

Beach Water Testing Making Sense of the Grades



Department of Health
and Human Services

Assembly Bill 411, 1999

- Mandated testing of seawater at public beaches (visited by > 50,000 people annually or adjacent to storm drains) at weekly intervals from April through October
- Established standards for bacterial levels (both single test and average of tests over time)
- Required public notification (advisories) when bacterial levels above standard; **no grading system used in state system**
- Allowed local agencies to choose either single test or the average of tests as criteria for advisories
- Automatic closure of beaches for known sewage spill, 72 hour rain advisory after storms

Other closure at the discretion of Health Officer

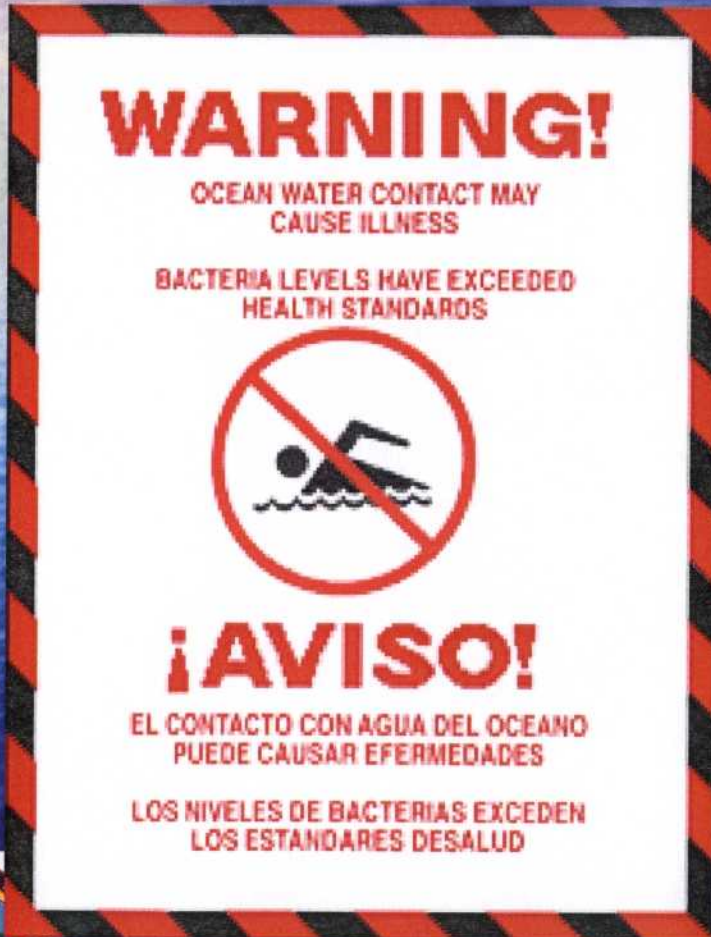


Long Beach Water Testing Program

- Test 25 sites weekly year-round
- If single result exceeds state standards, then an advisory sign is posted, and daily sampling is done at that site until results are below state standards
- Do not post advisories for high averages
- Closure of beaches is at discretion of the Health Officer, based on marked and persistent elevation of bacterial counts
- Data on testing is posted on our website, and 24-hour phone recording reports latest advisories and closures (562-570-4199)



Beach Signs: Advisory



- Advisory posted when bacterial levels above state standards
- Remain in place as long as levels are high
- Water contact may cause illness
- No enforcement
- Beach remains open for non-water activities



Beach Signs: Rain Advisory



- Bacterial levels known or presumed to be high in an area at or near a storm drain
- In effect during rainy period and for 72 hours after last rain
- Water contact may cause illness
- No enforcement
- Beach remains open for non-water activities



Beach Signs: Closure



- Water is contaminated with sewage, or has persistent high levels of bacteria
- Lifeguards enforce avoidance of water contact
- Beach remains open for non-water activities



Heal the Bay

- Non-profit organization which evaluates water quality at beaches throughout California
- Uses data from local agencies that test the water
- Developed a new grading system in 2005
- Points are deducted if either a single sample high, or the average over time is high (uses both state criteria)
- Assigns a letter grade based on calculated points
- Reports cards are issued weekly during summer, at end of summer (for time period June – September), and annually



Summary of Heal the Bay Summer Grades for Long Beach, 2004 - 2006

- 2004: 23 sites assigned grades
 - A's or B's: 21 (91%)
 - C's or D's: 2 (9%)
- 2005: 23 sites assigned grades
 - A's or B's: 20 (87%)
 - C's or D's: 3 (13%)
 - F's: 0
- 2006: 25 sites assigned grades
 - A's or B's: 3 (12%)
 - C's or D's: 6 (24%)
 - F's: 16 (64%)



So What Happened?



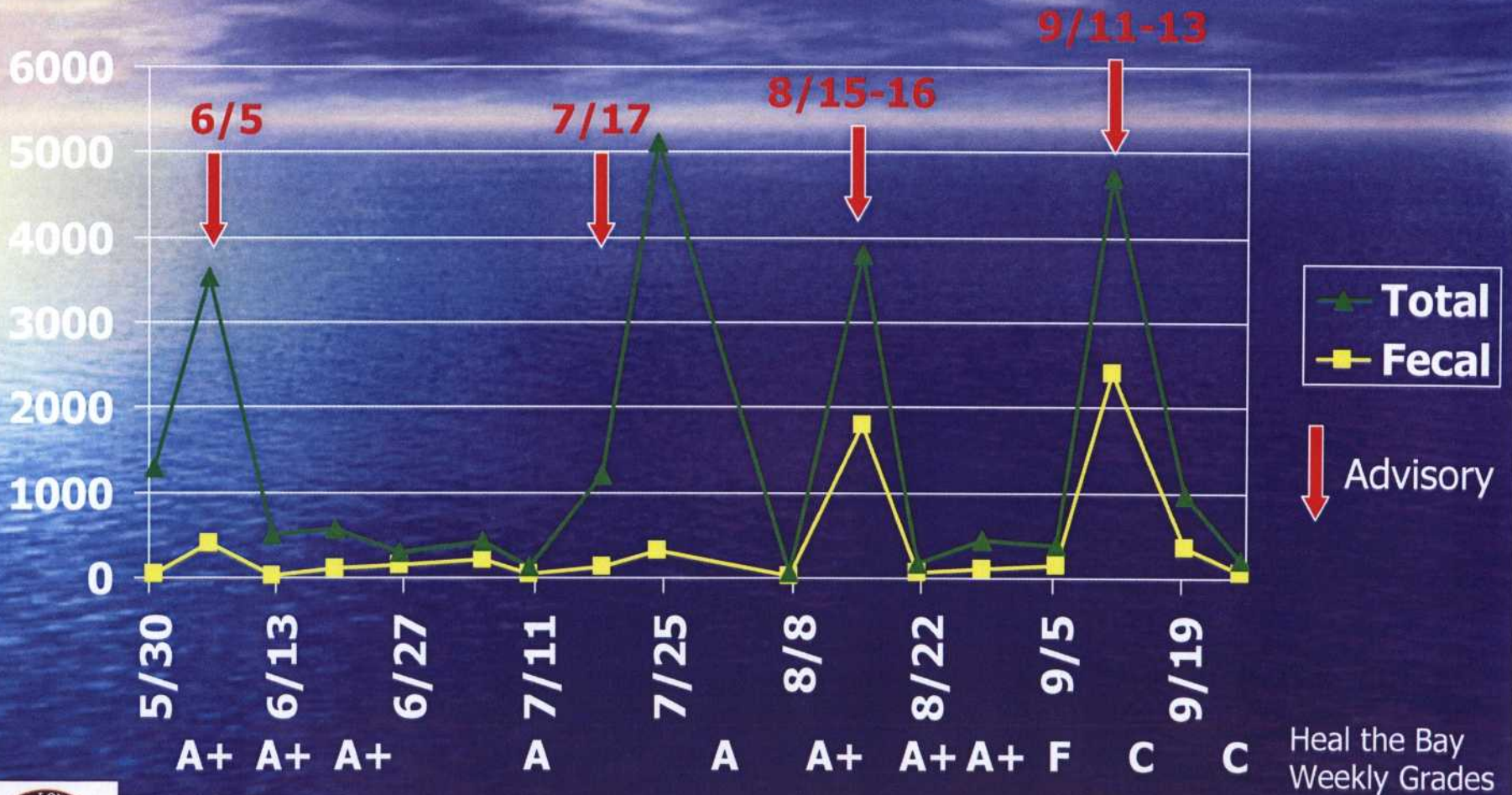
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Comparison of Selected Testing Sites in Long Beach

	2004		2005		2006	
Site Tested	#Advisories	Grade	#Advisories	Grade	#Advisories	Grade
City Beach at Coronado	2	A	1	A	6	F
2nd at Bayshore	7	B	2	A	7	F
Mother's Beach North	13	C	1	A+	9	F



2nd Street at Bayshore, Summer 2006



Overall Summer Grade = F
 (7 bad days in 4 months = F)



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What Happened?

- Heal the Bay's grading system changed
 - Now points deducted for both single sample above standard as well as average above standard
 - Grades in 2004 would not have been as good if current system was in place then
- Summer 2005
 - Unusually good summer for beach water quality
 - Good grades despite tougher grading system
- Summer 2006
 - Advisories seen in areas not known to be problems before
 - Continuing problems in known problem areas





Potential Causes of High Bacterial Levels



Two Separate Problem Areas

- Coastal Beaches
 - City beaches and Belmont Pier
- “Inland” Beaches
 - Alamitos Bay
 - Mother’s Beach
 - Colorado Lagoon



Long Beach Coastal Beaches



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Urban Runoff



Long Beach "Inland" Beaches



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Colorado Lagoon

- Causes:
 - Several storm drain pipes go into lagoon
 - Lots of waterfowl, other animals
 - Small channel communicating with tidal flow leads to stagnation of water, slower clearance of contamination
 - Not related to LA River problems
- Mitigation efforts:
 - Colorado Lagoon Restoration Feasibility study underway
 - Several projects scheduled with public works



Mother's Beach

- Causes still not entirely clear
- Investigation/mitigation:
 - Dye testing of pump-out stations revealed leakage
 - Leaking pump-out stations shut down
 - Initial improvement in counts, but then high counts recurred
 - Dye testing of local sewage pipes from restrooms in Mother's beach and Davies Launch Ramp failed to detect leaks
 - Divers searched area for evidence of leaking pipes: none found
 - Impact of reduced flow to power plants being investigated
- Closed 9/28/06 – 10/24/06, re-opened but still monitoring and bacterial levels periodically high



Long Term Response

- Committee formed involving Public Works, Parks, Recreation and Marine, Fire/Lifeguard, Health and Water
- 4 meetings so far to discuss problems and plan further investigation/response



Plan

- Extend Colorado Lagoon feasibility study to include additional areas in and around Alamitos Bay
- Will illustrate two major components of water circulation:
 - Pattern of water movement
 - “Flushing frequency”: how often water turns over
- What will be done with the results?
 - Identify potential stagnant areas
 - Can focus on potential solutions to improve flow in these areas



Summary

- Beach water quality is not great, but it's not bad all the time
 - Intermittent high bacterial levels at city's open coastal beaches most likely due to urban runoff from LA River
 - Ongoing problem spots at Colorado Lagoon, Alamitos Bay and Mother's Beach being addressed
- Change in Heal the Bay's grading system redefined the problem
- Plan to continue efforts at investigation



