



OCSD Urban Runoff Program

SCAP – Collection Systems in Motion



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OCSD Service Area



Huntington State Beach, California

July 1 - September 3, 1999 up to 4 1/2 miles (23,000 feet) of Huntington Beach was closed due to elevated bacteria level



Santa Ana River



Causes of Beach Closures

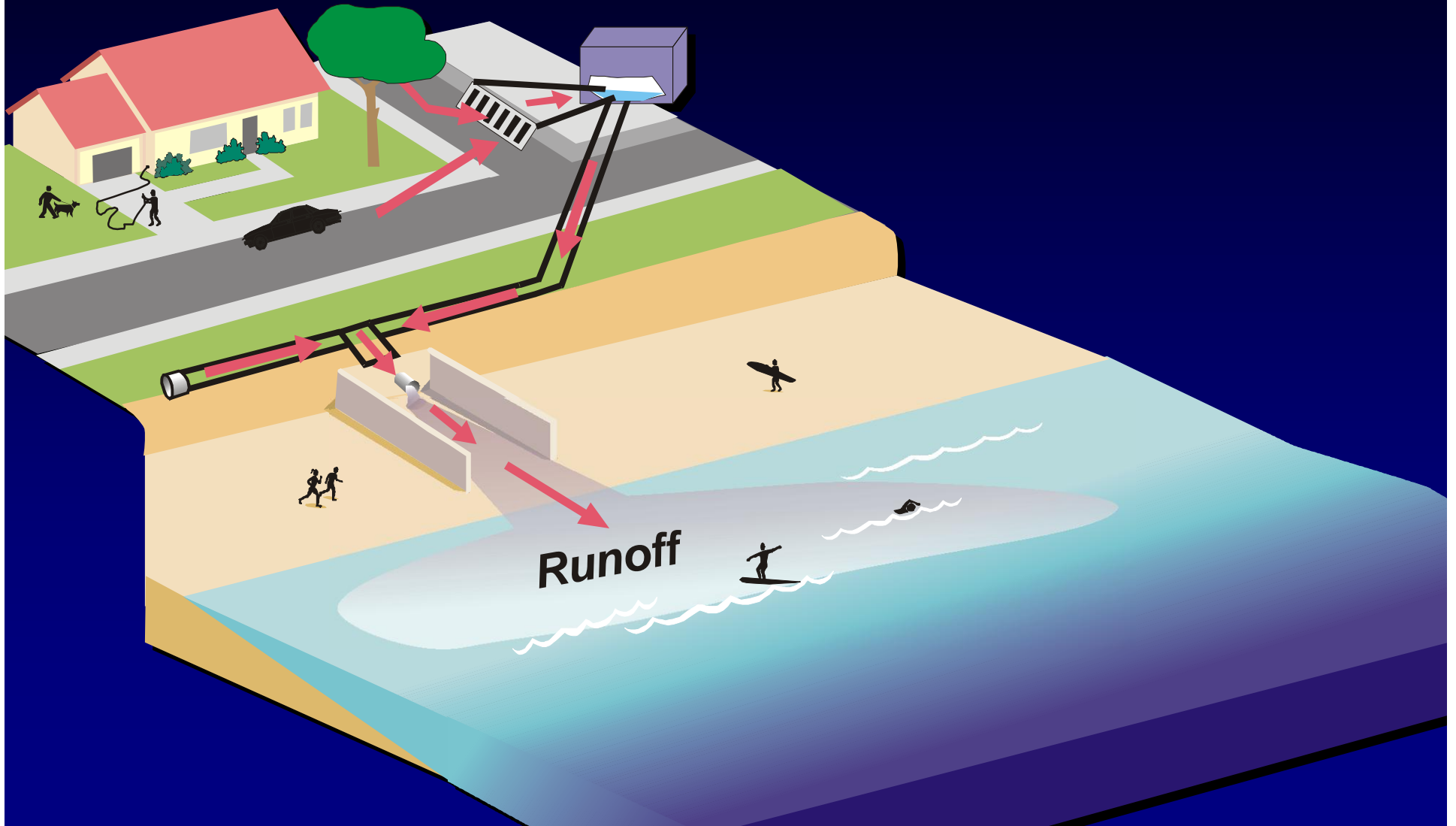
Urban Sources
(nuisance & stormwater runoff)

Leaking Sewer Lines
(groundwater flow)

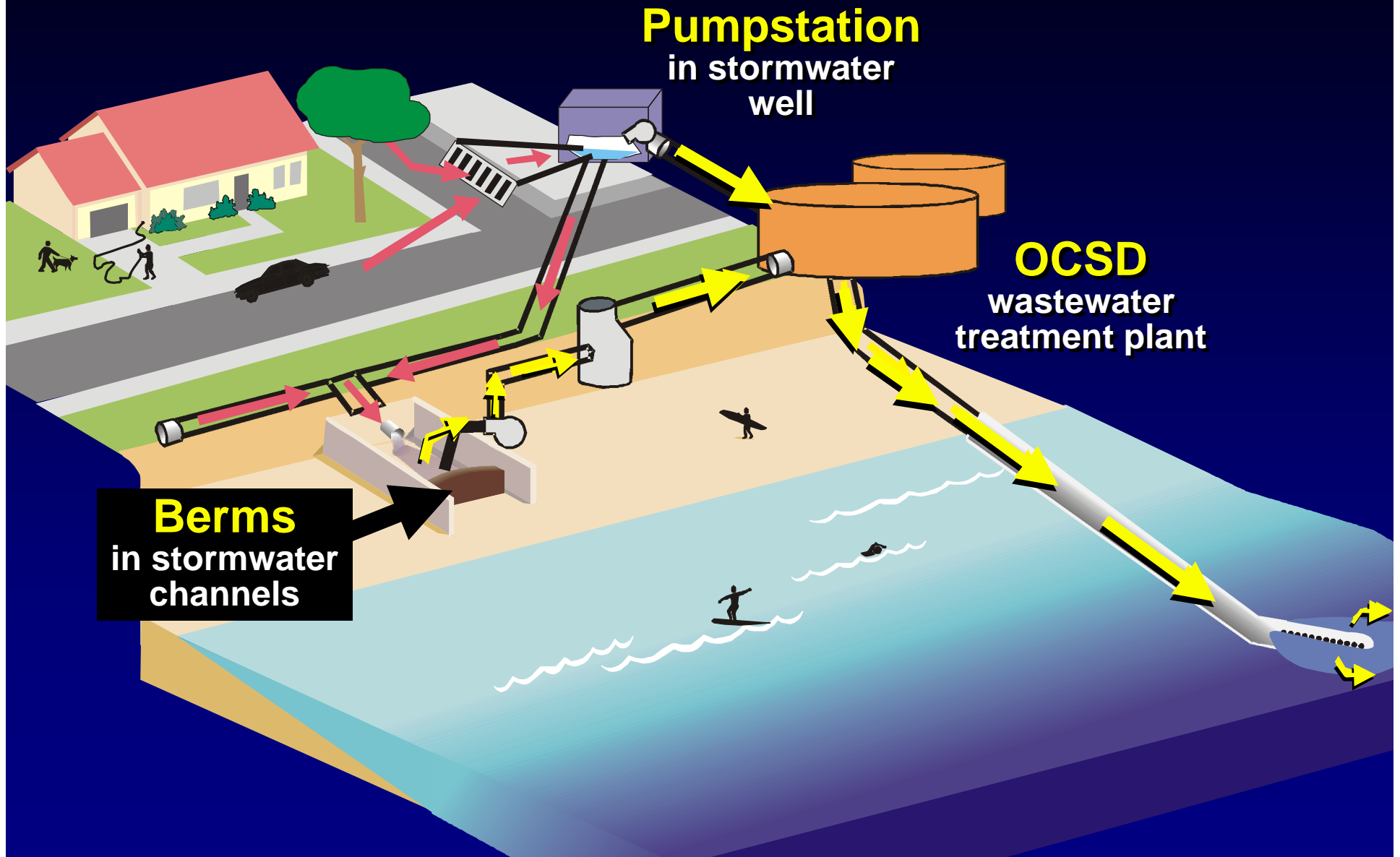


Environmental Sources
(direct & tidal inputs)

Low Flow Diversion Systems



Low Flow Diversion Systems



Temporary – Santa Ana River Channel Diversion



Permanent – Santa Ana River Channel Diversion

**Concrete Dam
to Wet Well**



9/24/2002 14:02

Temporary – Channel Diversion



**Diversion pipe
connected
to sewer line**

**Concrete
berm**

3.23.20

Permanent – Channel Diversion



**Inflatable
Rubber Dam**

10.16.2002

Stormwater / Urban Runoff Pump Station



Wet well

Diversion pipe connected to sewer line

Urban Runoff – Why Care?

- u Public health
- u Recreational water bodies
- u Economy
- u Quality of life



Important Regulations

- u Orange County stormwater NPDES permit
- u Assembly Bill 411 (ocean water – contact sports standards)
- u Total Maximum Daily Load (TMDL)

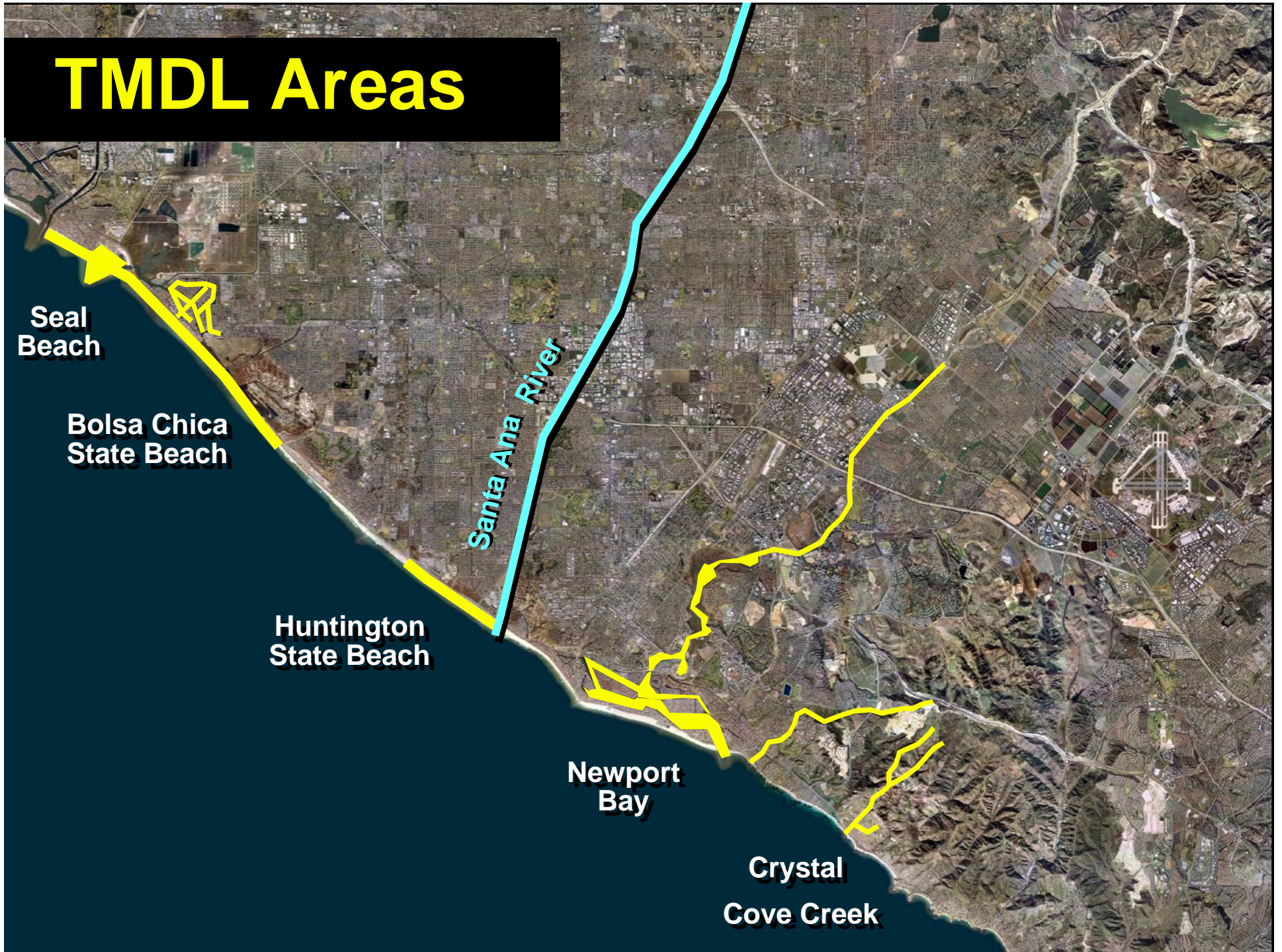


The map displays 13 distinct watersheds within Orange County, each represented by a different color. The colors include yellow, blue, light purple, pink, light green, grey, orange, dark blue, purple, and teal. The watersheds are irregularly shaped and cover the majority of the county's land area.

Orange County 13 Watersheds

40–70 MGD dry weather urban runoff

TMDL Areas



Seal Beach

Bolsa Chica State Beach

Huntington State Beach

Newport Bay

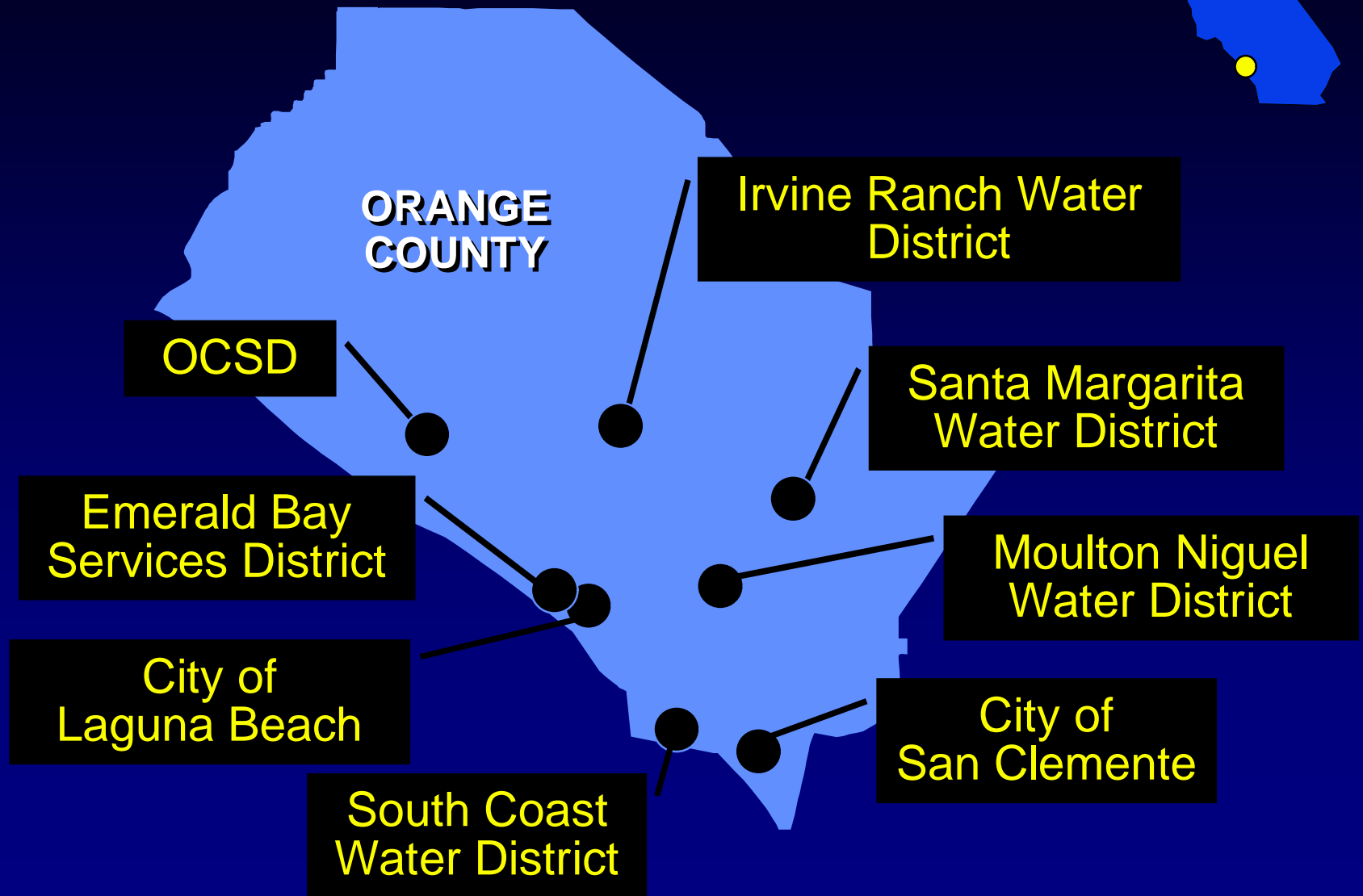
Crystal Cove Creek

Santa Ana River

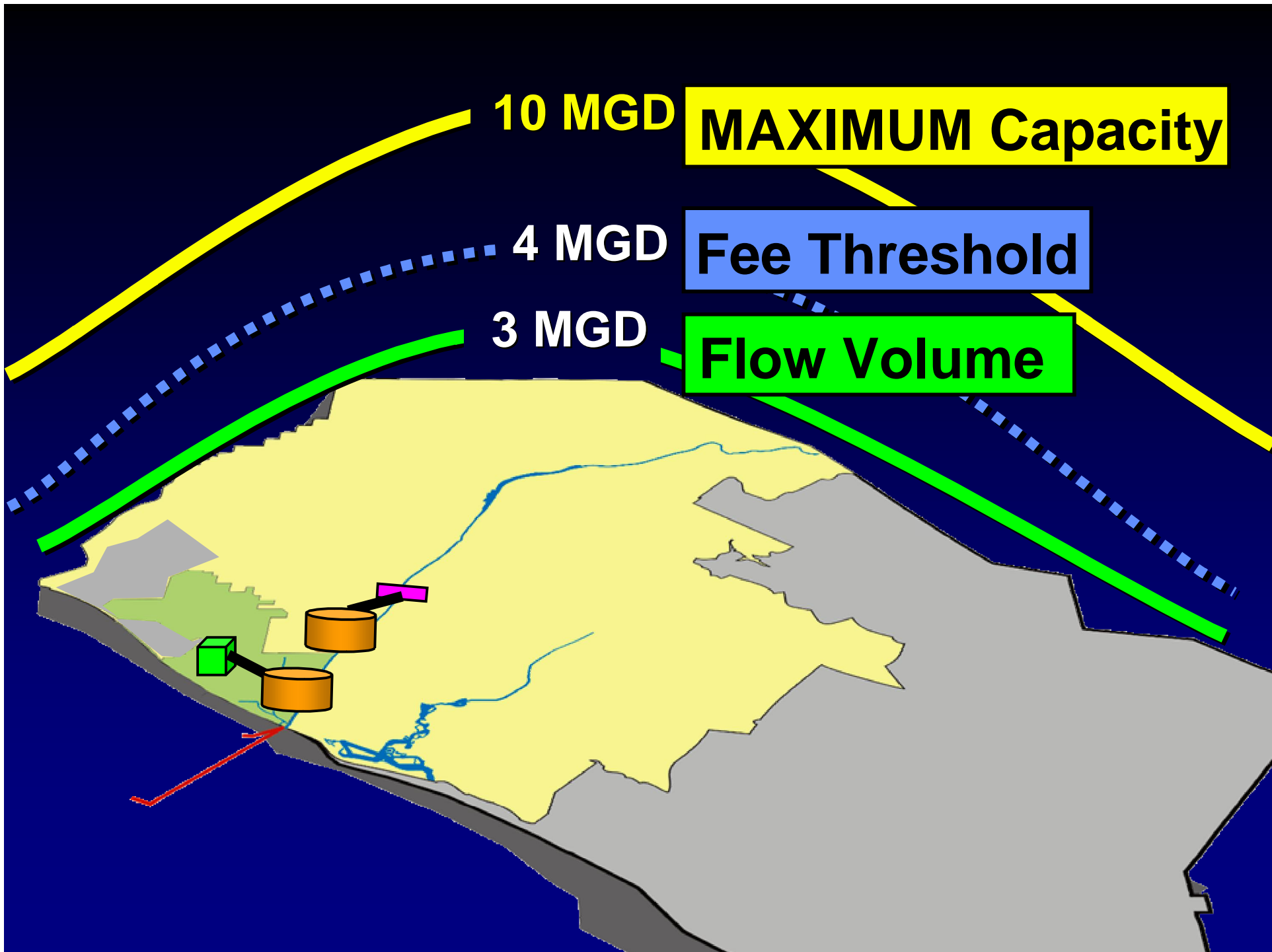
OCSD's Urban Runoff Solutions

- u Aug 1999 – Stormwater pump station diversions
- u Jun 2000 – Channel and river diversions
- u Sep 2000 – Dry Weather Urban Runoff Policy
- u Jan 2002 – Proposal to amend OCSD's Charter – AB 1892
- u Jun 2002 – Legislation AB 1892 approved by Governor

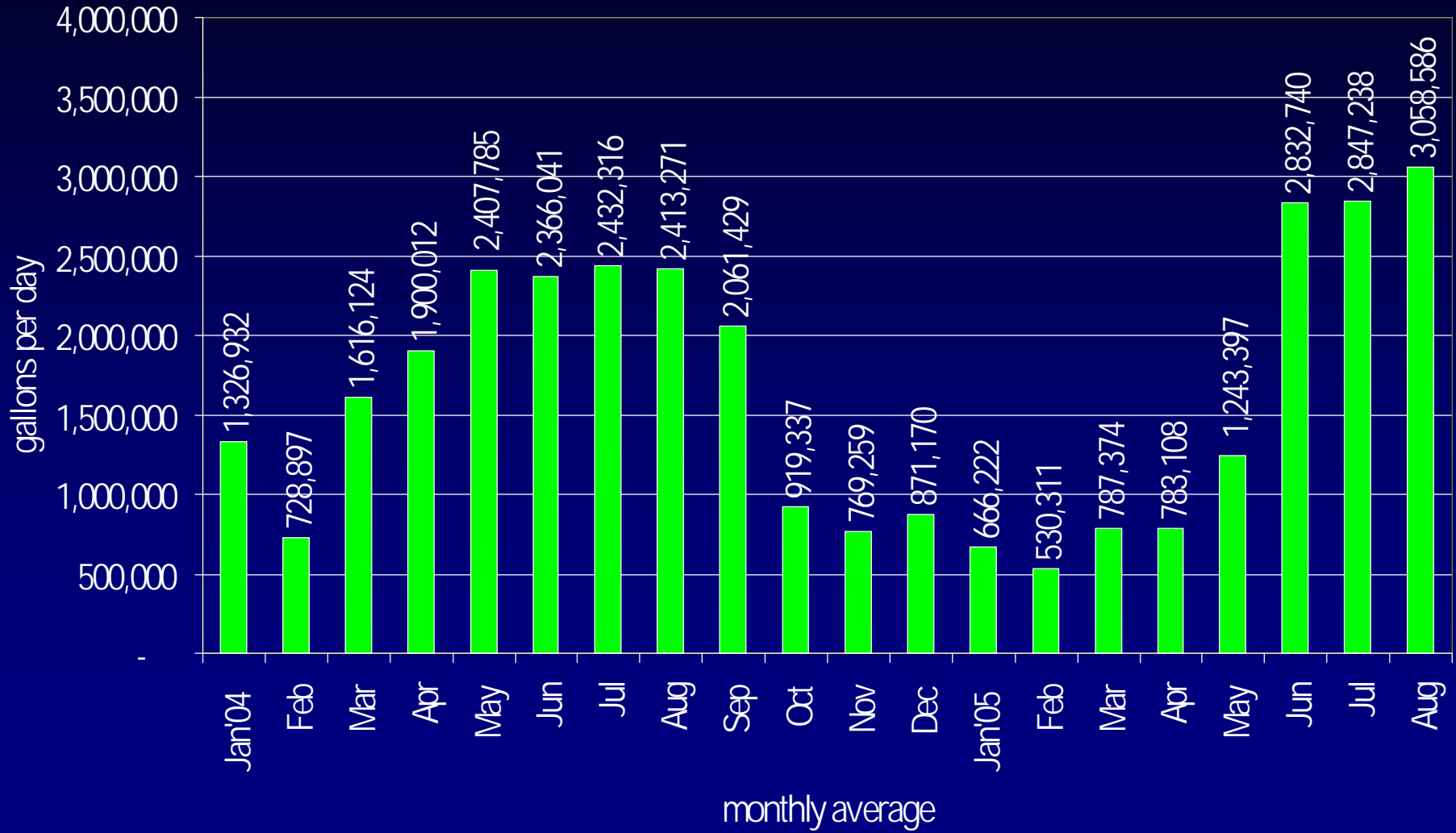
Agencies in Orange County Treating Urban Runoff

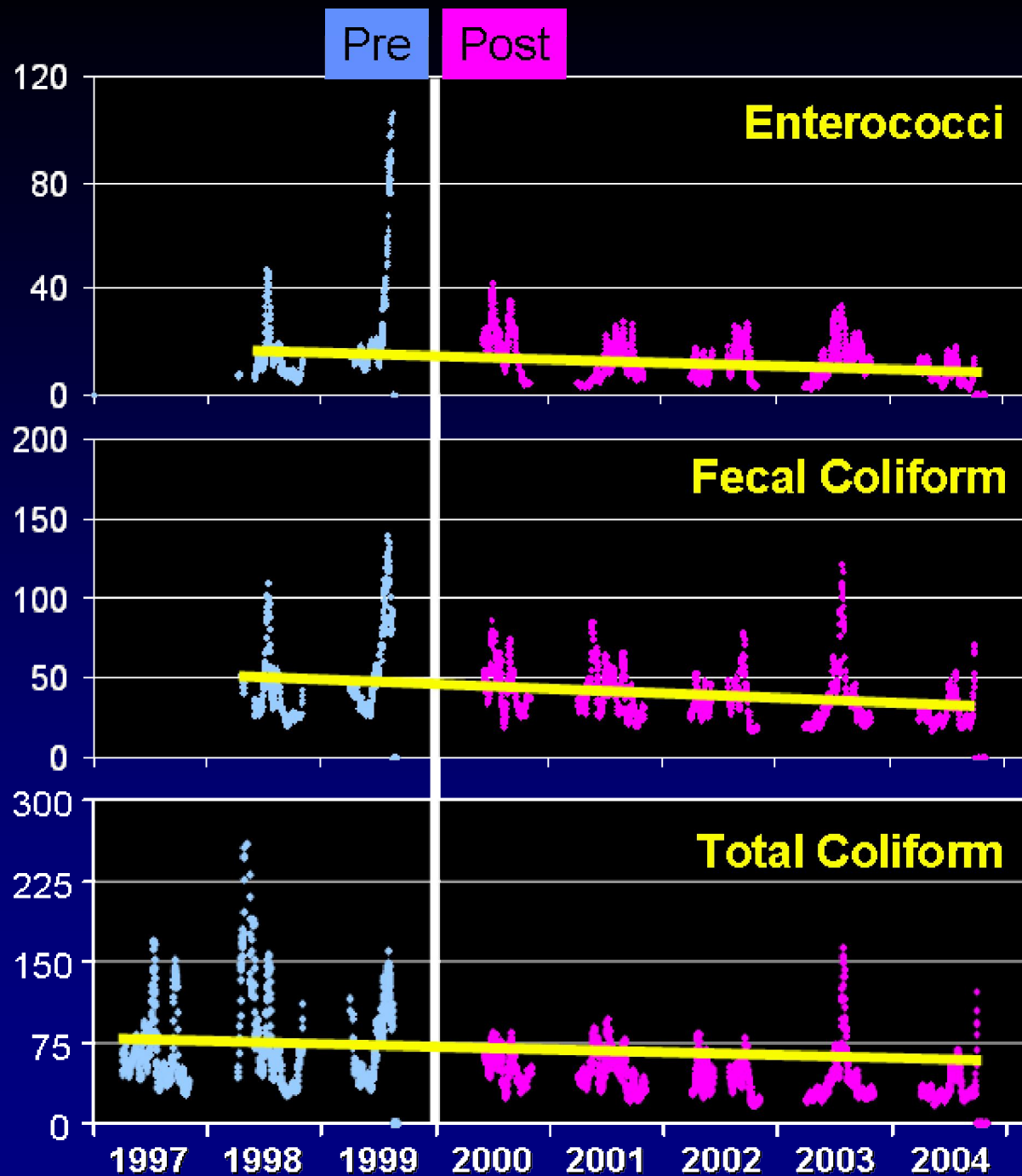




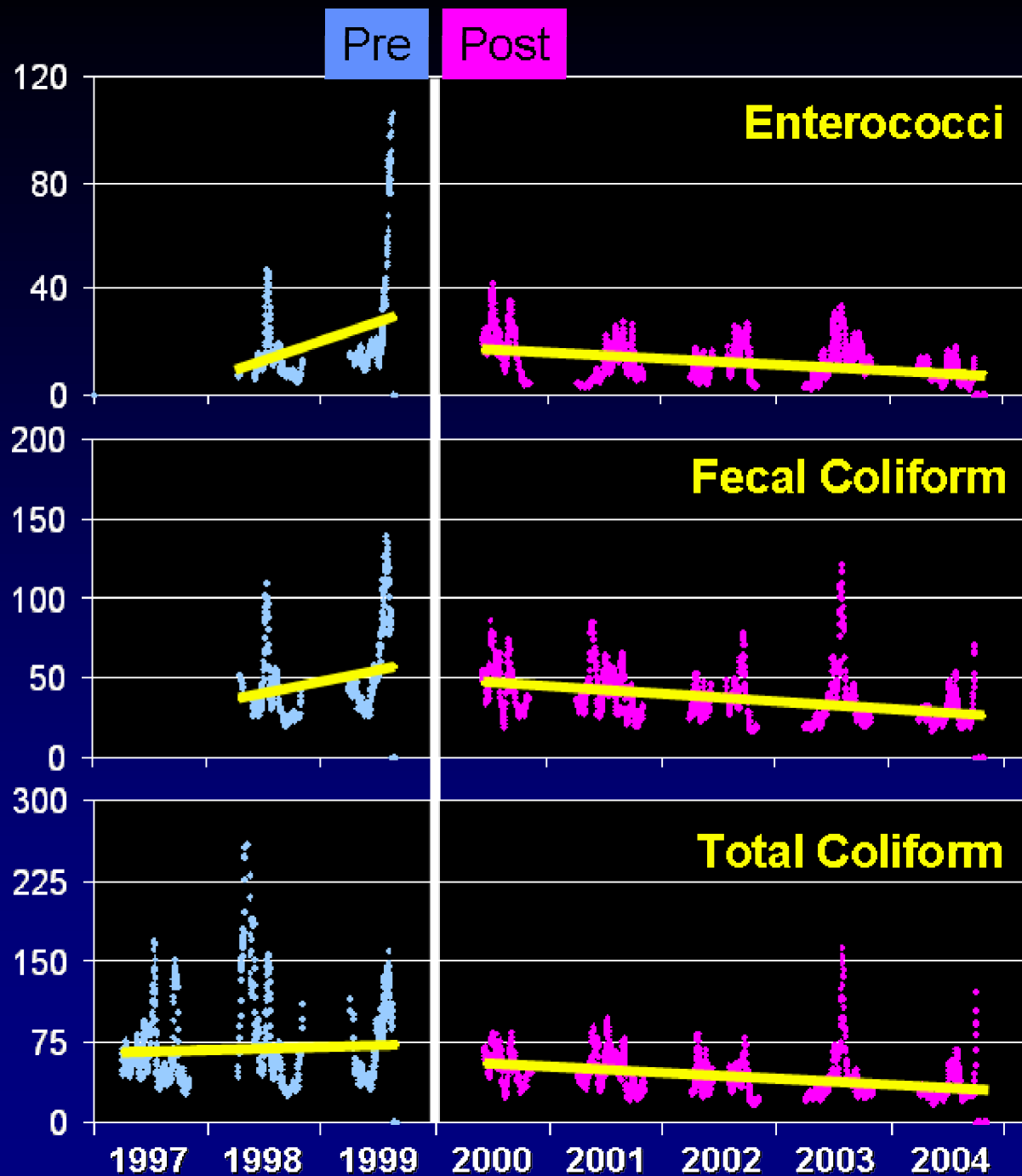


Orange County Sanitation District
Dry Weather Urban Runoff Diversion Monthly Averages, gpd





**Decrease
in Overall
30-Day Geometric
Mean Post Diversions**



**Decrease
in Overall
30-Day Geometric
Mean Post Diversions**













OCSD Urban Runoff Program

- u 6 years experience
- u Treating as high as 3 MGD of dry weather urban runoff from coastal cities during the summer
- u No fees if under 4 MGD & 10 MGD maximum flow
- u Permit and enforcement
- u Treatment Costs approx. \$529,000 annual @ ave. 1.5MGD

Benefits OCSD Urban Runoff Program

- u One tool for for addressing NDPES permit, AB411, and TDML regulations
- u Containment for SSOs
- u Public health and environmental protection
- u Economic benefits
- u Foster regional partnerships and new technologies

Issues Related to Urban Runoff Diversion

- u One tool of many
- u Emerging pollutants
- u Limited collection and treatment capacity
 - Storm flows impossible to divert
 - What about “first flush”?
 - Who builds and operates the infrastructure?
- u Who takes responsibility – who pays?

Regional Cooperative Projects in Orange County



**Dry Weather
Diversion System**



**Wetland
Treatment System**

Questions?



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