

AAPA Marine Terminal  
Management Training Program  
Sept. 14, 2015

Critical Issues Facing  
**PUBLIC PORTS** and  
Marine Terminals



Port of  
**LONG BEACH**  
*The Green Port*

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Chief Commercial Officer and  
Managing Director of Commercial Operations

# COMPETITION

## Weekly vessel calls from East Asia to U.S. West Coast

(1 line = 2 calls)

PRINCE RUPERT, 2

VANCOUVER, 16

SEATTLE-TACOMA, 16

LONG BEACH/SAN PEDRO BAY, 40

# WHAT'S YOUR NICHE?

Are you a market leader? Is your market growing?

# MOST DIRECT ROUTE

Far East to East Coast via POLB saves 10 DAYS

## Growing competition among canals



Source: Nikkei Asian Review

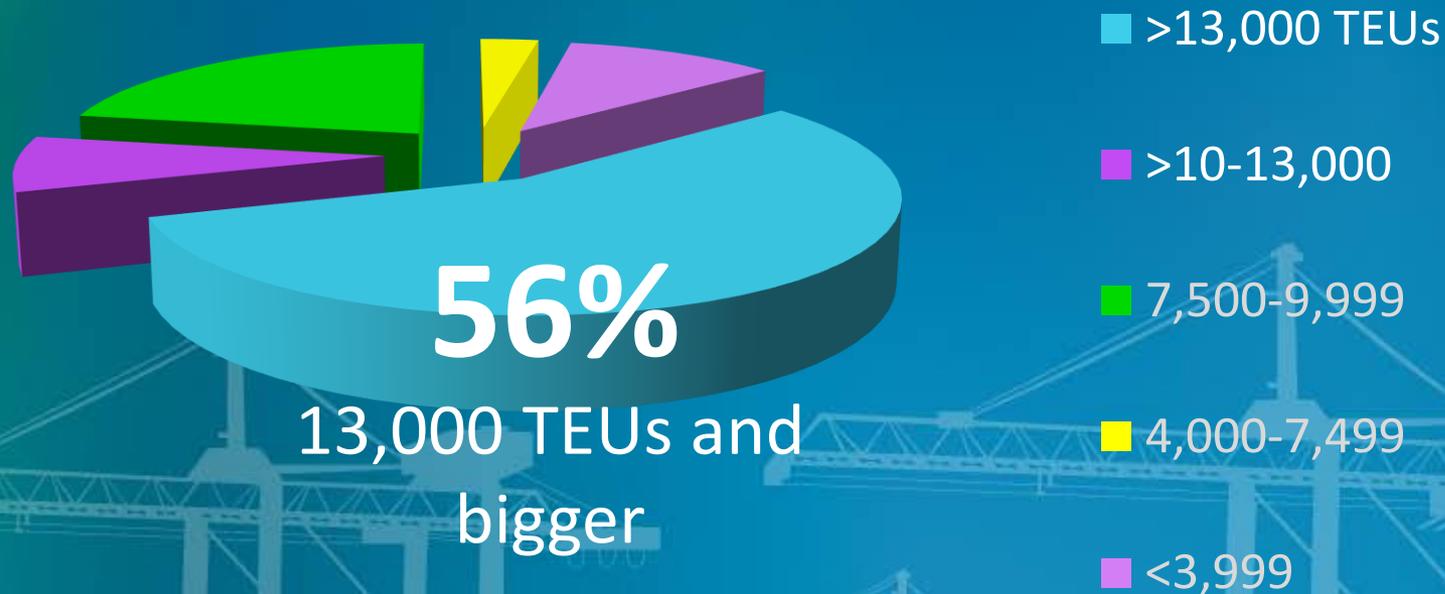


# BIG SHIP READY?

Big ships are arriving, and even bigger ships are coming.

# BIG SHIPS COMING

Of ships on order, more than half can't pass through expanded Panama Canal.



Source: Alphaliner, April 2015

# REALLY, REALLY BIG

13,000- to 18,000-TEU “ultra-large” container vessels will require even longer wharves, deeper water and larger cranes.

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Length of Berth	1,200 - 1,310 feet
Design Depth of Water	50-55 feet draft
Max Crane Outreach	20 - 24 rows
Clear Lift Above Rail	132 – 154 feet

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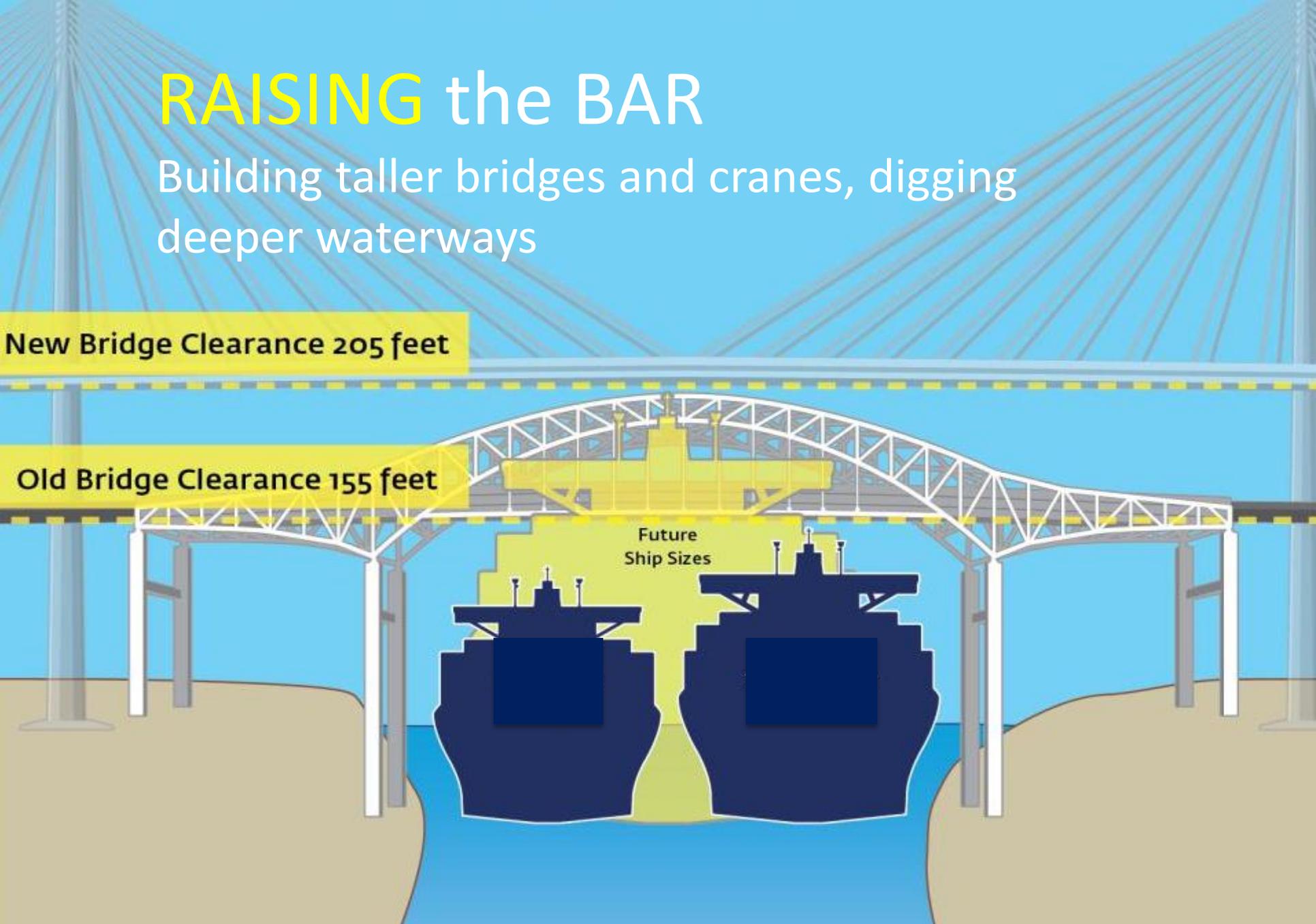
# RAISING the BAR

Building taller bridges and cranes, digging deeper waterways

New Bridge Clearance 205 feet

Old Bridge Clearance 155 feet

Future Ship Sizes



# BIG TRAINS COMING

The length of trains is doubling to two miles.



# TRAINS v. TRUCKS

Trains impact the environment much less

1 train  
eliminates  
up to  
**750**  
truck trips

Trains are **2-4 times**  
**more fuel efficient** than  
trucks on a ton-mile basis

Trains emit **1/3<sup>rd</sup>**  
**less greenhouse gas** on a  
ton-mile basis

Source: Environmental Protection Agency and Port of Long Beach

**LEGEND**

*	DENOTES STATE FUNDING (TCIF) AND FEDERAL TIGER GRANTS
	CONSTRUCTION COMPLETED
	DESIGN / CONSTRUCTION PHASE
	E.I.R. / PERMIT PHASE
	ON HOLD
	MARINE TERMINAL ON-DOCK RAIL
	OUTSIDE MARINE TERMINAL RAIL

MAP I.D.	PIER/BERTH	ON-DOCK MARINE TERMINAL PROJECTS
	PIER G	ITS RAIL YARD REDEVELOPMENT
	PIER E/F	MIDDLE HARBOR RAIL YARD
	PIER G	PIER G METRO TRACK IMPROVEMENT

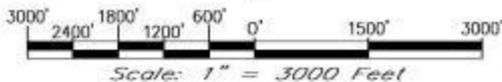
**RAIL ENHANCEMENT PROJECT LIST\***

PRO. I.D.	LEAD AGENCY	PORTS RAIL PROJECTS OUTSIDE MARINE TERMINAL
	POLB	PIER F SUPPORT YARD *
	POLB	TRACK REALIGNMENT AT OCEAN BLVD./ HARBOR SCENIC DRIVE *
	POLB	PIER B STREET AND PICO AVENUE REALIGNMENT (PHASE I)
	POLB	PIER B RAIL YARD (PHASE II)
	POLB	PIER B RAIL YARD (PHASE III & IV)
	POLB	TERMINAL ISLAND WYE TRACK REALIGNMENT
	POLB	RECONFIGURATION OF CP MOLE
	POLB	GRADE SEPARATION FOR REEVES CROSSING AND CLOSURE
	POLB	NAVY MOLE ROAD STORAGE RAIL YARD
	POLA	NEW CERRITOS RAIL BRIDGE
	ACTA	THENARD TRACK CONNECTION PHASE 2



# RAIL INVESTMENTS

\$1 billion in rail projects planned over next decade



**PORT RAIL ENHANCEMENT PROJECTS - 2015**



# MAJOR CHALLENGES

Big ships and alliances spur operational optimization



# SUPPLY CHAIN OPTIMIZATION

Joint Long Beach and L.A. initiatives to improve velocity



# CUSTOMER OUTREACH

Spreading the word that we remain the best.

# Infrastructure INVESTMENTS

Capital program to improve terminals, bridges, etc.

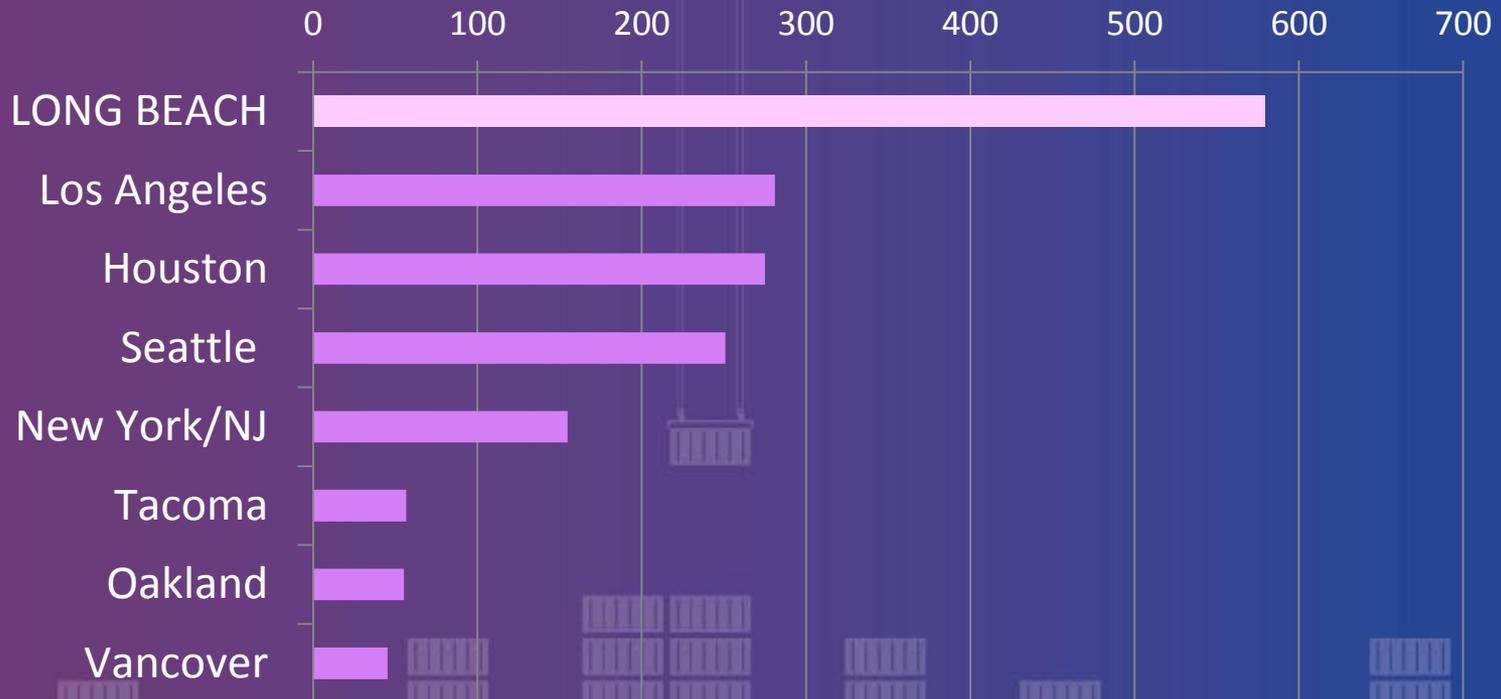


# BETTING ON THE FUTURE

## POLB leads No. Am. ports in capital spending

Millions of dollars in FY2015 capital budget

Source: Ports





# SELF-FUNDED

Not supported by tax dollars;  
Revenue from leases re-invested in infrastructure



# MIDDLE HARBOR

Advanced technology, for world's greenest terminal



# ZERO EMISSIONS

All-electric, remote-controlled yard tractors



# \$1.3 BILLION INVESTMENT

305-acres, 3.3 million-TEU capacity in 2019

The image features several green flags with white environmental logos, including a stylized leaf and a recycling symbol. The word "Environment" is printed in white on the green fabric of the flags. The background is dark, making the green and white elements stand out.

# THE GREEN PORT

Leading the way in reducing environmental impacts

# GREEN PORT POLICY

Adopted in 2005, the policy directs the Port to do business in an environmentally friendly way.

**10**

Years of the Green Port Policy

**1**

Rank of the Port of Long Beach in the world for environmental leadership in 2014, according to readers of Cargonews Asia



**300+** Species of marine animals



**60+** Species of fish



**100** Species of birds



**78**

Acres of kelp beds in the Port



**99**

Percent of cargo ships slowing to 12 knots or less near the Port to reduce emissions



**82** ↓

Percent of diesel particulate exhaust eliminated overall from Port sources



**500 million**

Dollars invested in clean air projects for ships, trucks, trains and cargo-handling equipment



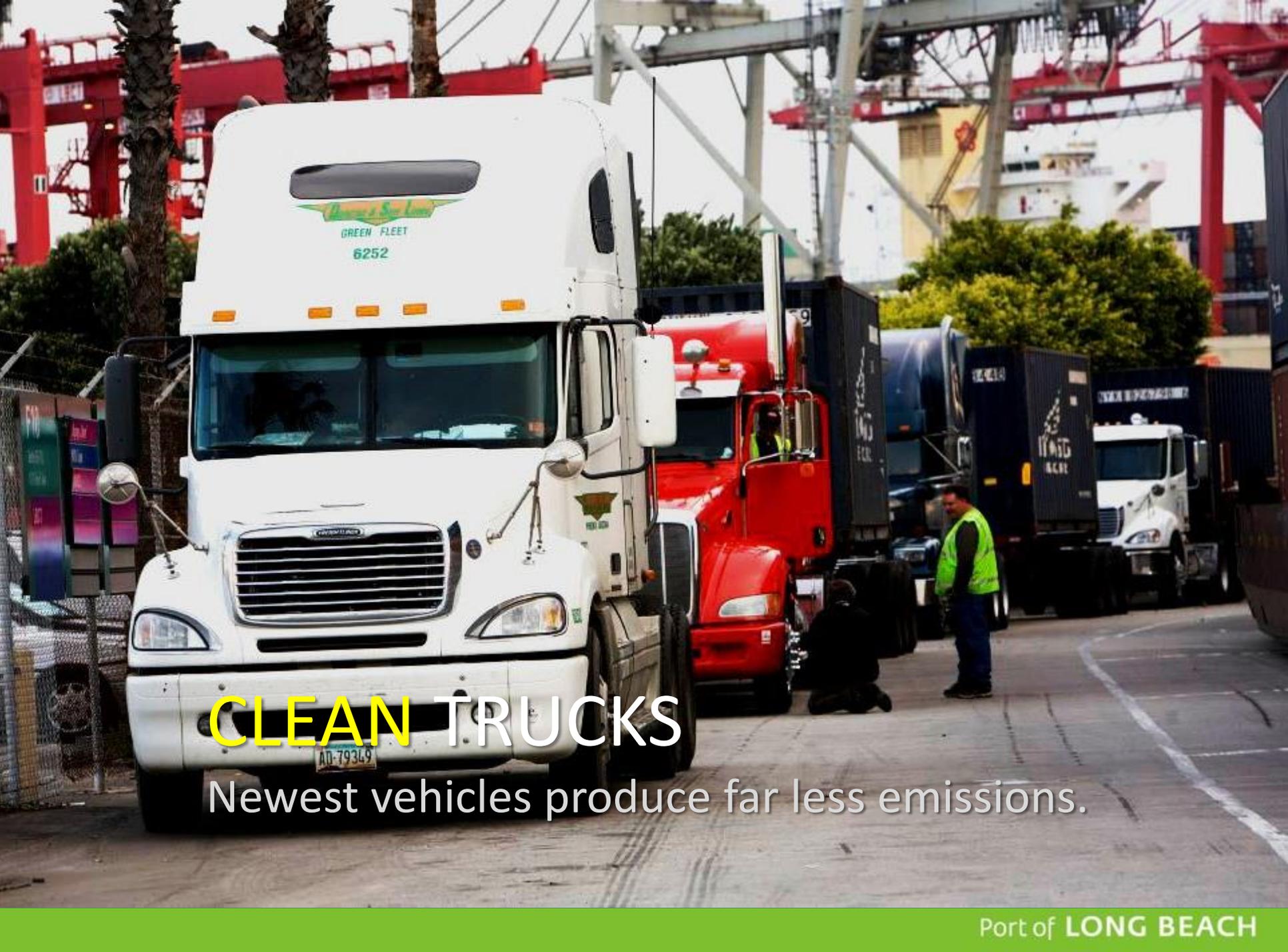
**17.4 million**

Dollars awarded to schools, health outreach, and renewable energy programs

**14,000**

Trucks of year 2007 or newer registered in the Clean Trucks Program





# CLEAN TRUCKS

Newest vehicles produce far less emissions.



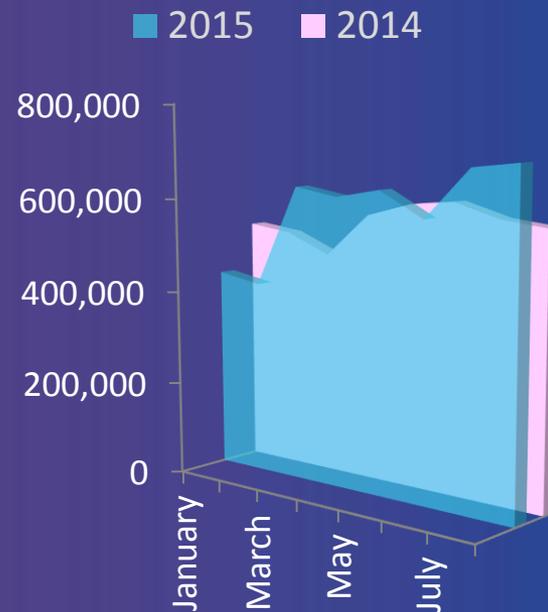
# COMMUNITY PARTNER

\$18 million in air quality, health education and greenhouse gas projects

# TRADE ON THE REBOUND

Cargo volume up 5.4% first eight months of 2015

**+22.8%**  
in August.  
Busiest month  
EVER



Twenty-foot Equivalent Units (TEUs) or  
20-foot-long containers



# THE FUTURE IS **BRIGHT**

We can capitalize on key opportunities to bring a promising future to the Port of Long Beach.