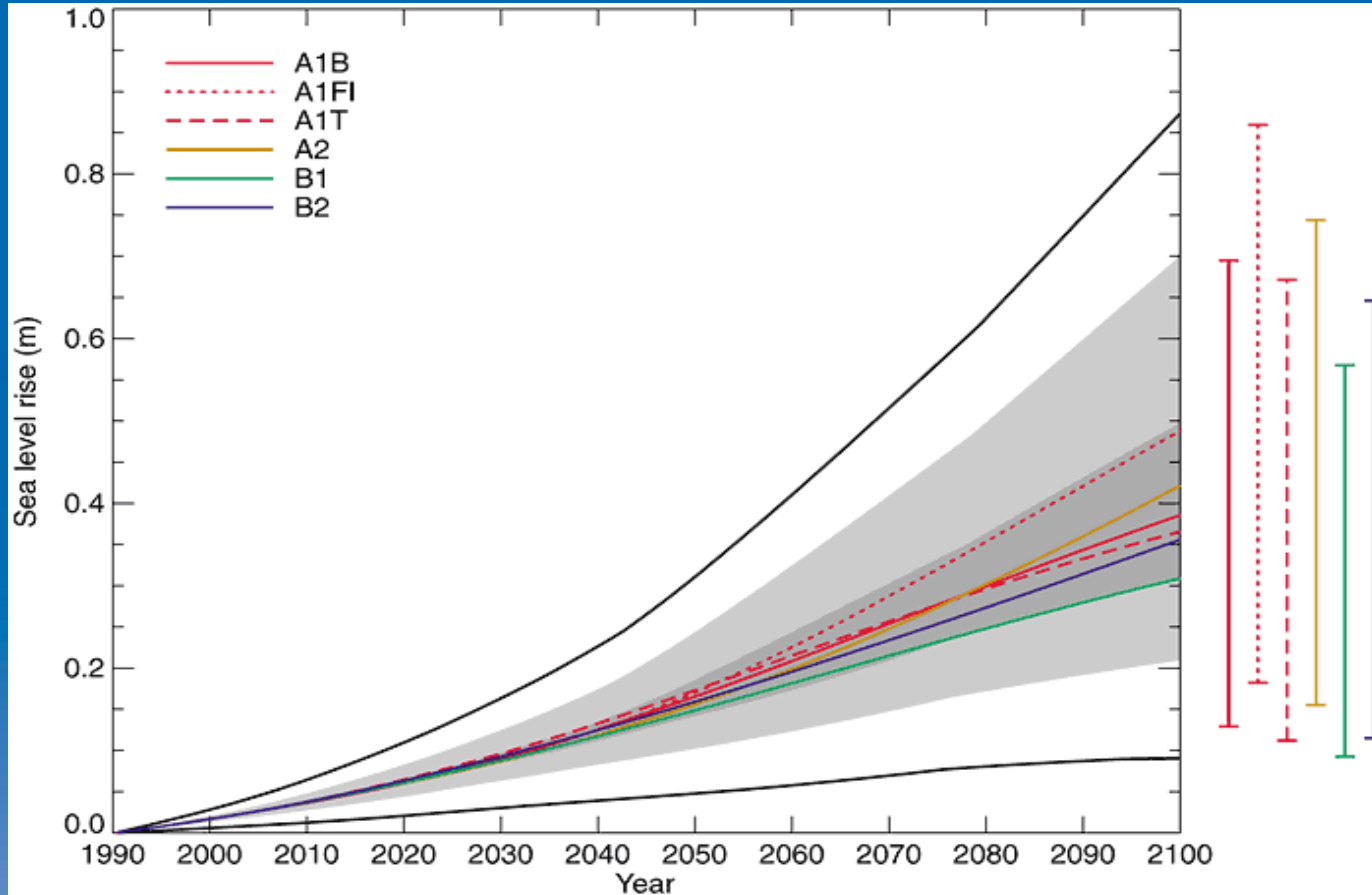


Range of temperature projections for 2100 goes from about 4⁰F to about 11⁰F

Third National Climate Assessment Report (2013 draft)



Sea Level Rise is Projected to Accelerate **2-4 FOLD** During Next 100 Years.



Global average sea level rise (1990 to 2100)

for the IPCC SRES emission scenarios
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Sustainable Planning and Design

Sustainability

- Massport Sustainable Design Standards and Guidelines mandatory for all Massport capital projects as of June 2009
- Voluntary compliance with “LEED Plus” green building requirements
- Seek to redevelop underutilized and brownfield properties and support regional “smart growth” policies
- “Green” lease terms with tenants, environmental audits, and voluntary sustainable tenant initiatives



WHY BUILD

GREEN

Massport Goals:

Asset Management

sustainability increases the value and revenue generating potential of projects on Massport properties

Environmental Benefits and Permitting Strategy

reduce environmental impact of buildings and reduce permitting time for individual projects

Citizenship

positively impact the communities surrounding Massport-owned property

Design Excellence

promote innovative, environmentally responsible and beautiful design



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Massport Disaster and Infrastructure Resiliency Planning Study

Strategy

- Modeling of storm surge for 25 years
- Identification of critical infrastructure for resiliency planning
- Implement Short and Long Term Programs

Program Elements

- Planning
- Existing Buildings and Infrastructure
- New Buildings
- Emergency Response



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Logan Airport



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Consolidated Car Rental



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Consolidated Car Rental Facility

- **Construction of Consolidated Car Rental Facility (ConRAC) Scheduled to be completed 9/25/2013.**
 - The ConRAC will be a LEED certified four level garage with approximately 1.3 million square feet of parking, office and check in space
 - New Massport operated shuttle busses offer significant environmental benefits by eliminating approximately 94 existing, diesel-powered rental car buses, and replacing them with 32 clean diesel-electric hybrid buses
 - Hybrid shuttle buses purchased using a FAA VALE grant



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Fuel Switching

- Voluntary conversion of Logan Airport central heat plant boilers from #6 Fuel Oil to #2 Fuel oil
- Transitioning from portable diesel fired snowmelters to natural gas and steam driven snowmelters
- Massport purchase of CNG and flex fuel powered vehicles
- Tenant switching from diesel equipment to alternative fuel.
 - Replacing Diesel Ground Service Equipment with Electric
 - Conversion of on-road fleets to CNG and E-85
- Installation of gate electrification and pre-conditioned air systems at nearly all Logan Airport gates






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Port of Boston



-  Massport Property
-  Other Public (USCG & BRA)
-  Private Port Facilities



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North American Emission Control Area (ECA)



- Effective 8/1/2012
- All vessels required to use $\leq 1.00\%$ sulfur fuel
- Effects already felt at the port of Boston with at least one cruise ship no longer using Boston as a port of call
- Recently announced agreement between U.S. EPA / U.S. Coast Guard and Carnival Corporation to develop advanced emission control technology utilizing DPFs and SO_x Scrubbers
- By allowing flexible compliance options, the U.S. EPA and Coast Guard have helped to minimize the adverse impact of the ECA rules



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Conley Container Terminal



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Conley Terminal Yard Equipment Retrofit and Replacement

- Voluntary installation of Diesel Oxidation Catalyst in 9 pieces of pre-2007 yard equipment
 - Retrofit project utilized an EPA DERA grant awarded in 2006
- Between 2003 and 2006, 25 pieces of yard equipment were purchased with factory installed DOCs
- Replacement of older yard equipment with current Tier rated diesel powered equipment



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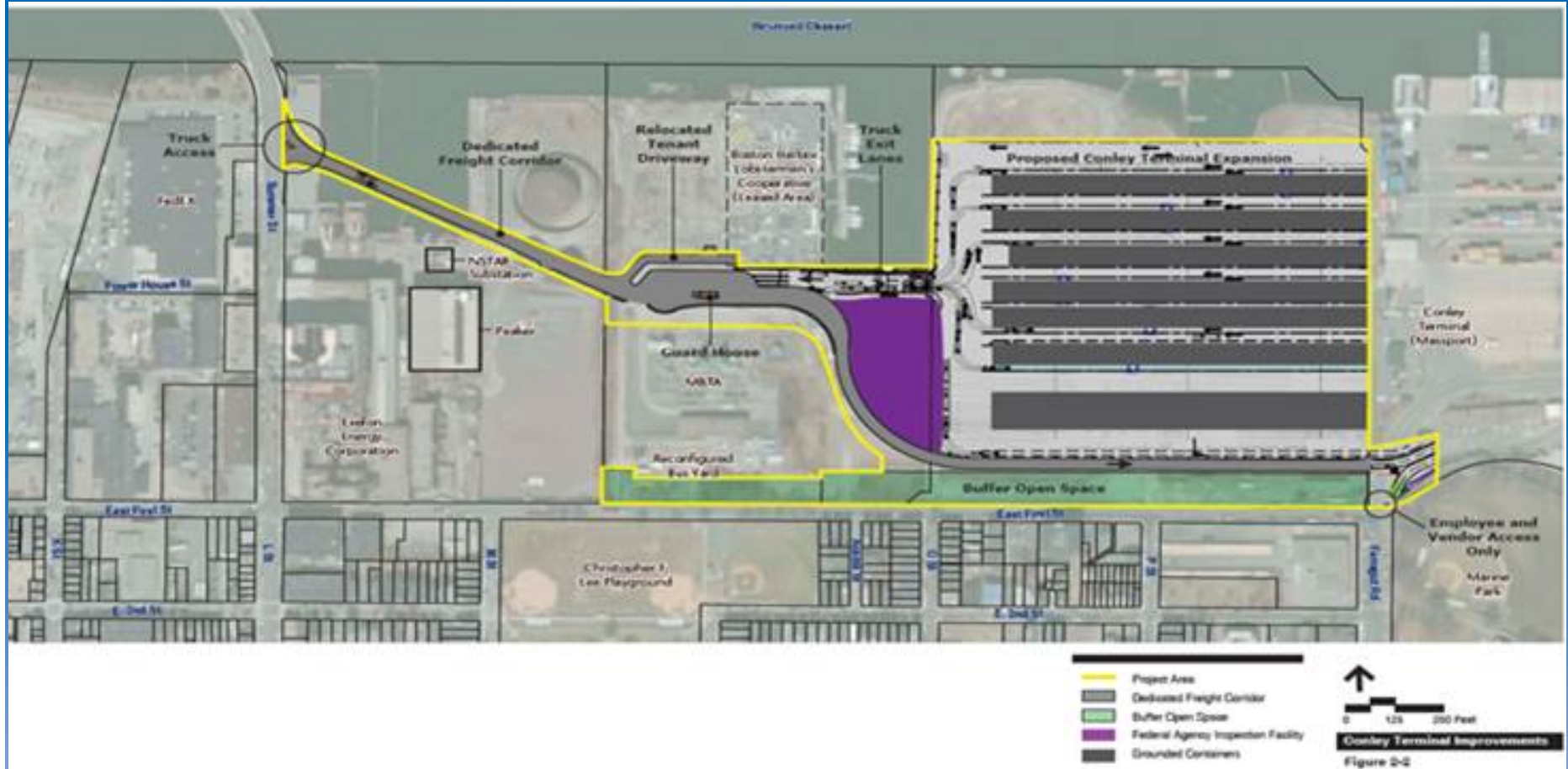


Conley Terminal Improvements and Dedicated Freight Corridor

- Integration of the former Coastal Oil site into Conley Terminal to enable the Port of Boston to respond to future global shipping demand
- Construction a new 2/3-mile dedicated truck haul road
 - New Corridor will allow Massport to remove all container truck traffic from East First Street and portions of Summer Street
- Construction of a new 4.5-acre community open space to be built and maintained by Massport
 - The Buffer Open Space will serve as a significant noise and visual buffer for the adjacent residents



Conley Terminal Improvements, Dedicated Freight Corridor, and Buffer Open Space



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Conley Drayage Truck Replacement Project

- Objective: Replace 20 Class 8b trucks with 1985-2000 model year engines with newer truck with a 2007 emission compliant engine
 - Projected Annual Emission Reductions :
 - 63% for hydrocarbons
 - 92% for carbon monoxide
 - 2% for carbon dioxide
 - 76% for nitrogen oxides
 - 92% for particulate matter
- Program started in September 2011
- Total Funding \$1.1 Million
 - \$500,000 EPA DERA grant, \$600,000 in private funding
- Vehicles Bought to Date: Ten



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Conley Drayage Truck Replacement Project

- Phase 2 of the Conley Drayage Truck Replacement Project
 - Program will be modeled after current program
 - Massport has committed \$1,000,000 to fund the replacement of an additional 40 trucks
 - In total, 60 of the oldest drayage trucks serving Conley Terminal will be permanently removed from service and replaced with 2007 Compliant (or newer) trucks



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Boston Fish Pier

- Fish Pier Berth Electrification Project
 - EPA DERA and DEP ARRA Grants
 - \$400K project electrified 18 berths
 - Eliminates use of on-vessel generators while berthed
 - Completed in 2011



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Questions?

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