

AAPA Environment Committee Meeting



Sustainable Design and Construction Guidelines for Marine Industrial Development

Tim Van Wormer

Joint West Coast Port Technical Committee

Want to use best available practices.

Which practices make the best investments?

How do ports know that they have considered all possible options?

How can we measure performance?



Joint West Coast Port Technical Committee

Communities want to see environmental results.

Leaders have made policy declarations.

Some procedures and plans in place.

Isolated but not consistent project results.

Organizational challenges.

Joint West Coast Port Technical Committee

We Form a Team to develop a tool by ports for ports

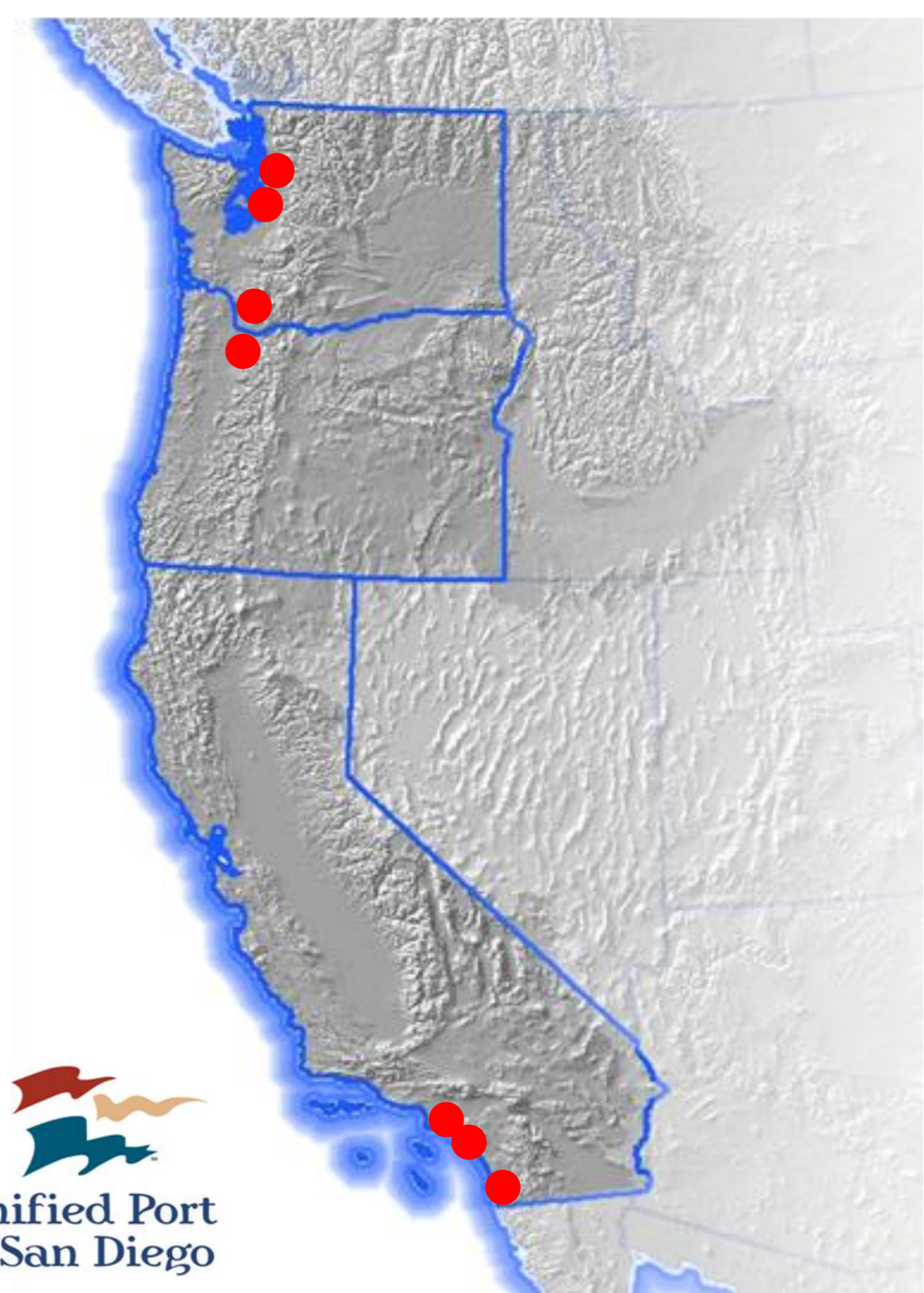
Portland and Long Beach invite others.

Los Angeles, San Diego, Vancouver, Tacoma, and Seattle join.

First meeting in February 2011.

Adopted a charter to develop Sustainable Design and Construction Guidelines for port industrial development.

Joint West Coast Port Technical Committee



Joint West Coast Port Technical Committee

Sustainable Design & Construction Guidelines for marine facility development

- Standardize the approach to incorporating sustainability
- There is currently no other comprehensive guidance available for sustainable marine terminal development
- Flexible approach that can be applied to different sized ports with differing geography, politics, environmental concerns

Joint West Coast Port Technical Committee

Objectives:

- Define sustainable marine industrial development at the project level;
- Build upon the sharing of best practices, keys to success, and lessons learned for implementation;
- Establish a common language that is understood by internal and external port stakeholders;
- Improve the efficiency, productivity and environmental performance of each port without disadvantage to the other ports

General Checklist

- Air,
- Public outreach,
- Water,
- Natural resources,
- Economic considerations,
- Economic growth,
- Transport,
- Site development,
- Safety & security,
- Waste,
- Energy,
- Materials,
- Maintenance and monitoring/reporting

General Checklist Examples

- Consider using earth movers and import haulers with a gross vehicle weight rating (GVWR) of at least 19,500 lbs that comply with USEPA 2004 on-road emission standards for PM10 and NOx.
- Host a meeting or panel discussion for affected communities, separate from the public hearing, as an opportunity for more dialogue.
- Design for collection of runoff from pollution generating surfaces and provide stormwater treatment, including over-water areas.
- Replace conventional shoreline armoring with alternative shoreline protection methods to improve ecological functions.

Project Specific Checklist

- Dredging - Create shoreline recreation areas or shallow marine habitat where future Port development is not anticipated to offset impacts.
- Wharf construction - Specify the use of life-extending technologies where applicable (e.g., rubberized pavements, low pH sealcoat).
- Roadways, rails and bridges - For railway construction, consider use of alternative materials (concrete ties).
- Landscaping - Incorporate landscape measures to distract and discourage seabirds from concentrating in areas of impervious surfaces.
- Utilities - Utilize trenchless construction to reduce excavation areas, minimize site disturbance, and improve construction efficiency.

Project Area Checklist

Project Area: Land Development										
Focus Area: <input type="text" value="Safety & Security"/>										
<input type="button" value="Add New Strategy"/> <input type="button" value="Go to Start Page"/> <input type="button" value="Summary Reports"/>										
Focus Area	Focus Areas	Strategy	Implemented ?	Why Not Implemented? Why Not Applicable?	Supporting Details	Resources for Additional Information	Strategy Weight	Economic	Environmental	Social
Strategies Required by Regulation										
<i>Ports, please enter sustainability strategies here which are required by Port or local regulations.</i>										
Strategies Under Consideration										
<i>Project Managers, please select additional sustainability strategies that you have considered for your project.</i>										
Air		Consider using harbor craft with Tier 3 engines or cleaner.								
Air		Consider reducing the speed of ships and barges delivering construction-related materials (12 knots for ocean-going vessels).								
Air		Consider requiring construction-related ships, barges, and marine equipment to use low sulfur or ultra low sulfur fuels where appropriate.	Yes				3	X		
Air		Trucks hauling material such as debris or fill material should be fully covered while operating off Port	Yes				4			X
Air		Minimize idling of construction equipment and on-road trucks used during construction .	Yes				5		X	
Air		Consider using on-road trucks with a gross vehicle weight rating (GVWR) of at least 19,500 lbs that comply with USEPA 2007 on-road engine standards for PM10 and NOx.	No							
Air		Consider using earth movers and import haulers with a gross vehicle weight rating (GVWR) of at least 19,500 lbs that comply with USEPA 2004 on-road emission standards for PM10 and NOx.	Not Applicable							

Summary Report

[Go To Start Page](#)

SUMMARY REPORT

Select Project Area

Select Focus Area(s)

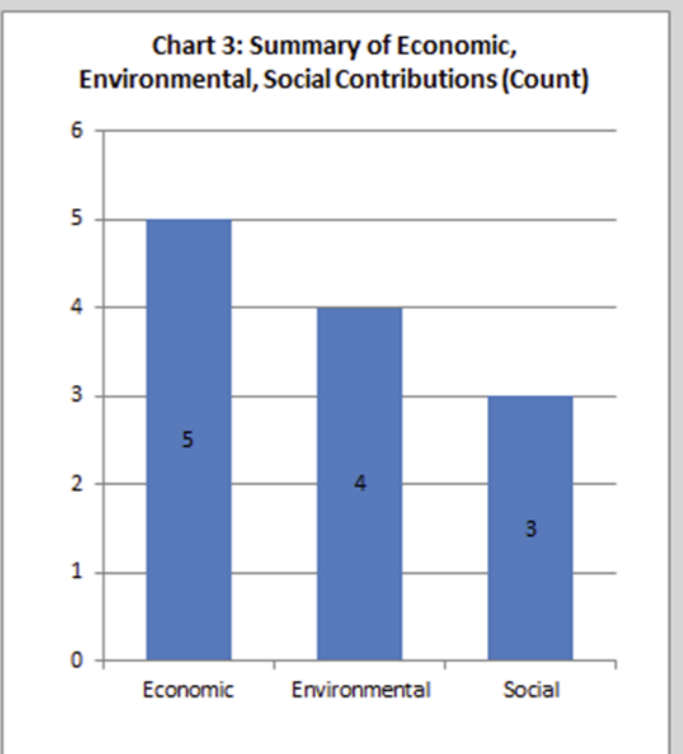
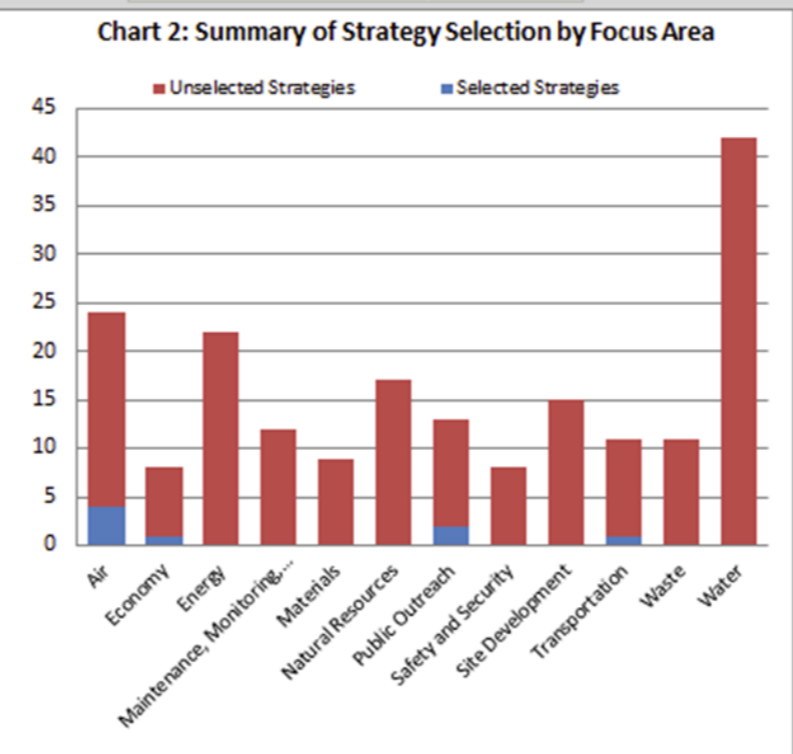
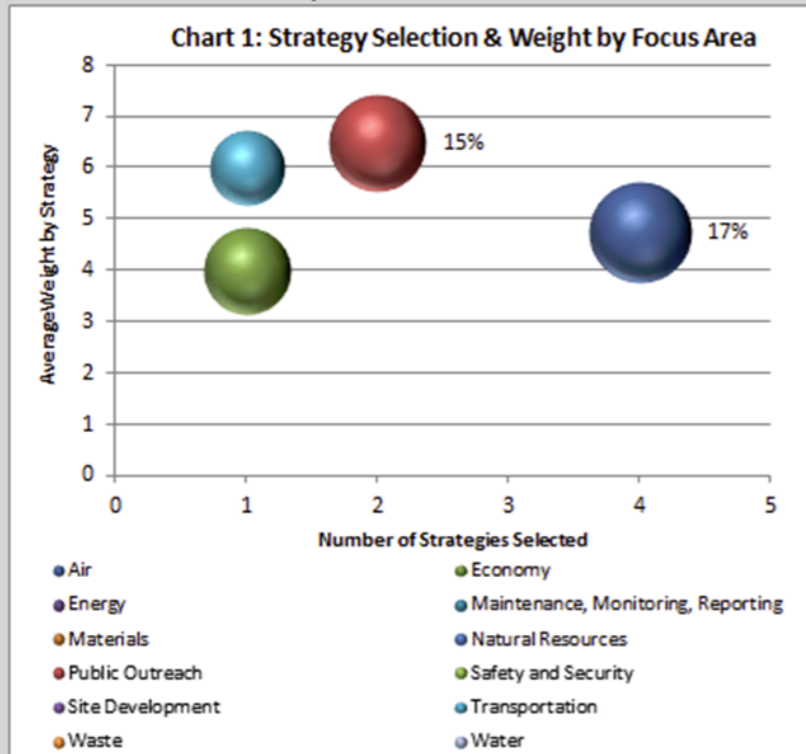
[Go To List of Criteria Implemented](#)

[Print Selected Criteria](#)

Summary Charts by Project Area

PROJECT AREA: Land Development

[Link to Chart Descriptions](#)



Summary Tables

Project Area	Focus Area	Summary of Selected Strategies	Percent Selected	Total Weighted Score	Contributions		
					Economic	Environmental	Social
Land Development	Air	4 out of 24 (17%)	17%	19	2	2	1
Land Development	Economy	1 out of 8 (13%)	13%	4	1	0	0
Land Development	Energy	0 out of 22 (0%)	0%	0	0	0	0
Land Development	Maintenance, Monitoring, Reporting	0 out of 12 (0%)	0%	0	0	0	0
Land Development	Materials	0 out of 9 (0%)	0%	0	0	0	0
Land Development	Natural Resources	0 out of 17 (0%)	0%	0	0	0	0
Land Development	Public Outreach	2 out of 13 (15%)	15%	13	1	1	2
Land Development	Safety and Security	0 out of 8 (0%)	0%	0	0	0	0
Land Development	Site Development	0 out of 15 (0%)	0%	0	0	0	0

Implementation

- Sustainability attributes are communicated and understood by all divisions involved in a project;
- Construction documents and specifications clearly identify the sustainability attributes
- Contractor is aware of the project's sustainability attributes; and
- Verification at project completion that the sustainable attributes were constructed
- The operation and maintenance of the sustainable attributes are communicated to operations and maintenance personnel

West Coast Technical Committee

Next Steps

- Test and Final Excel Checklist Tool
- Post tool to AAPA website
- Ongoing maintenance and collaboration to capture experience and identify best practices.

- Implementation
- Pilot Projects