

Climate Mitigation and Adaptation Plan GHG Emission Inventories



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ENVIRON

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of San Diego

CMAP Development Process

Stage 1: Development of CMAP

GHG Mitigation

1. Baseline & Future Emission Inventories
2. Review & Rank Control Measures
3. Set Goals
4. Specify Control Measures to Achieve Goals
5. Tracking Methods

Climate Change Adaptation

1. Existing Conditions
2. Port Vulnerabilities
3. Port Prioritization of Actions
4. Port Implementation Strategies

Stage 2:
Draft
CMAP

Stage 3:
Final
CMAP

Stage 4:
CEQA
Process

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Public Meeting



- Introduction to climate change and adaptation in a regional context
- What is the Port doing and what is a CMAP?
- June 9th, 5:30pm



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GHG MITIGATION - GHG INVENTORY



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Scope of Inventory



- Port Operations
 - The Climate Registry (2008, 2009)
 - Water, waste, public events, transportation (employee, customer)
- “Maritime” Tenants
 - Starcrest Emissions Inventory (2006)
 - Energy, water, waste, transportation (employee, customer)
- Other Tenants and Subtenants
 - Tenant list (300+) not in 2006 Maritime Inventory
 - GHG Inventory: South Bay Power Plant, CP Kelco, Goodrich Chula Vista (2008 ARB report)
 - Tenant Outreach: Some provided specific information to Port
 - General tenant types used CA average information



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Inventory: Primary Data Sources



- Starcrest Maritime Inventory (2006)
- Port’s The Climate Registry reports
- Selected tenants
- ARB Public GHG reports
- ARB Scoping Plan Projections
- Port information and records



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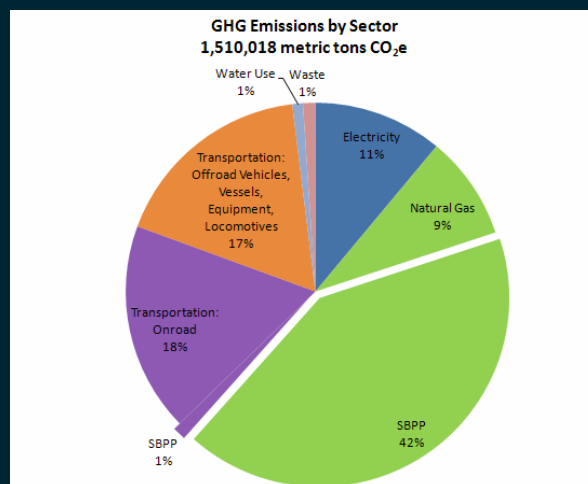
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Scope of Inventory

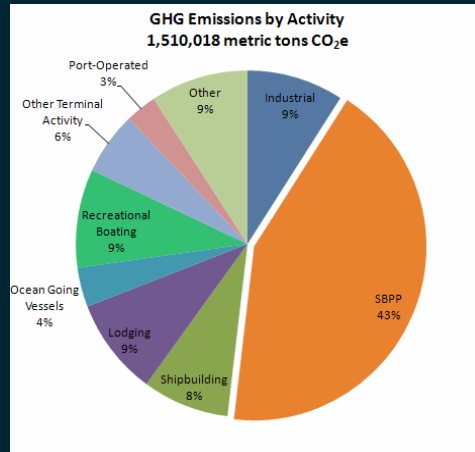


Category	Geographical Scope
Energy	<ul style="list-style-type: none"> •Electricity and natural gas usage within jurisdiction •Minor amount of diesel combustion
Transportation: On-Road Vehicles	<ul style="list-style-type: none"> •Trips originating or terminating within jurisdiction (including VMT outside of jurisdiction) •Exclude pass-by trips
Transportation: Off-Road Vehicles, Vessels, Equipment, Locomotives	<ul style="list-style-type: none"> •Consistency with Maritime inventory <ul style="list-style-type: none"> •Locomotives – within County •OGVs and harborcraft – within County and State Waters •Trucks – within County •CHE – within Port •Cruise Terminal Transportation – within Port •Recreational boats
Water Use & Wastewater	<ul style="list-style-type: none"> •Usage within jurisdiction
Waste	<ul style="list-style-type: none"> •Solid Waste - Direct landfill emissions (transport in Transportation Category)

Baseline GHG Inventory (2006)



Baseline GHG Inventory (2006)



Other	
Restaurant (Standalone)	2.5%
Marinas	2.5%
Rental Car	1.5%
Yacht Club	1.0%
Boatyards	0.5%
Warehouse/Storage (Standalone)	0.2%
Retail (Standalone)	0.2%
RV Park	0.2%
Office (Standalone)	0.2%
Commercial Fishing	0.2%
Golf Course	0.1%
Museums	0.1%
Petroleum	0.1%
Sportfishing	0.05%
Land Transportation	0.01%
Other Terminal Activity	
Heavy Duty Vehicles	1.9%
Buildings/Onroad Transportation	1.9%
Commercial Harbor Craft	1.4%
Cruise Terminal Transportation	0.3%
Locomotive	0.2%
Cargo Handling Equipment	0.2%



Baseline Inventory: General Conclusions



- South Bay Power Plant is a large contributor (> 40%)
 - Is retiring so will not be in 2020 inventory
- Other significant emissions (8-10% each)
 - Recreational boating
 - Industrial
 - Ship Building
 - Lodging



Future Projections: Growth Assumptions in Activity



- Port Operations
 - activity data consistent with time so no growth in activity
- Maritime Operations (in Maritime Inventory)
 - Maritime Business Plan
 - Cargo activities grown by 3% per year
 - Cruise activities grown by 10% from 2008 to 2020
- Other Tenants
 - Non-industrial: based on square footage assumed not to change (unless future project identified)
 - Industrial: no change in activity data
- Future Additions or Changes
 - Included future projects reasonably foreseeable by Port (~30)
- Assumptions may be adjusted in future updates



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Future Projections: Regulations Included – Affects Emission Factors



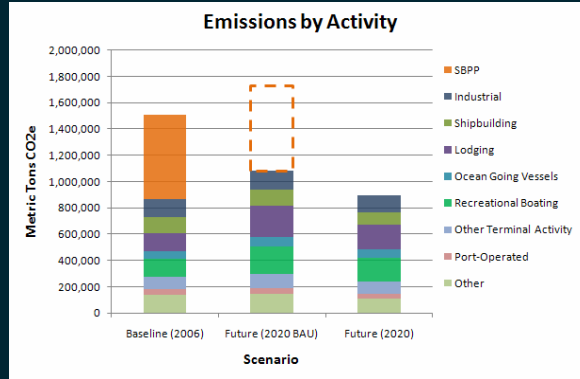
- Renewable Portfolio Standard
- Low Carbon Fuel Standard and Pavley
- Heavy Duty Vehicle GHG Measure
- Shore power
- OGV Fuel Switch
- Note: Business as Usual (BAU) Projection does not include these regulations



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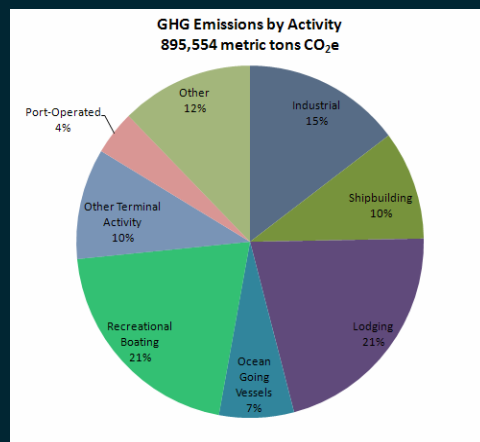
GHG Inventory Summary (By Activity)



% Reduction from Baseline (2006)	Future (2020 BAU)	Future (2020)
	28.5%	40.7%



Future GHG Inventory (2020)



Other	
Restaurant (Standalone)	3.5%
Marinas	3.3%
Rental Car	2.1%
Yacht Club	1.3%
Boatyards	0.6%
Warehouse/Storage (Standalone)	0.3%
Retail (Standalone)	0.3%
RV Park	0.2%
Commercial Fishing	0.2%
Golf Course	0.2%
Museums	0.1%
Office (Standalone)	0.1%
Petroleum	0.1%
Sportfishing	0.1%
Fire Station (CVBMP)	0.02%
Land Transportation	0.01%
Classrooms	0.01%

Other Terminal Activity	
Heavy Duty Vehicles	4.2%
Buildings/Onroad Transportation	2.5%
Commercial Harbor Craft	2.2%
Locomotive	0.5%
Cargo Handling Equipment	0.4%
Cruise Terminal Transportation	0.4%



Future Projection Inventory: General Conclusions



- South Bay Power Plant is a large contributor to decrease
- Other significant emissions (>10% each)
 - Recreational boating
 - Lodging
 - Industrial
 - Ship Building



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GHG Mitigation: Next Steps



- Review and Rank Control Measures (present to Oct)
 - Use inventory to focus on appropriate control measures
 - Evaluate measures by list of evaluation criteria
 - Develop ranking
 - July Work Group Meeting for further input
- Set Goals (Aug – Dec)
 - Based on review of control measures
 - September Work Group Meeting
 - October Public Meeting
 - October 18 – Environmental Committee
 - December 13 – Board Meeting



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Questions?



Revised CMAP Schedule



- Public Meeting June 9
- July – Review Control Measures / Vulnerability
- September – Set GHG Goals / Adaptation Actions
- October – Public Meeting
- November – Specify Control Measures / Finalize Strategies
- February – Draft CMAP (Workgroup)
- March – Public Meeting and Review
- May – Final CMAP

