City of Newport Beach

Coastal/Bay Water Quality Citizens Advisory Committee Minutes

DATE: 1/14/10 **TIME:** 3:00 P.M. **LOCATION:** Fire Conference Room

1. Welcome/Self Introductions

Committee Members present:
Chairwoman/Council Member Nancy Gardner
Council Member Henn
Council Member Selich
Tom Houston
Jim Miller
Janet Rappaport
Randy Seton

Guests present:
Jerry Mora
David Pohl, Westin Solutions
Jack Skinner

City or County Staff present:
John Kappeler, Code & Water Quality Enforcement Division Manager
Chris Miller, Harbor Resources Manager
Kay Sims, Assistant Planner
Jim Sinasek, Special Projects Consultant
Shirley Oborny, Administrative Assistant

2. Approval of Previous Meeting's Minutes

The minutes from the November 12, 2009, meeting were approved.

3. Old Business

(a) Bay and Ocean Bacteriological Test Results

Mr. Kappeler reviewed the latest bacti reports. Chairwoman Gardner said she thinks it would be helpful for him to give a brief presentation to the City Council at a Study Session about what sampling is being done and what types of things could create water quality issues.

4. New Business

(a) Bacteria Source Identification Study

Mr. Kappeler explained that in talking with Mr. Pohl about the gutter study he recently participated in (discussed at previous meetings); he discovered that Mr. Pohl had also done some related studies. Mr. Pohl gave a PowerPoint presentation (attached). He

said the bacteria TMDLs are now coming into play in a lot of areas and putting requirements on coastal areas, creeks and bays. Sometimes the practical resolutions haven't caught up to the regulations. He talked about some of the studies:

- Marina del Rey - bacteria was associated with birds and restaurants' dumpsters. The washing down of the dumpsters transport the bacteria into the water;
- Pacific Beach Point, San Diego – combination of conditions; kelp on shore being seeded by a trickling outfall, bacteria grew, kelp flies help spread it on the kelp, and high tides carried the bacteria back out into the water;
- Mission Bay – birds on beach seed the sand, tide transfers it to the wrack line, and combined with the organic materials the concentrations go up.

Discussion ensued about how natural sources associated with bacterial load in the water shouldn't necessarily be the responsibility of the municipality to clean it up. Mr. Pohl talked about conditions in storm drains and gutters that create biofilm that can be flushed into the water and cause a huge spike in bacteria. He said they are trying to convince the Regional Board that it's a re-growth issue and it's not the bacteria that causes swimmers to get sick.

Mr. Pohl said when there are conditions that cause high concentrations, such as organic materials or overwatering, the focus needs to be on trying to reduce those conditions and checking to see if the bacteria is really associated with a risk to humans. The ultimate goals are to protect human health, protect the environment and to use money wisely.

Mr. Skinner talked about the gutter study he observed and how bacteria lives and grows in biofilm material. The street sweeper really helped lower the bacteria level, alleviating the overwatering and cleaning out the catch basins. Chairwoman Gardner asked Mr. Skinner his opinion about sharing the results of the study with the Regional Board. He thinks the City of Newport Beach and the Health Department should figure out how the article could be used to try to make some of the regulations more reasonable.

Chairwoman Gardner said she and City Manager Kiff would get together with the County Healthcare Agency and make an appointment with the Regional Board. She said she thinks the City's Public Information Office can help get the word out to educate people. Mr. Pohl suggested the City look to other cities to see how they're handling there TMDL issues.

(b) <u>Dockwalker Program and Clean Boating Networking Conference</u>

Mr. Sinasek said in addition to the Dockwalker Program, he's involved in *Heart of the Harbor*, an NBTV show.

In regard to the Clean Boating Networking Conference, he said it's a program that invites boat owners, fuel dock owners, marinas, and bottom hull cleaners, etc., to come to the meetings at the American Legion. The next one will be held at 10:00 am on March 2, 2010. At that meeting the owner of a business called Copper Coat will be talking about his boat paint that he says doesn't slough off copper. Mark Silvey will be

in attendance to pose questions to him.

Mr. Sinasek said he's also been participating in the Dockwalker Program which entails a group of people who go to various locations and distribute materials to boat owners free of charge such as:

- bilge pads;
- *Cruising the Harbor;*
- *Clean Boating Habits;*
- website info. on environmental water quality laws and California boating law;
- *Boating Clean and Green;*
- chart of Newport Harbor with pump out locations and phone numbers;
- Boaters' guide for harbors from San Diego to the Catalina Channel Islands;
- canvas bags.

Chairwoman Gardner asked what other means could be used to distribute these materials out to more people. Mr. Miller said there is a five-minute questionnaire required in order to receive the items. He doesn't think the Harbor Patrol would have the time to conduct those surveys.

In response to Chairwoman Gardner's inquiry about how much the City pays for the bilge pads that Harbor Resources offer for free to the Balboa Yacht Basin. Mr. Seton suggested making more people aware of bilge pump filters.

Mr. Sinasek talked about a problem with some boat owners who abuse the pump out stations for cleaning out their bilge which can clog and damage the pump out stations. Mr. Miller said there has been discussion of adding bilge pumps at the pump out stations or at the Harbor Patrol dock but it creates liability issues due to the hazardous materials.

(c) <u>Proposed Coastal Marina Permit</u>

Mr. Sinasek said the State Water Resources Control Board (SWRCB) has proposed a water quality plan for enclosed bays and estuaries. They would like to adopt it by November 2010. Pursuant to Clean Water Act Section 303 (c) and Title 40 CFR 131, the EPA has approved this plan. He said the plan is proposed for all marinas. A marina is defined as a commercial property of 10 or more slips and/or moorings. The plan is designed to control pollutants by implementing appropriate management practices for marinas and impaired waters. He used a PowerPoint presentation (attached).

The committee expressed their concern about how difficult and expensive this would be for marinas to comply with. Mr. Miller suggested that Mr. Sinasek could attend the stakeholder workshop in February in San Diego. He also explained that this measure is highly contested by many boating groups in California. Petitions are circulating. Last night the Harbor Commission asked him to do draft a letter or resolution in response to this. In response to Council Member Henn, Mr. Miller said it's in the public input phase.

Mr. Seton felt the bay needs to be cleaned out first in order to have a clean source from

which to monitor from so it's not biased from the surrounding areas.

Mr. Sinasek said some agencies are suggesting that each marina be looked at and certified as a clean marina. Council Member Gardner said the boaters will be forced to spend $7.5 million and the bay may not end up cleaner.

Mr. Skinner thinks it's important to figure out what agency this is really coming from and whether it has the authority to mandate these changes under the Clean Water Act. Mr. Houston thinks the City should find a way to legally oppose this. Mr. Sinasek said he would follow up with the attorney representing the recreational boating community to find out what their opposing letter says so the City is consistent with its comments in the event it chooses to weigh in.

5. Public Comments on Non-Agenda Items

Mr. Mora presented a letter to the committee (attached). He is a boat cleaner who recommends boat owners have their boats cleaned more often to prevent algae from growing on the boat and using a hard paint instead of a soft paint. When algae are present the boat cleaner must scrub the hull to remove it and in doing so, boat paint is removed and it's deposited into the water where Mr. Mora has witnessed fish eating it. If the boats are cleaned regularly the algae can simply be wiped off.

6. Topics for Future Agendas

(a) Update on Integrated Watershed Planning Efforts
(b) Bacteriological Dry – Weather Runoff Gutter Study (Phase III)
(c) City of Newport Beach's Integrated Pest Management Policy (IPM)
(d) Committee Field Trips 2010
(e) NBTV – Waterwise
(f) OCHCA & OCSD Water Quality Monitoring Program
(g) Big Canyon Project Update
(h) Newport Bay Copper Reduction Project

Mr. Kappeler talked about ideas for future field trips. One idea was hosting a meeting at the Utilities Yard and taking a tour of the water distribution facilities and water quality treatment facilities. There was also some interest in going to the Metropolitan Water District of Orange County. Mr. Skinner suggested going to the Groundwater Replenishment System (GWRS) for a very interesting tour. They have the RO facilities, UV light and peroxide treatment.

7. Set Next Meeting Date

The next meeting was set for February 11, 2010.

8. Adjournment

The meeting was adjourned at 5:00 pm.

Bacterial TMDLs

A Summary of Case Studies and Solutions

Presented by Weston Solutions, Inc

Case Studies –

Marina del Rey

Marina del Rey – Mothers' Beach and Back Basins

Los Angeles County Flood Control District, City of Los Angeles , City of Culver City and Caltrans

Drivers

- WQ Issues in Back Basins, MdR Harbor, and Beach.
- Source Tracking Study Needed for TMDL.
- Suspected NPS Sources of Birds, Wash-Down Water, and Boat Discharges.

Marina del Rey – Mothers' Beach and Back Basins

- Spatial and temporal study of bacterial sources during dry (5) and wet (2) weather
- Inspection of sewage infrastructure
- Investigation of Illicit discharge of sewage from boats
- Sediment investigation
- Bacterial indicator loading calculations and modeling

Marina del Rey – Mothers' Beach and Back Basins

Key Findings – dry and wet weather spatial sampling

- Spatial and Temporal bacterial investigations
  - Dry weather highest concentrations were in Boone-Olive Pump Plant.
  - Wet weather highest concentrations were in Oxford Basin.
  - Q-PCR found low levels of human contaminations.
  - Ribotyping found majority of fecal coliform was avian in origin. Secondary sources were rodent and canine in origin.
  - Visual observations determined that restaurant, dumpster, restroom, and parking lot wash downs, as well as irrigation runoff, were all contributing to bacterial concentrations.

Marina del Rey – Mothers' Beach and Back Basins

Key Findings – additional studies

- Sewage infrastructure inspections using CCTV
  - One major break was identified, leading from the Marriot to Mothers' Beach.
- Illicit boat discharge investigation
  - Results were low, but does not completely rule out this episodic behavior as a source.
- Sediment investigation
  - Sediment concentration were low, indicating that resuspension is an unlikely source.
- Loading estimates
  - Largest contributions from Oxford Basin and Boone-Olive Pump Plant.
  - Wet weather load significantly higher than dry weather.

Case Studies –

Pacific Beach

Pacific Beach Point, San Diego

City of San Diego Storm Water Pollution Prevention Department

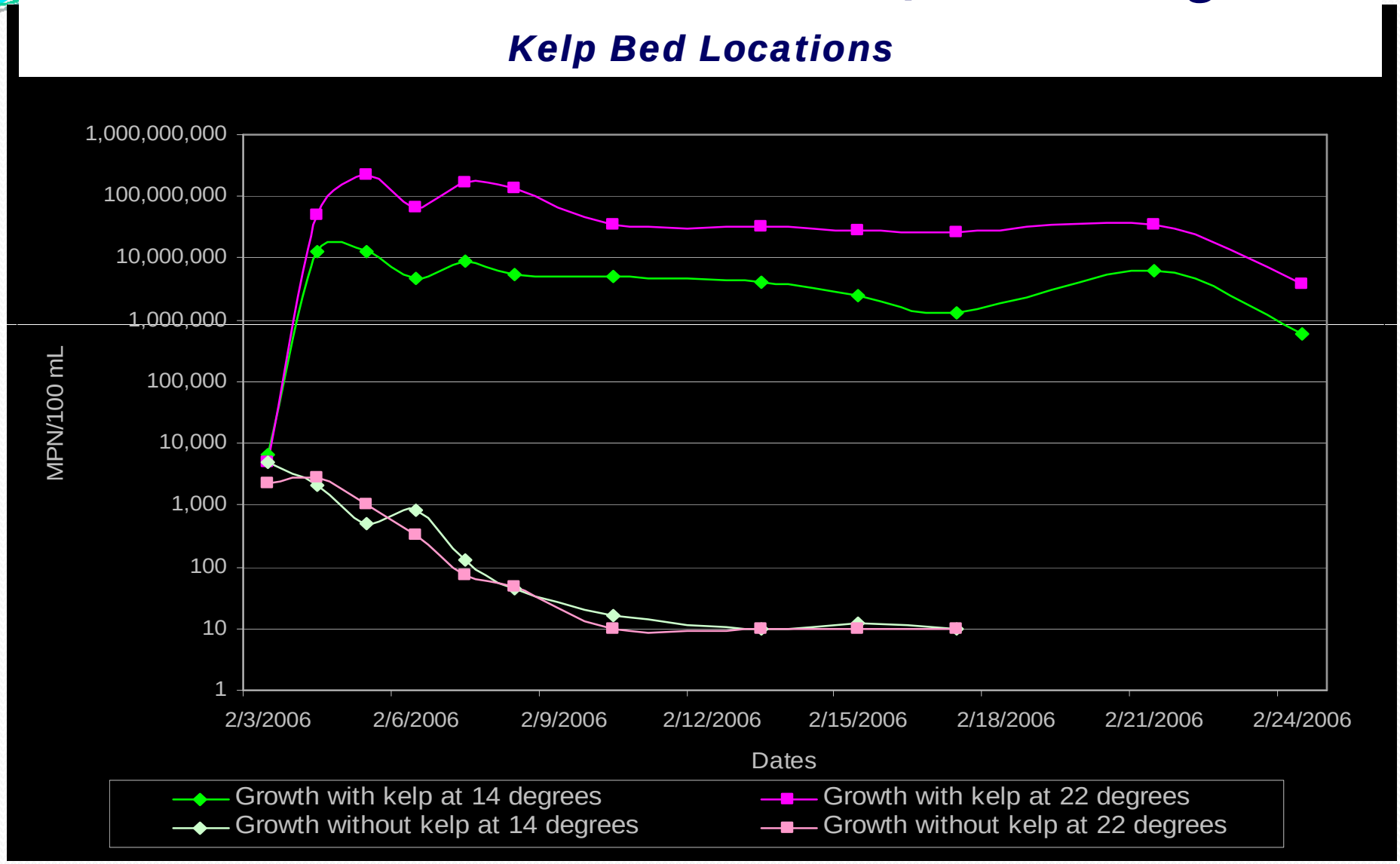
- Inner Cove had the highest bacterial concentrations

- Inner Cove - storm drains, a scour pond, and large quantities of kelp

- Point Loma offshore sewage outfall?

Pacific Beach Point, San Diego

Kelp Bed Locations



Pacific Beach Point, San Diego

Conclusions

- Natural and anthropogenic bacteria sources:
  - birds, dogs, storm drains, scour ponds and irrigation runoff
- Decaying kelp = perfect incubator for bacterial growth
- High tides washed over decaying kelp, washing bacteria into receiving water
- Recommendations:
  - frequent beach raking to remove kelp
  - reducing attractant to birds, dogs, and flies
  - diverting storm drain effluent away from beach

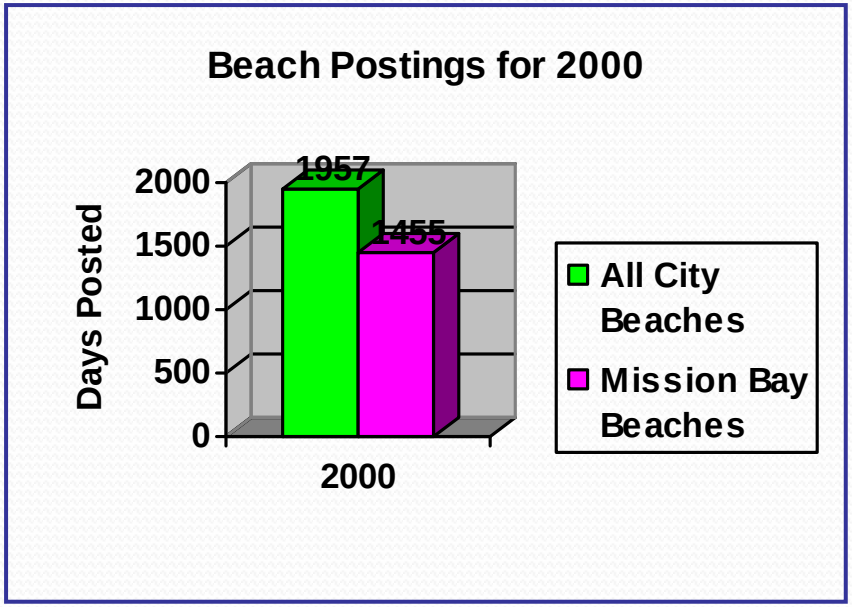
Case Studies –

Mission Bay

Mission Bay, San Diego

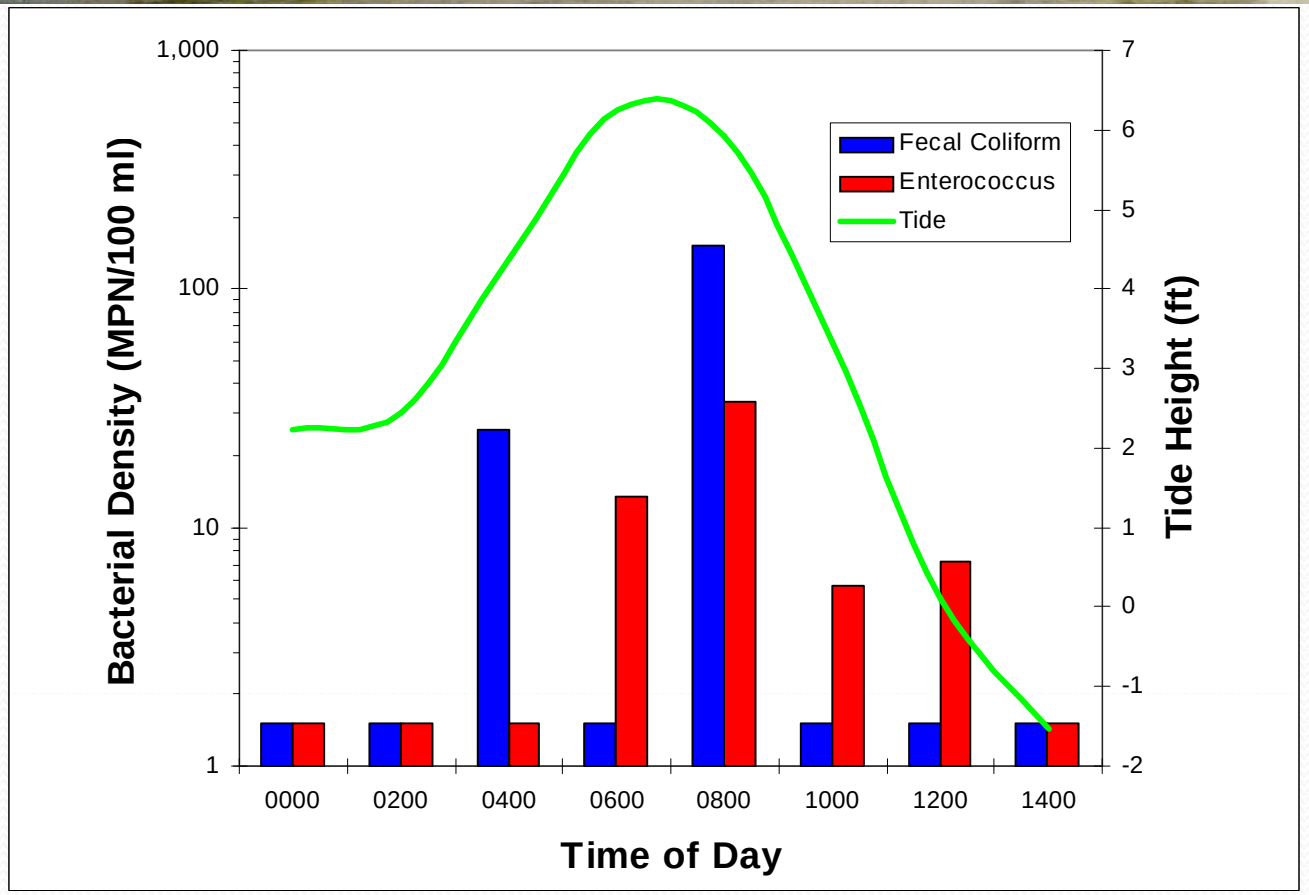
City of San Diego Storm Water Pollution Prevention Department

- Frequent Beach Postings
- Source ID to Determine Public Health Risks.
- Information Generated From Study Was Useful For Forecasted Epidemiology Study.



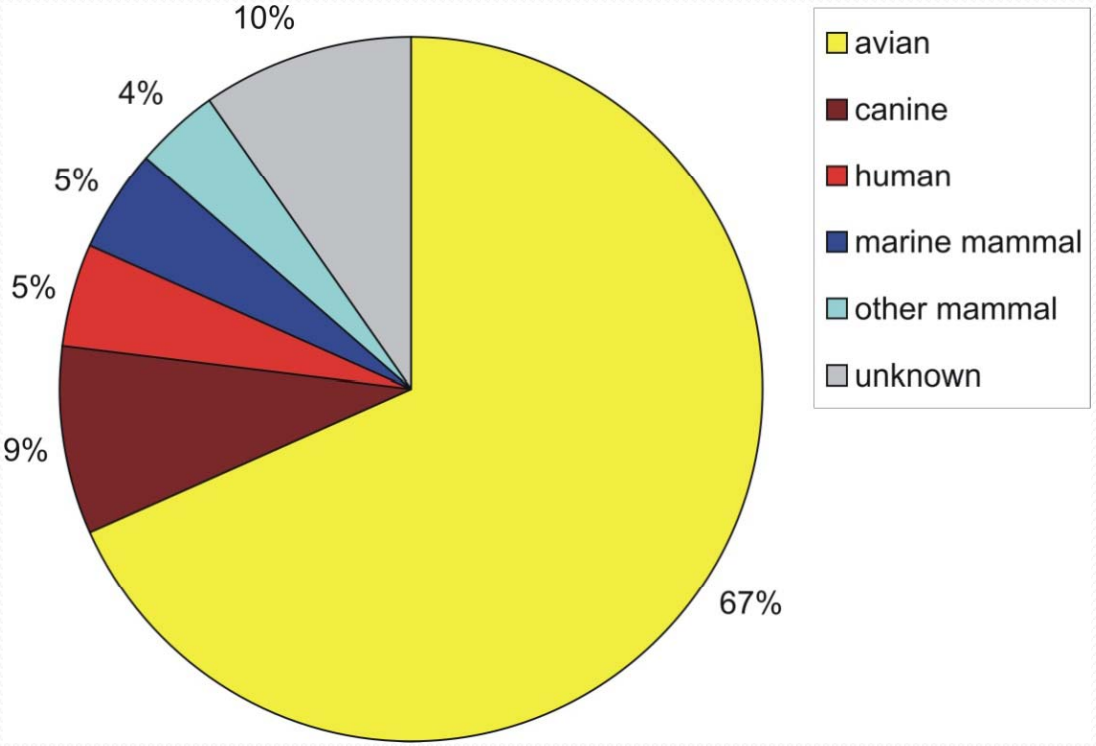
Mission Bay, San Diego

Influence of Tides and Sediments



Mission Bay, San Diego

Host Origin Analysis



- **Majority of the enteric bacteria in Mission Bay originated from birds**
- **Very little bacteria in the bay originated from humans**
- **The small percentage of bacteria from humans was not found in storm drains**

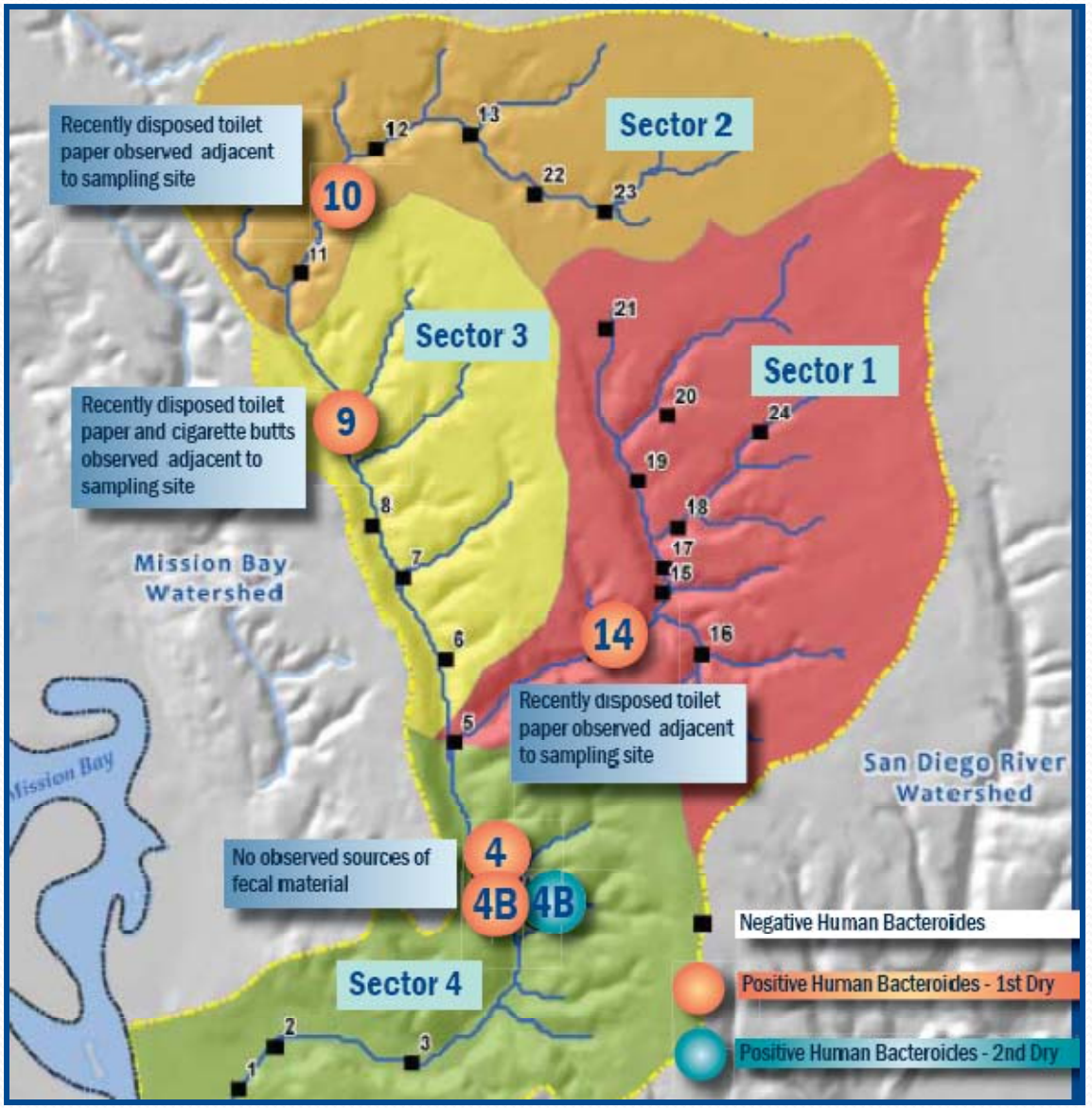
Case Studies –

Tecolote Creek and San Diego River

Tecolote Creek, San Diego, CA

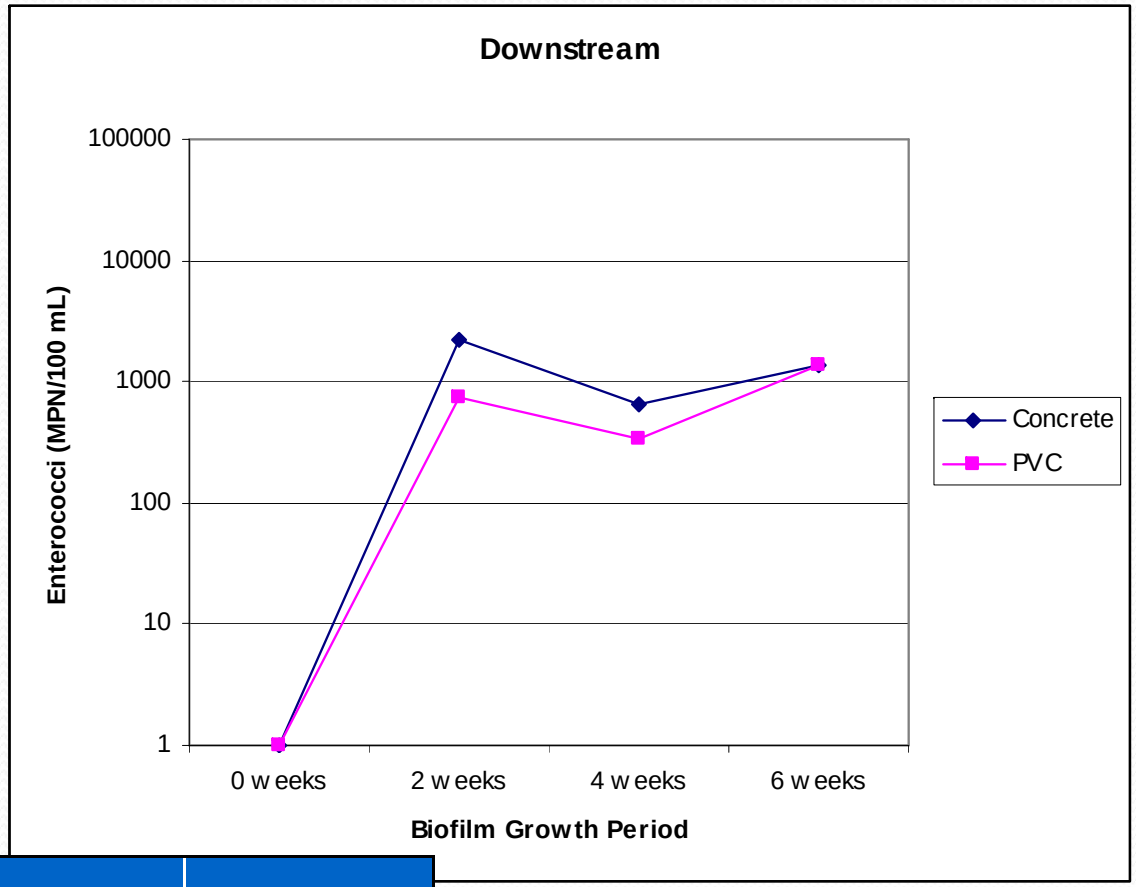
City of San Diego Storm Water Pollution Prevention Department

- Section 303(d) listed for fecal coliforms and enterococci throughout the watershed for beneficial uses REC-1 (potential) and REC-2
- Pending Bacterial TMDL
- Unknown sources of bacteria
- Potential for significant environmental sources



Tecolote Creek Bacterial Source ID:

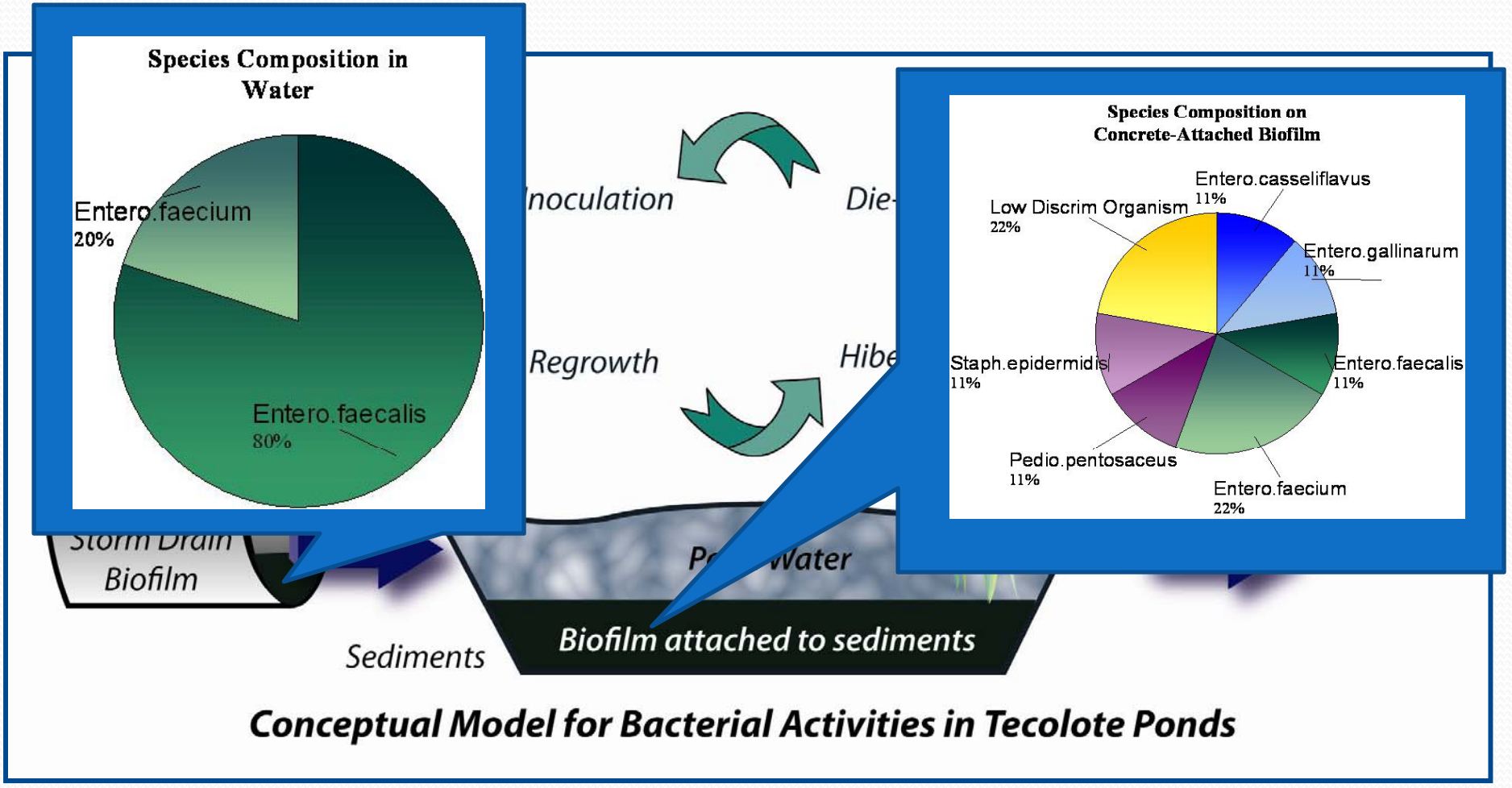
Impact of Biofilms in the MS4



Substrate	Upstream
Concrete coupon biofilm (MPN/in^2)	2095
Natural biofilm (MPN/gram – wet weight)	3505

Tecolote Creek Bacterial Source ID:

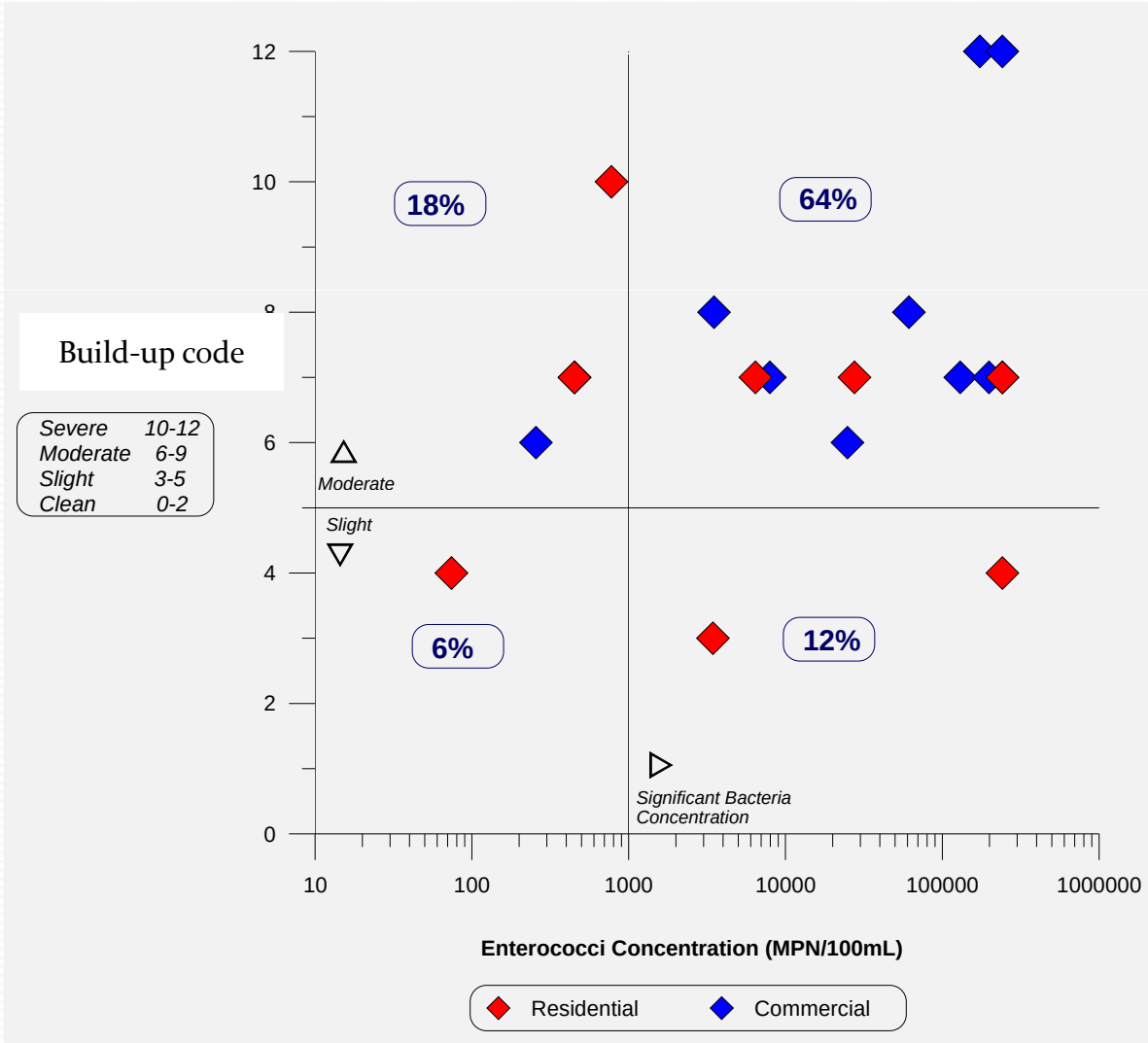
Impact of Biofilms in the MS4



Conceptual Model for Bacterial Activities in Tecolote Ponds

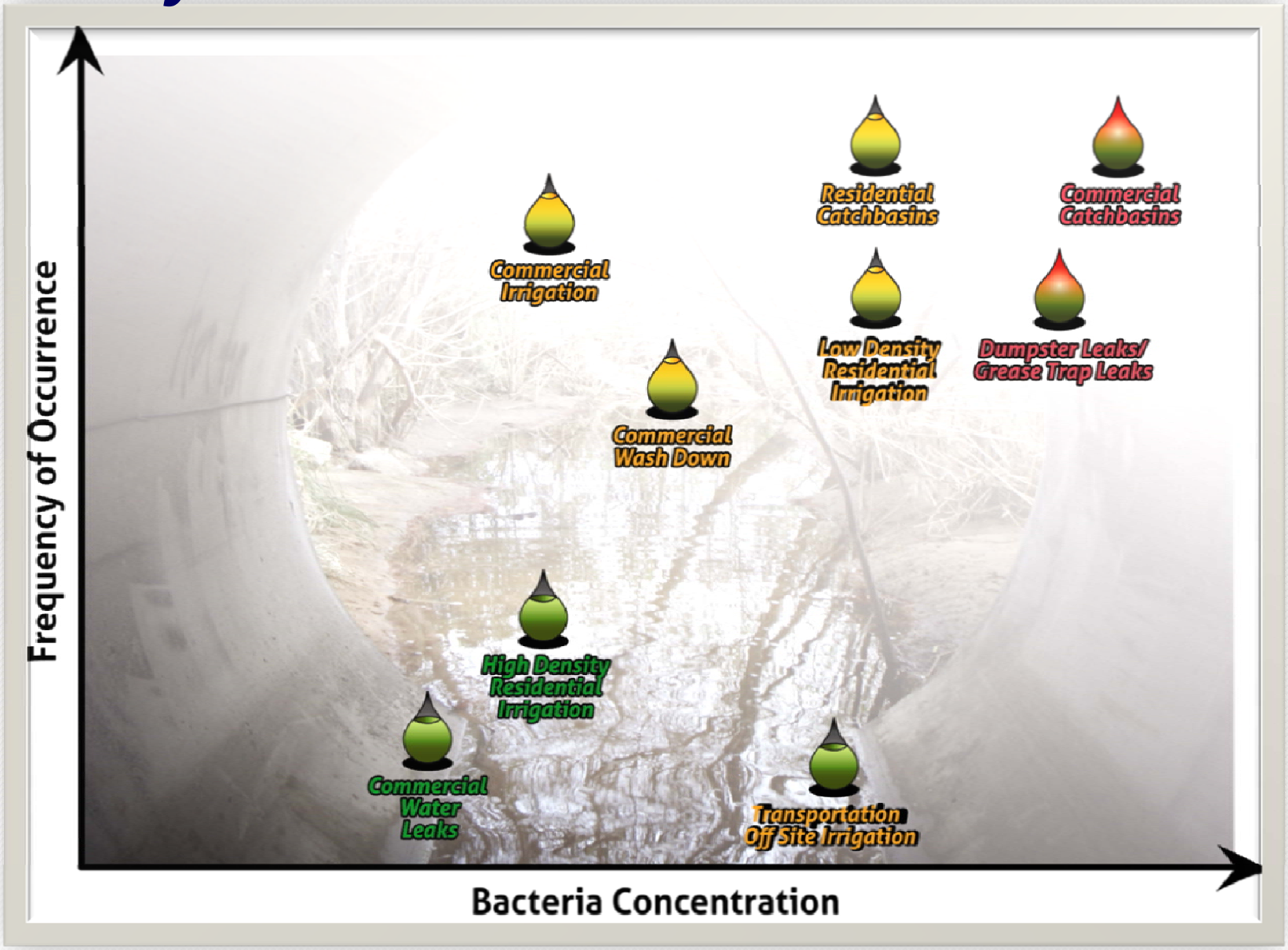
San Diego River Bacterial Source ID:

Impact of Catchbasins

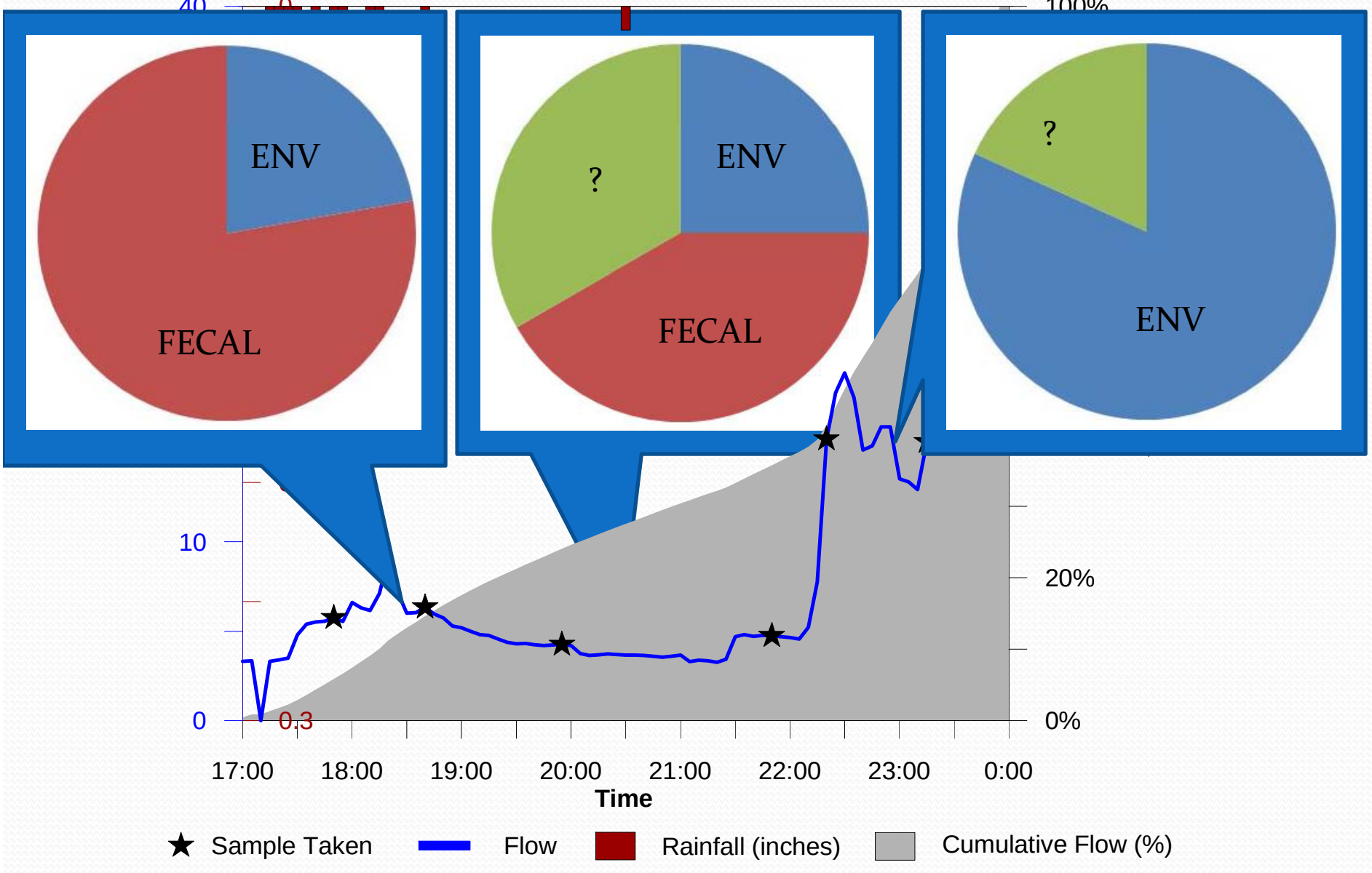


Bacterial concentrations linked to catchbasin build-up

Activity Prioritization



Tecolote Creek Bacterial Source ID: Species Composition during Storms



Summary of Case Studies

- Sources can include
  - Kelp, sands, sediments, catchbasins, MS4, birds, dogs, rabbits
  - Very rarely is a human fecal source identified
- Transport mechanisms can include:
  - Over irrigation
- Dry and wet weather

Case Studies –

Aliso Creek

Originally presented by Sunny Jiang (UC Irvine)

STUDY SITE

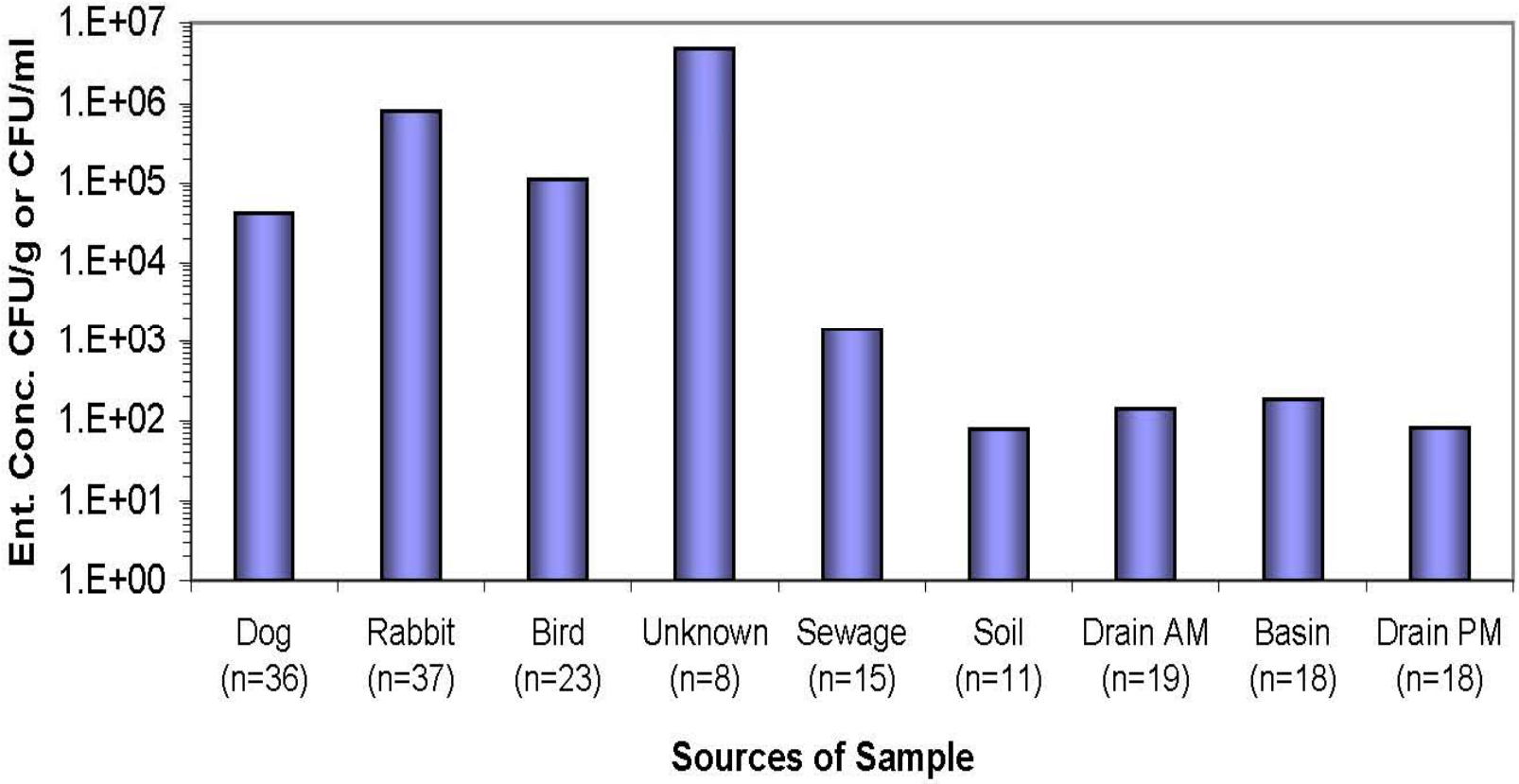

B
A
Awma Rd
Alicia Pkwy
Wood Canyon Dr
Chat Dr
Kite Hill Dr N
Sulphur Creek Reservoir
Laguna Niguel Regional Park
Brant Ln
Jaeger Dr
Westport Way
Highlands Ave
Ironhead Ln
Becard Dr
Curlew Ln
Snipe Ln
Ridgeview Dr
Thackery Dr
Porter Cir
Belmar Dr
Colebrook Dr
Niguel Rd
Kensington Dr
Michelis St
Pelican Way
Ana Maria Ln
Ivy Glenn Dr
Hillview Dr
Parkside Dr E
Laguna Niguel
sub-watershed


California

WATER QUALITY PROBLEMS

- The sub-watershed experienced chronic fecal coliform and enterococci contamination, with concentrations on average 2-4 orders of magnitude greater than State of California established type 2 recreational standards.
- San Diego Regional Water Quality Control Board issued a Cleanup and Abatement Order for the area.
- However, the clean up effort was hindered due to the unknown pollution sources.

ENTEROCOCCI CONCENTRATION IN SAMPLES



FINAL CONCLUSIONS

- Sewage was not a major contributor of fecal bacterial impairment in this small urban watershed.
- *E. coli* toxin genes indicated that birds were a major source of fecal pollution in the watershed.
- Further investigation is necessary to understand the contribution of organic fertilizers to bacterial sources either via amendment or through growth of fecal bacteria.
- Amendments and dog feces are areas where inputs can be managed by city or county ordinances, while other inputs from birds or rabbits are nearly impossible to control.

Solutions

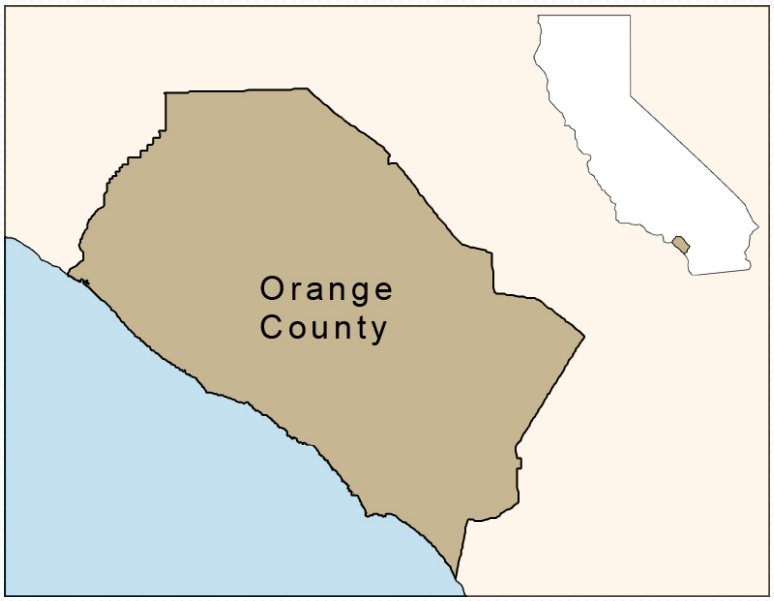
Originally presented by David Pohl (Weston), Nancy Palmer (Orange County) and Jeff Haltiner (PWA)

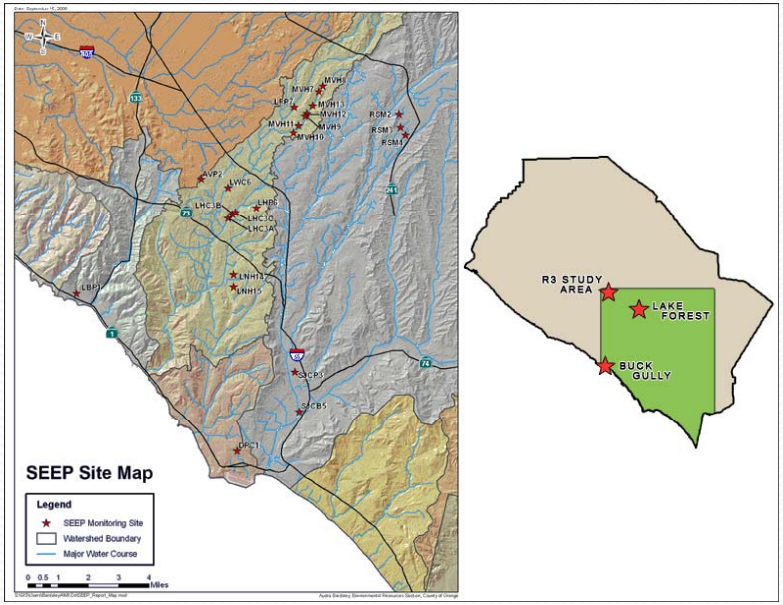
Reducing Dry Weather Bacteria Loads in So. California

Originally presented by Nancy Palmer, City of Laguna Niguel

Project Context

- Dry-weather TMDL models for bacteria Waste Load Allocations in South Orange County assume flow is all land use surface "wash-off", largely from inefficient landscape irrigation
- Prior R3 study (Residential Runoff Reduction) documented that landscape irrigation controller retrofits can reduce surface runoff rates in urbanized flatlands of Central Orange County
- Can irrigation runoff reduction help So. Orange County comply with the dry-weather TMDLs requiring FIB load reductions of up to 95%?





Project Test Site Variability

- 23 assessment areas in 10 cities in South OC
- 14 sites with large commercial controllers ("COM")
  - 4 multi-family complexes
  - 6 public parks
  - 4 business complexes
  - Pre-enrolled as retrofit participants or 'controls'
- 9 single family areas ("SFR") with 1000+ small controllers
- Areas designated for rebate offers or as 'controls'

BMPs Retrofits Implemented

- “Smart” irrigation controllers to manage frequency & timing of watering based on evapotranspiration or soil moisture
- Improved sprinkler type & layout to reduce waste via overspray & overcompensation
- Reduced areas of water-thirsty turfgrass lawn to cut back on need for irrigation

Evaluation Program

- Pre-project baseline (2007) compared to post-retrofit (2008)
- Twice weekly grab samples + continuous flow measurement in MS4 for 14 weeks May - August
- Parameters measured:
  - Fecal Indicator Bacteria (FIB
  - Electrical Conductivity
- Collection of water consumption data from water meters is ongoing

Runoff Volume Reduction

- Mean daily total volume down 55% at unretrofitted Controls from 2007 to 2008
- Mean daily total volume down 90% at retrofitted sites

Variables:

- 2007 was drier and hotter than 2008
- Governor declared drought in June 2008

Runoff Flow Volume Range

from Total Area

	Pre-Retrofit	Post-Retrofit
# of zero-flow sites:	3	4
Worst-case flow Rate, mean cfs	1.72	0.13

FIB Concentrations in MS4

	Fecal Coliform MPN/100 mL	Enterococcus cfu/100 ml
2007 mean	6,366	21,307
2008 mean	26,70	20,187

FIB Daily Mean Load

	Fecal Coliform	Enterococcus
'07-'08 Change At Control sites	+4%	-59%
'07-'08 Change at Retrofitted sites	-82%	-93%

Practical Implications

- Significant dry-weather bacteria load reductions feasible via irrigation retrofits
- Effectiveness will vary by locale & starting point
- Start with “worst first”:
  - SFR more likely than COM to over-water
  - Give steeper/clay soil areas higher priority
  - Target ‘bad actors’ identified via water over-usage or runoff enforcement

Other BMP solutions

Originally presented by David Pohl (Weston Solutions) and Jeff Haltiner (PWA)

Bacteria Loading Reduction Solutions

DRY WEATHER FLOWS

Why is the approach to dry weather different?

- Draft Bacteria TMDL Requirements
- Flow Rates and Volumes Manageable
- Sources and Mechanisms Identifiable
- Cost Effective Solutions Attainable

Urban Watersheds – BACTERIA SOURCES

Bacteria Loading Reduction Solutions

DRY WEATHER FLOWS

Dry Weather Source Studies Findings

- High Loading Sources – Dumpster/Grease Traps
- Common Bacteria Transport Mechanisms – Over-irrigation
- Bacteria Transported to “Carnival Conditions”
- Re-growth Party!
- Higher Dry Loads lead to Sources of Wet Loads

Bacteria Loading Reduction Solutions

DRY WEATHER FLOWS

Bacteria's

Carnival Cruise

- Initial Course
- Open Buffet
- Dark Ballroom
- Surrounded by Water
- Tropical Temps

Bacteria Loading Reduction Solutions

DRY WEATHER FLOWS

Dry Weather Bacteria Solutions – How to Ruin the Cruise Party

- *Eliminate the Initial Course* -High Loading Sources – Containment & Cover
- *Dry Dock the Ship* – Address the Transport Mechanisms – Over-irrigation
- *Cut out the Buffet* – Remove Organic Matter and Sediment
- *Treat the Sick Passengers* – End of Pipe Treatment (where applicable)

Bacteria Loading Reduction Solutions

DRY WEATHER FLOWS

Implement Good Housekeeping Containment or Covers for Dumpsters & Waste Containers, Control Birds

Targeted Industrial and Commercial Inspections, Education and Incentives to Change Practices

Regulate, Enforce and Create Incentives to Reduce Over-irrigation and Wash-down Activities

Channel Maintenance, Catchment Cleaning,MS4 Maintenance, Sanitary Sewer Inspections/Lining

Bacteria Loading Reduction Solutions

DRY WEATHER FLOWS

CASE STUDY: BMP Recommendations for MdR – Based on Bacteria Source ID

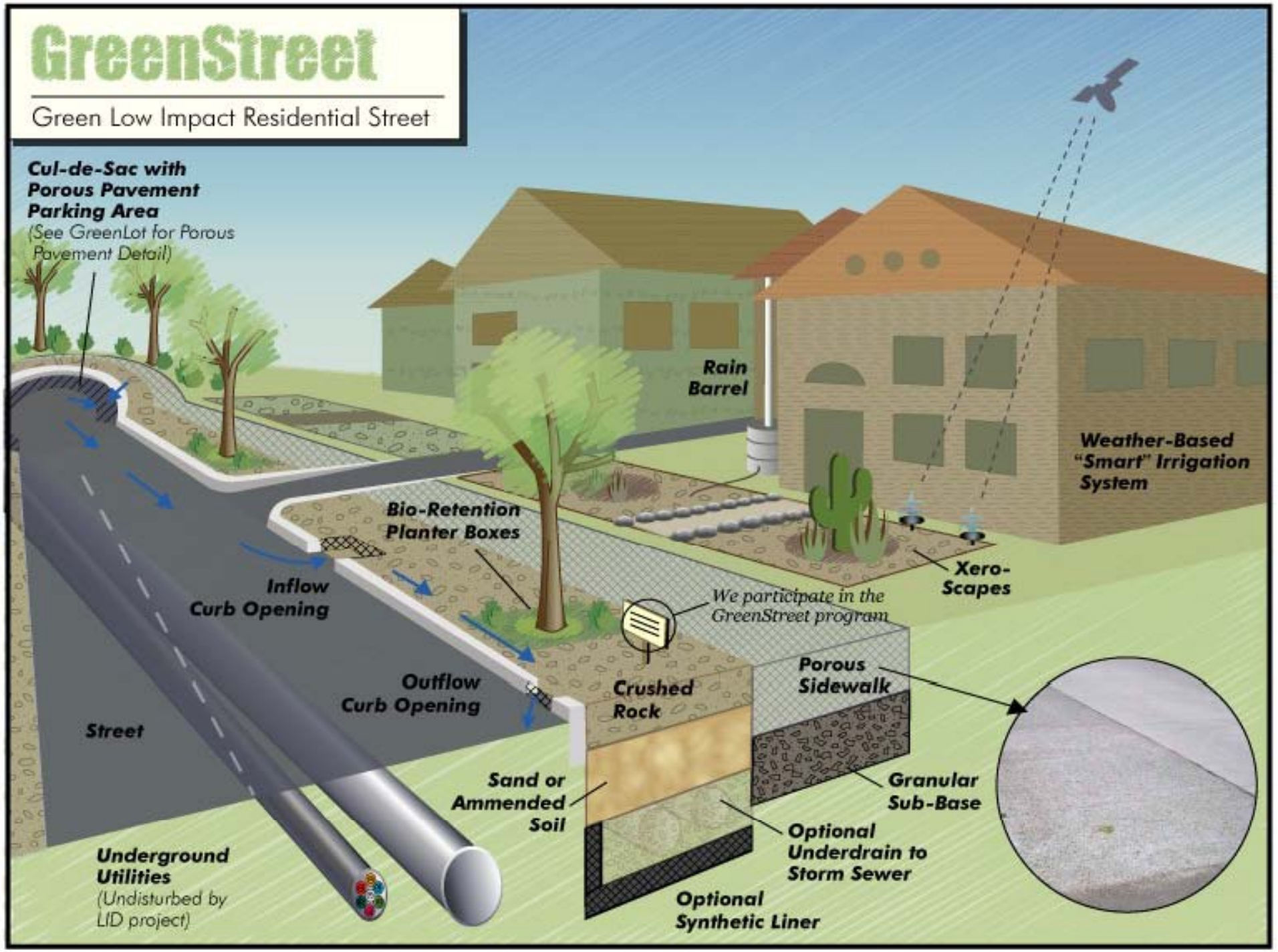
- Implement BMPs to deter birds from landing in the back basins and Mothers' Beach.
- Implement BMPs to reduce irrigation runoff
- Sewerage infrastructure inspections
- Illicit boat discharge investigation
- Sediment investigation
- Oxford Basin and Boone-Olive Pump Plant
  - Implement source control BMPs, LID and possible diversions

Bacteria Loading Reduction Solutions

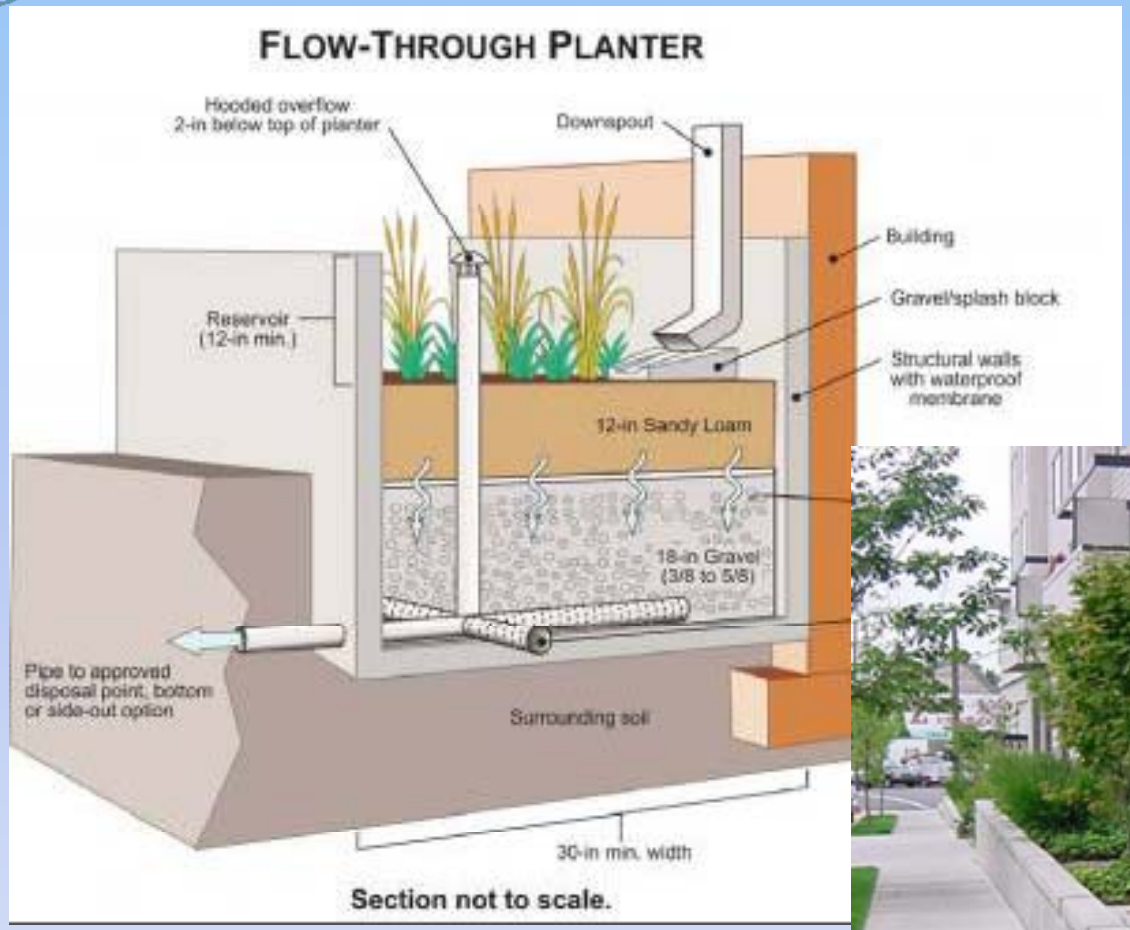
DRY WEATHER FLOWS

Where does Low Impact Development (LID) fit into Dry Weather Bacteria Load Reduction?

- Control of Temporary Urban Runoff – **Yes**
- Control of Chronic Urban Flows – **No**
- True "Integrated LID" Approach includes Dry Weather Flow Reduction
- LID Filtration BMPs – Potential Clogging


GreenStreet
Green Low Impact Residential Street
Cul-de-Sac with Porous Pavement Parking Area
(See GreenLot for Porous Pavement Detail)
Rain Barrel
Weather-Based "Smart" Irrigation System
Bio-Retention Planter Boxes
Xero-Scapes
Inflow Curb Opening
We participate in the GreenStreet program
Outflow Curb Opening
Crushed Rock
Porous Sidewalk
Street
Sand or Ammended Soil
Granular Sub-Base
Optional Underdrain to Storm Sewer
Underground Utilities
(Undisturbed by LID project)
Optional Synthetic Liner

LID: Flow-through planter



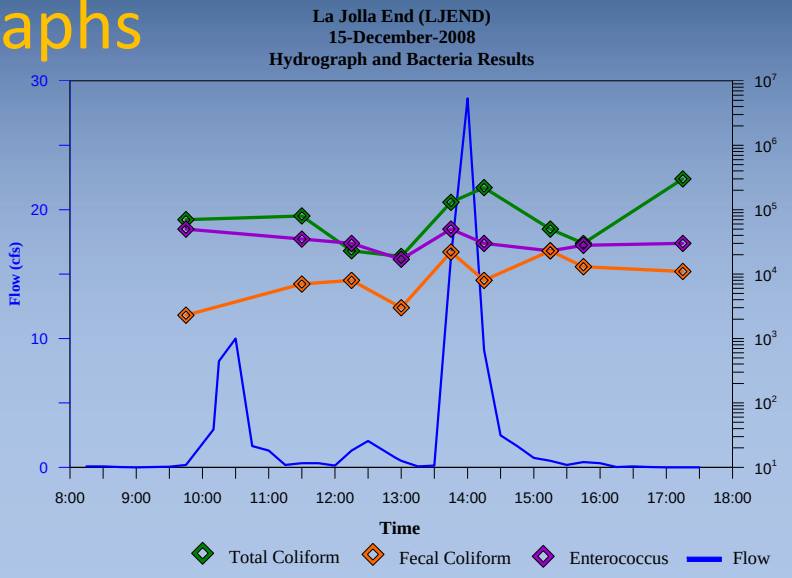
Bacteria Loading Reduction Solutions

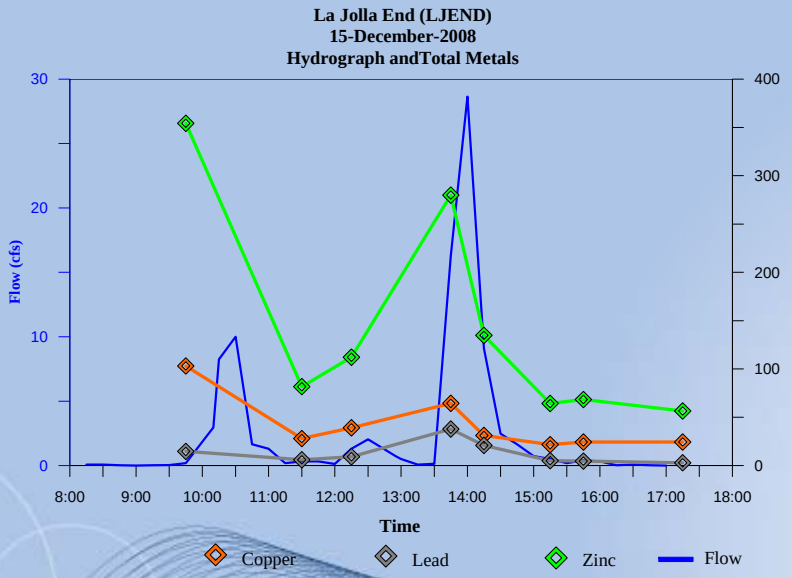
WET WEATHER STORM FLOW

Wet Weather Bacteria Loading Conditions

- Concentrations Remain High throughout the Storm Hydrograph
- State of Science in Development -Relating Risk to Indicator Bacteria in Storm Flows
- Variable and High Flow Rates and Volumes
- Treatment Systems Require Pre-treatment and Slow Through-put – Significant Storage

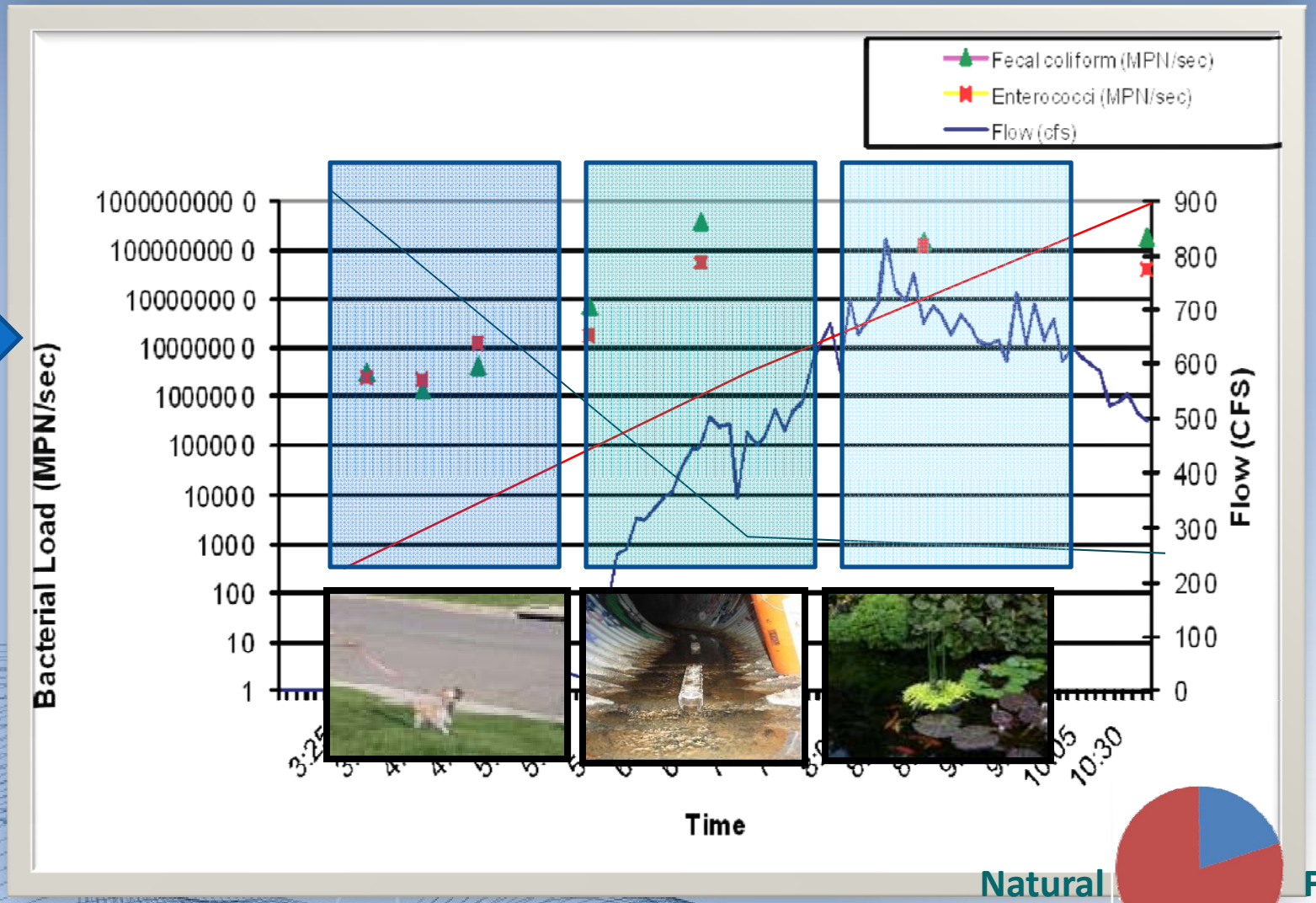
Bacteria Pollutographs





Bacteria Loading Reduction Solutions

WET WEATHER BACTERIAL LOADING CHARACTERISTICS



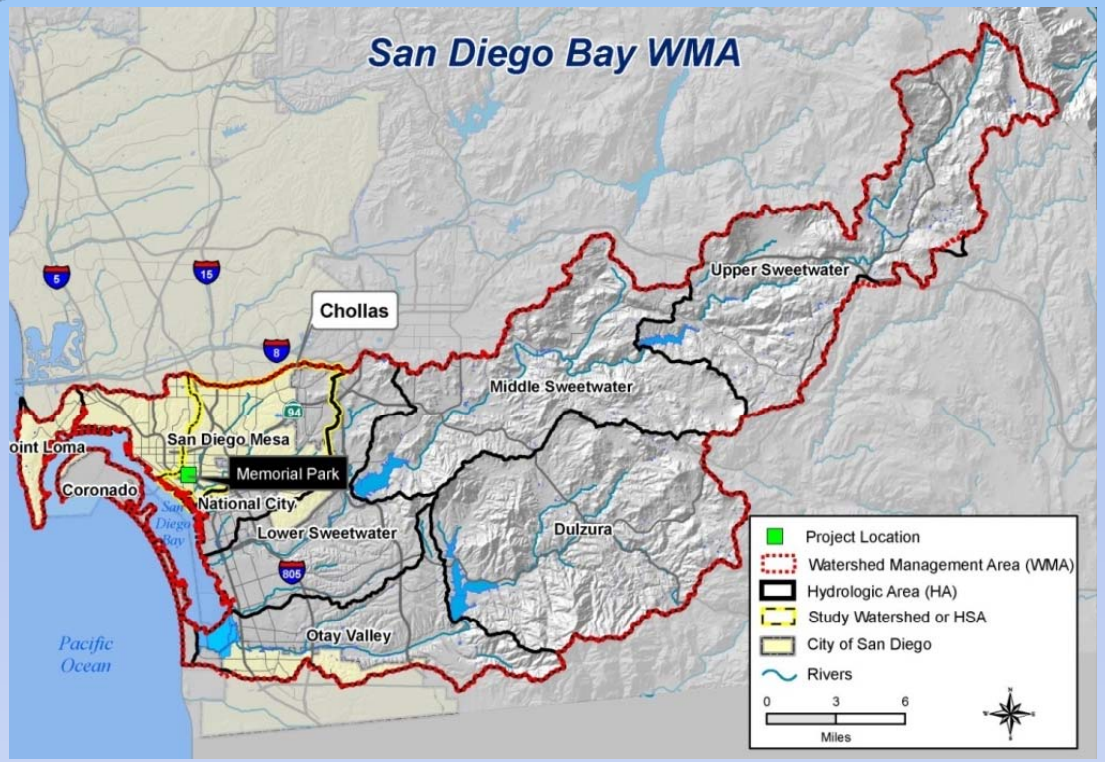
Bacteria Loading Reduction Solutions

WET WEATHER FLOWS

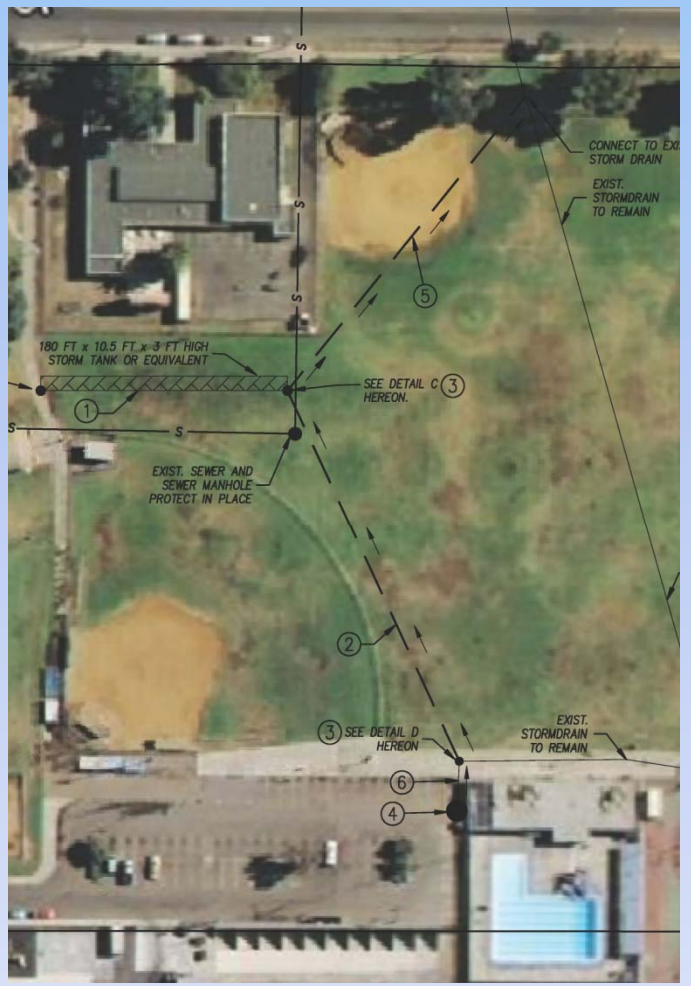
Stormwater Bacteria Reduction Opportunities

- Dry Weather Source Controls – Reduce Wet Weather Loads
- Runoff Reduction Measures – Reducing Volume and Flow Rate to Potentially Manage
  - Low Impact Development (LID)
  - Rain Harvesting

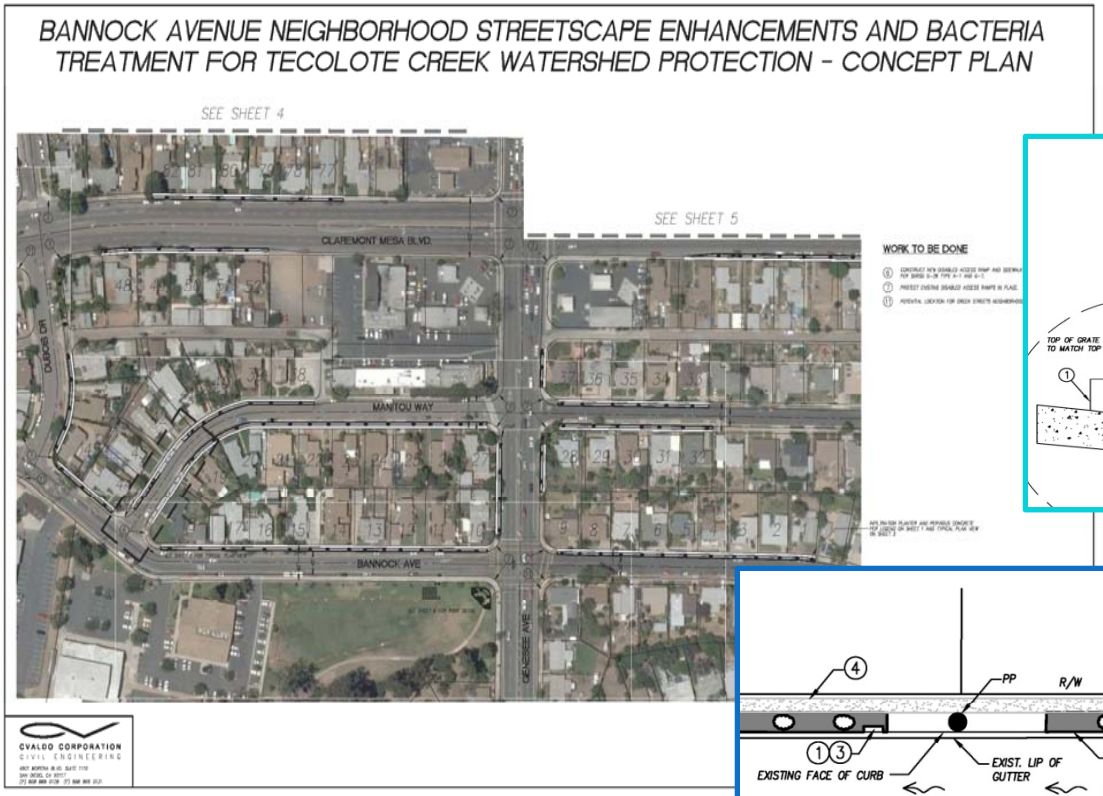
LID – Dual Use Site

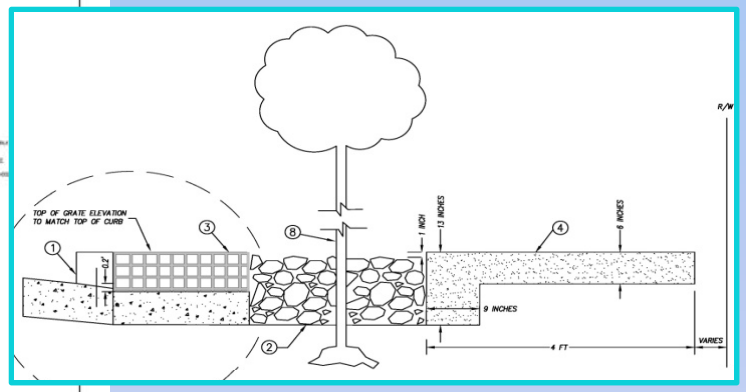


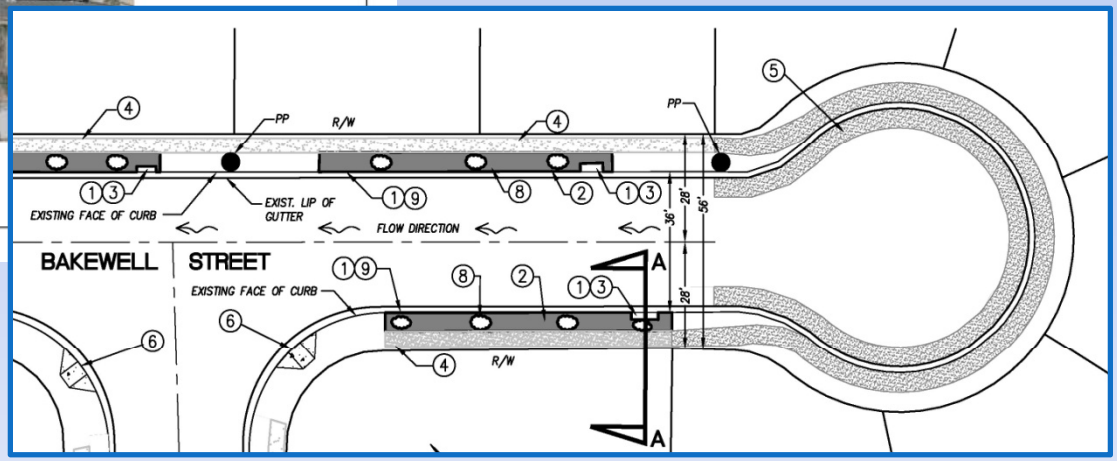
Memorial Park – City of San Diego Infiltration LID Project



LID GREEN STREET & BACTERIA TREATMENT INTEGRATED APPROACH







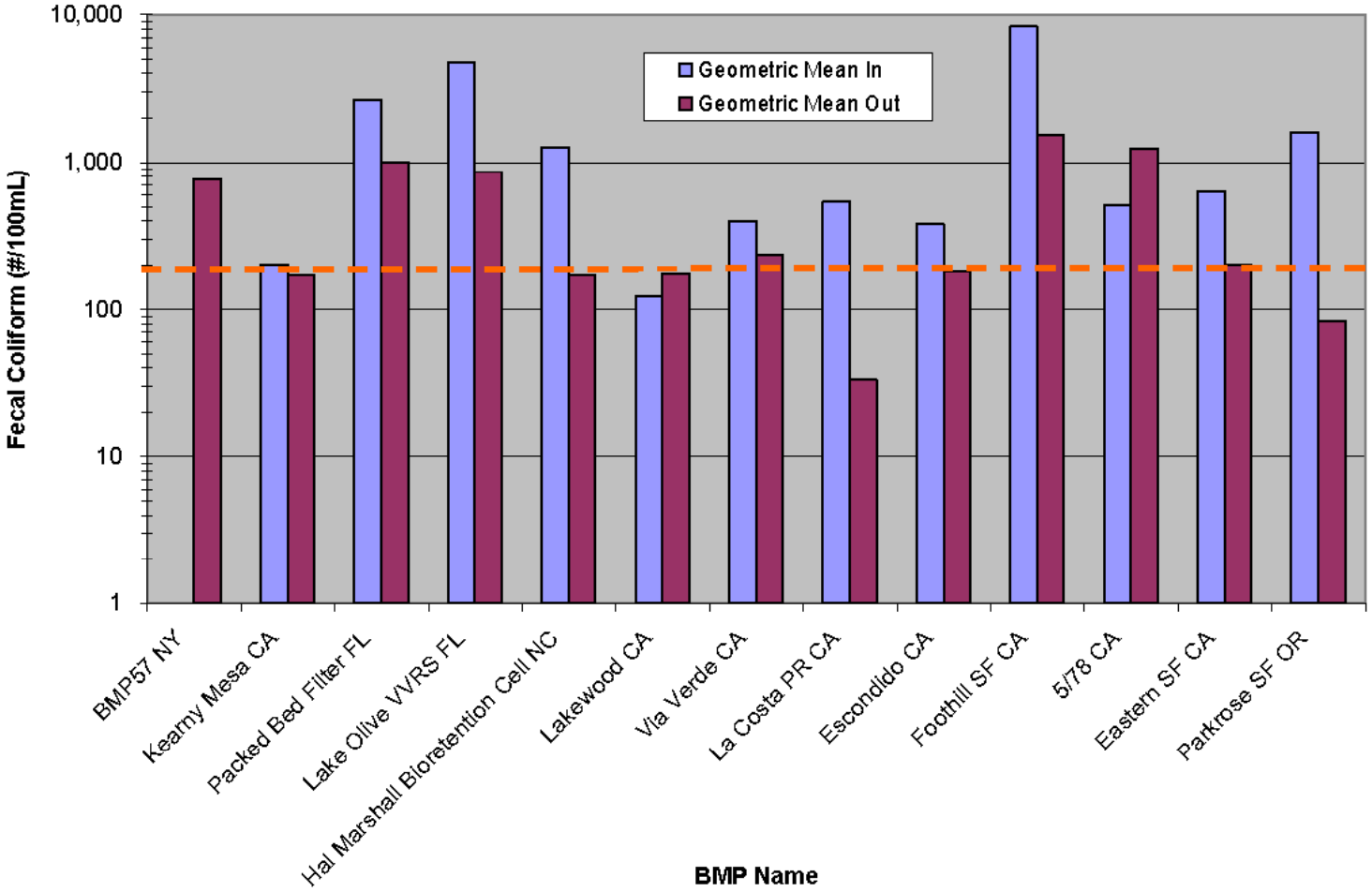
Bannock Ave. -Green Street LID & Bacteria Treatment Project

Bacteria Treatment BMPs Integrated with LID Solutions

- Bacterra™ - 95%-99% Removal – Low Flow Rate
- Abtech Smart Sponge Plus – SWAT Facility, Riverside – Detention Basin + Media Filter – 16 to 4 cfs
- Bioclean Modular Wetland System - Oceanside

Media Filter BMP Effectiveness

Figure 6. Media Filter Fecal Coliform Data (13 Studies)



Potential Wet Weather Solution - Storm Water Harvesting/Reuse

Rob Field Pilot Project:

- Large Storage Requirements (85th percentile – 10M Gal.)
- Pre-Treatment Required – Treatment Train (Trash & TSS Before UV)
- Potential for Use to Supplement Irrigation of Ball Fields
- Pilot First Phase- Current Water Supply Costs much Lower

Contacts

Dr. David Pohl
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Ph: 760-795-6918

Coastal Marinas Permit

Jim Sinasek

Overview

- State Water Resources Control Board (SWRCB)
- Moving forward with required Coastal Permit
- Proposed for all marinas
  - A marina is defined as a facility with ten or more slips &/or moorings

Objective

- To control pollutants by implementation of appropriate management practices
- For marinas in impaired waters (Upper Bay)

or

- To prevent pollution generated by marina activities from impacting high quality waters (Lower Bay)

Requirement

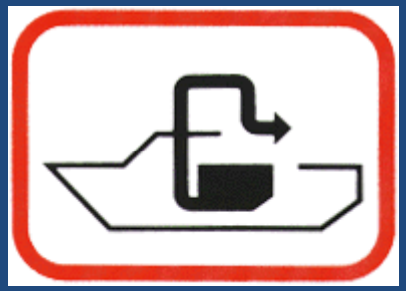
Yacht clubs and Marinas would have to obtain the Coastal Permit and comply with requirements, which include two elements:

1. A Marina Pollution Prevention Plan(MPPP) and
2. A Marina Monitoring and Reporting (MRP)Component

Activities defined

MPPP Includes

- Identifying & evaluating sources of pollutants; and,*
- Identifying & implementing site-specific management practices**
- General Permit***



MRP Component Includes

- Determining compliance/assurance with permit terms & conditions
- Determining compliance with water quality objectives; and,
- Determining the effectiveness of the MPPPs & associated management practices

Statewide Coastal Marinas Permit

- Sampling & Analysis Plan
- Monitoring Requirements
- Spill/Illicit Discharge Log
- Data Assessment Requirements
- Reporting Requirements

Monitoring & Reporting Schedule and Frequency

- Daily visual observations
  - Monthly water quality summary report
- Quantifiable water quality data
  - Monthly water quality summary report
- Sediment laboratory analytical data
  - Twice yearly & annually
- Annual report
- Log of any illicit spill/discharge
  - Varies on case by case basis with requirement for the discharge to be reported within 24 hours verbally and to be submitted on a written document within five days

Repercussion

- Estimated to cost in Newport Harbor
  - ~50 marinas
  - $150K each (estimates run as high as $250K)
  - $7.5M in Newport Harbor

Key dates

Stakeholder Workshops

February in San Diego

March in Ventura, and

April in San Francisco

STAY TUNED !

Contact Information

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TO THOSE OF CONCERN:

Subject: OCEAN POLLUTION

Everyday hundreds of gallons of paint are being scrubbed off into our oceans. This pollution specifically happens when hull cleaners, like myself, clean boats that have from one month to several months of algae growth.

Most boat owners request cleaning on a monthly basis. Some wait longer. Unfortunately, the longer they wait the more algae and paint gets scrubbed and scraped off during cleaning.

This is a major concern because we hull cleaners must scrub and scrape this excessive amount of algae and paint to successfully clean the boat. However, as a result of the scrubbing, boat paint is also removed. Algae deteriorates in the ocean but the paint stays and destroys natural sea life. I would appreciate your support in implementing a significant solution to this critical part of ocean pollution.

RECOMMENDATION FOR CONSERVATION

Boat owners should have their boats cleaned twice per month in summer and once per month in winter before the algae grows into the boat paint. This will allow for only a minimum amount of algae to be wiped off and no dangerous paint scrubbed off. This service will also be less expensive for boat owners as well.

Please contact me regarding this issue. I would be happy to provide you with any further information you may need. If you would like an on site demonstration, do not hesitate to call me at 1(949-650-5930).

Sincerely,

Jerry M. Mora
Concerned Diver and Hull Cleaner
254 Walnut Street
Newport Beach, CA 92663