

## SAN PEDRO BAY STANDARDS

The San Pedro Bay Standards establish the long-term emissions-reduction and health risk-reduction goals for the ports of Los Angeles and Long Beach. Emission Reduction Standards for DPM, NO<sub>x</sub>, and SO<sub>x</sub> have target years of 2014 and 2023 to support state ambient air quality goals. The Health Risk Reduction Standard has a target year of 2020 to align with California Air Resources Board's Goods Movement Emission Reduction Plan.

### CLEAN AIR ACTION PLAN (CAAP) GOALS (% reduction compared to 2005)

	2014	2023
DPM	72%	77%
NO <sub>x</sub>	22%	59%
SO <sub>x</sub>	93%	93%
Health Risk Reduction Standard	2020	85%

(% reduction in residential cancer risk compared to 2005)



### OVERALL EMISSIONS REDUCTIONS



Pollutant	%	tons
DPM	87%	761
PM <sub>2.5</sub>	85%	695
PM <sub>10</sub>	86%	814
NO <sub>x</sub>	60%	9,652
SO <sub>x</sub>	98%	4,865

### EMISSIONS PER 10,000 TEU HANDLED REDUCTIONS

Pollutant	%	tons
DPM	89%	1
PM <sub>2.5</sub>	88%	1
PM <sub>10</sub>	89%	1
NO <sub>x</sub>	68%	15
SO <sub>x</sub>	98%	7



### OCEAN-GOING VESSEL EMISSIONS REDUCTIONS



Pollutant	%	tons
DPM	91%	423
PM <sub>2.5</sub>	88%	376
PM <sub>10</sub>	89%	477
NO <sub>x</sub>	45%	2,386
SO <sub>x</sub>	98%	4,715

## HEAVY-DUTY VEHICLE/CLEAN TRUCK EMISSIONS REDUCTIONS



Pollutant	%	tons
DPM	96%	239
PM <sub>2.5</sub>	96%	229
PM <sub>10</sub>	96%	238
NO <sub>x</sub>	77%	4,825
SO <sub>x</sub>	91%	41

## HARBOR CRAFT EMISSIONS REDUCTIONS



Pollutant	%	tons
DPM	51%	28
PM <sub>2.5</sub>	51%	26
PM <sub>10</sub>	51%	28
NO <sub>x</sub>	38%	505
SO <sub>x</sub>	88%	5

## RAIL EMISSIONS REDUCTIONS



Pollutant	%	tons
DPM	43%	24
PM <sub>2.5</sub>	41%	22
PM <sub>10</sub>	43%	24
NO <sub>x</sub>	48%	826
SO <sub>x</sub>	99%	97

## CARGO HANDLING EQUIPMENT EMISSIONS REDUCTIONS



Pollutant	%	tons
DPM	89%	47
PM <sub>2.5</sub>	86%	43
PM <sub>10</sub>	86%	46
NO <sub>x</sub>	71%	1,109
SO <sub>x</sub>	78%	7

## CO<sub>2</sub> EQUIVALENT CHANGES BY SOURCE TYPE

Source Type	%	tons
Ocean-Going Vessels	↓ 29%	↓ 82,765
Harbor Craft	↑ 16%	↑ 9,167
Cargo Handling Equipment	↑ 40%	↑ 54,273
Rail	↓ 7%	↓ 6,128
Heavy Duty Vehicles	↓ 16%	↓ 7,790
<b>TOTAL</b>	<b>↓ 10%</b>	<b>↓ 103,304</b>



↓ = reduction ↑ = increase

### PRIMARY POLLUTANTS DEFINED:

DPM = Diesel Particulate Matter  
 NO<sub>x</sub> = Oxides of Nitrogen  
 SO<sub>x</sub> = Oxides of Sulfur

PM<sub>2.5</sub> = Particulate Matter less than 2.5 microns in diameter  
 PM<sub>10</sub> = Particulate Matter less than 10 microns in diameter  
 CO<sub>2</sub> = Carbon Dioxide  
 (A Green House Gas contributor)