



**GREEN
PORT**
Port of San Diego

Water Conservation

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Water Conservation Background

- Three water agencies serve Tidelands:
 - Sweetwater Authority (National City & Chula Vista)
 - California American Water Company (IB & Coronado)
 - City of San Diego Water Department (San Diego)



City of San Diego Mandatory Restrictions

- Effective June 1, 2009: *Level 2 Drought Alert*
- Restrictions relevant to Port operations:
 - Irrigate at certain times, 3 days a week, for 10 mins
 - Stop or repair all leaks within 72 hours of discovery
 - Stop operation of ornamental fountains that spray water into air
 - Stop washing down paved areas
 - Stop irrigation water waste
- *The Port is in compliance with all Level 2 mandates.*



Current *Voluntary* Conservation Efforts

- Retrofitting buildings and park restrooms
- Installed Smart Irrigation Systems in 5 major parks
- Replacing high-water use shrubs with water-wise plants or bark mulch where feasible





What is the new “business-as-usual”?

- Requires a balance of:
 - Environmental stewardship
 - Parks
 - Tourism
 - Recreational opportunities
 - Community service



Water Use Baseline – FY 07/08

- FY 07/08 water use baseline helps us prepare for upcoming escalated restrictions.
 - Where do we use the most water?
 - Where do reductions make the most business sense?
 - What impacts are expected?

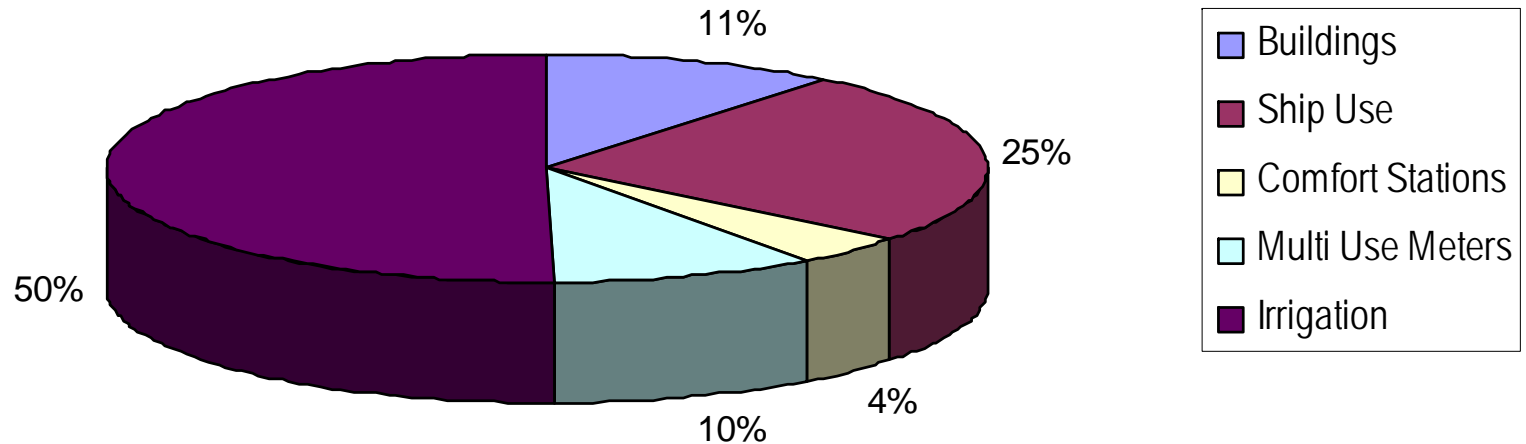


FY 07/08 Baseline

FY 07/08 Total

Total Water Use: 213,060,694 Gallons (284,841 HCF)

*1 HCF = 748 Gallons





Sample Reduction Scenarios

Reduction of Irrigation

- Result: Affected parks
 - Stressed and/or brown turf areas
 - Affected general public
- Potential Impacts:
 - More Port staff time available for other landscape care
 - Visible sign to community of Port's stewardship
 - Damage to turf during events
 - Loss of events
 - Dissatisfied park visitors



Sample Reduction Scenarios

Reduction of Water used by Ships

- Result: Affected tourism
 - Affected cruise lines and passengers
- Potential Impacts:
 - Financial benefit to cruise lines regarding water cost
 - Loss of cruise calls and their revenue



Sample Reduction Scenarios

Reduction of Water at Multi Use Meters

- Result: Affected recreational opportunities
 - Affected boaters
- Potential Impacts:
 - Financial benefit to the Port (if charge boaters for water)
 - Loss of recreational boaters and their revenue



Other options?

- Gray Water Recycling Systems
 - California Plumbing Code currently restricts commercial buildings from installing gray water recycling systems.
 - The Port is weighing in on proposed legislative changes to change this Code.
- Reclaimed Water
 - Infrastructure is not available on Port tidelands.



Next Steps

- Stay informed of mandates from water agencies serving tidelands
- Determine best options for further conservation efforts
- Develop Communications Plan
- Explore opportunities for working with the tenants
- Explore grant opportunities



Questions?





FY 07/08 Baseline

	FY 07/08 Total Use	Percent
Buildings	24,350,392 gallons	11%
Ship Use (Cruise & Cargo)	53,208,232 gallons	25%
Comfort Stations	8,559,738 gallons	4%
Multi Use Meters	20,792,530 gallons	10%
Irrigation	106,149,802 gallons	50%
TOTAL	213,060,694 gallons	100%



Cruise Ship Calls 05-09

	Calls	Passengers
2005	220	611,024
2006	182	526,886
2007	238	810,395
2008	255	921,360
2009	208	811,000 (estimate)



FY 07/08

Cruise vs. Cargo Water Usage

Terminal	Ship Water Use	Percent
CST	51,680,068 gallons	97%
TAMT	816,816 gallons	1.5%
NCMT	711,348 gallons	1.5%



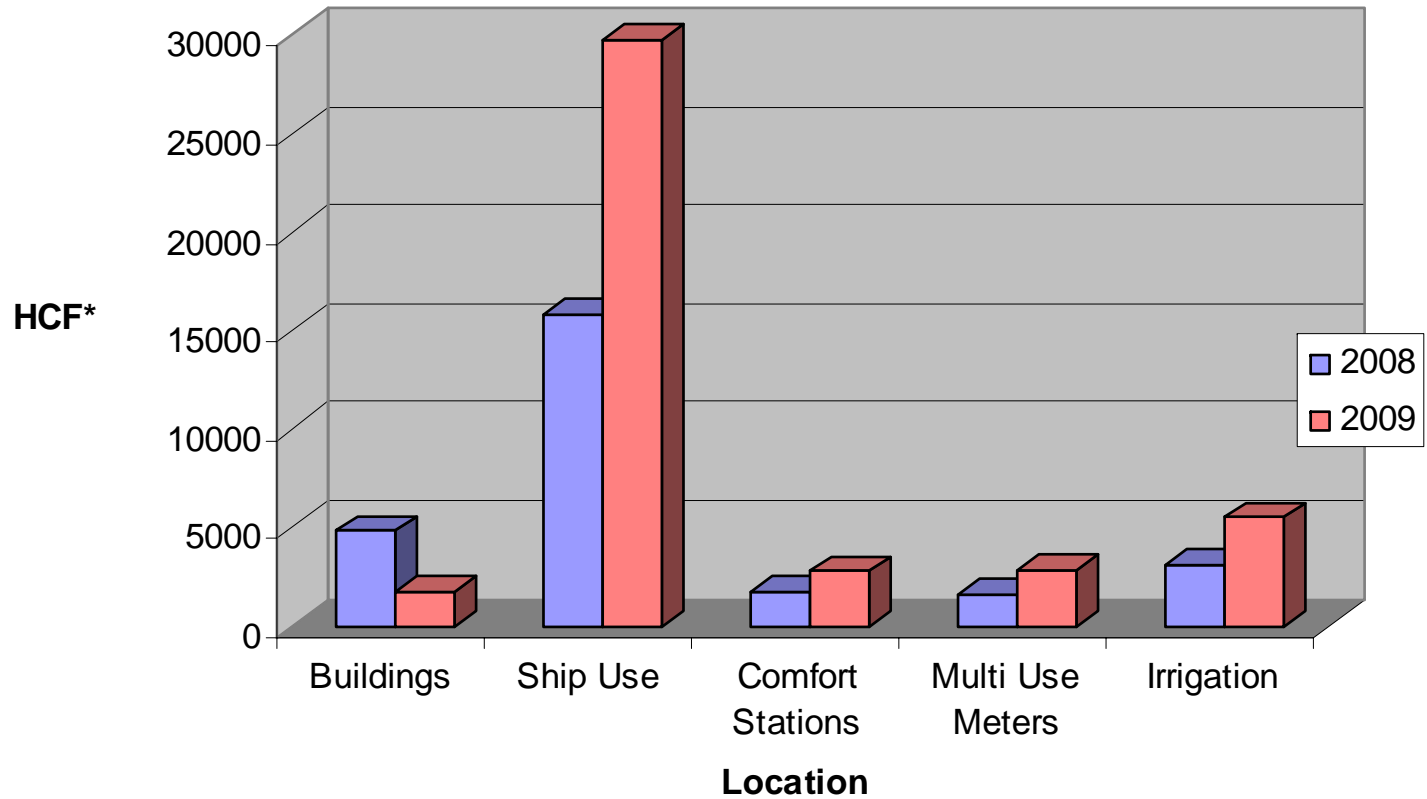
What are other Ports doing?

- Port of LA
 - Taking voluntary measures (retrofitting toilets, Smart irrigation systems, monitoring water use).
 - Currently under Level 1 Drought Watch with some water use prohibitions.
 - City of LA expected to go to Level 2 Drought Alert this year.
 - No voluntary steps to take overall reductions at this point.
- Port of Long Beach
 - Taking voluntary measures (evaluating irrigation systems & using native plants).
 - Currently under Level 1 Drought Watch with some water use prohibitions.
 - No voluntary steps to take overall reductions at this point.



How are we doing now? Year To Date

Jan & Feb 2008 vs Jan & Feb 2009



*1 HCF =
748 gal



Sample Reduction Scenarios

Reduction of Water in Buildings

- Result: Affected community service
 - Affected staff and building visitors
- Potential Opportunities:
 - Educational opportunities for staff and building visitors
- Unintended Consequences:
 - Dissatisfied staff and building visitors