Introduction

- TMDLs protect recreational beneficial uses and human health

- Currently employ a reference system/ anti-degradation approach

Marine Water Quality Objectives
Current

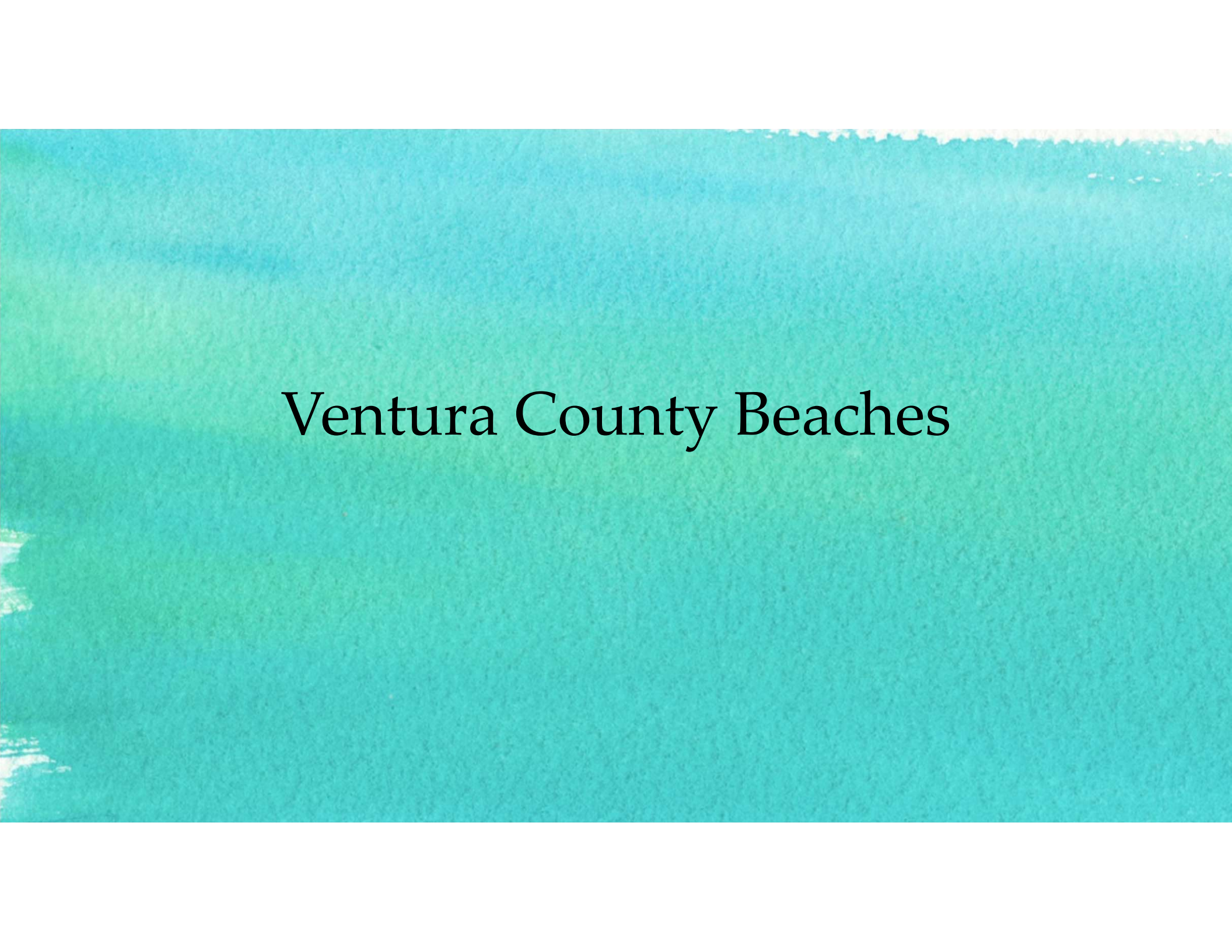| Indicator	Geometric Mean*	Single Sample
Total Coliform	1000 cfu/100 ml	10000 cfu/100 ml
if Fecal/Total > 0.1		1000 cfu/100 ml
Fecal Coliform	200 cfu/100 ml	400 cfu/100 ml
Enterococcus	35 cfu/100 ml	104 cfu/100 ml

*30-day rolling geometric mean calculated daily

Marine Water Quality Objectives
Proposed

Indicator	Geometric Mean*	Statistical Threshold Value (STV)
Enterococcus	30 cfu/100 ml	110 cfu/100 ml

*Six week rolling geometric mean calculated weekly

Ventura County Beaches

Existing Impairment:
Ventura County Beaches

303 (d) Impaired Waterbody
Ormond Beach
Rincon Beach
Rincon Parkway North
Peninsula Beach
Point Mugu Beach
Port Hueneme Beach Park
San Buenaventura Beach
Surfer's Point at Seaside

303 (d) Non-impaired Waterbody
Promenade Park

Existing Data Sources for Beaches

- VCEHD data

- UCLA study data (Peninsula Beach)

- VCWPD rainfall data

Data Review:

Example for discussion only

Surfer's Point Bacteria Summary November 1998 to October 2017 (Enterococcus)									
	Statistical Threshold Value (STV)					Rolling Geometric Mean (6-week calculated weekly (Sunday)			
	Standard (cfu/100 ml)	Overall	Summer/Dry	Winter/Dry	Wet	Standard (cfu/100 ml)	Overall	Summer	Winter
Exceedance Count		56	7	4	45		104	18	86
Sample Count	110 (Proposed)	924	522	245	157	30 (Proposed)	898	536	362
Exceedance Percentage		6.06%	1.34%	1.63%	28.66%		11.58%	3.36%	23.76%
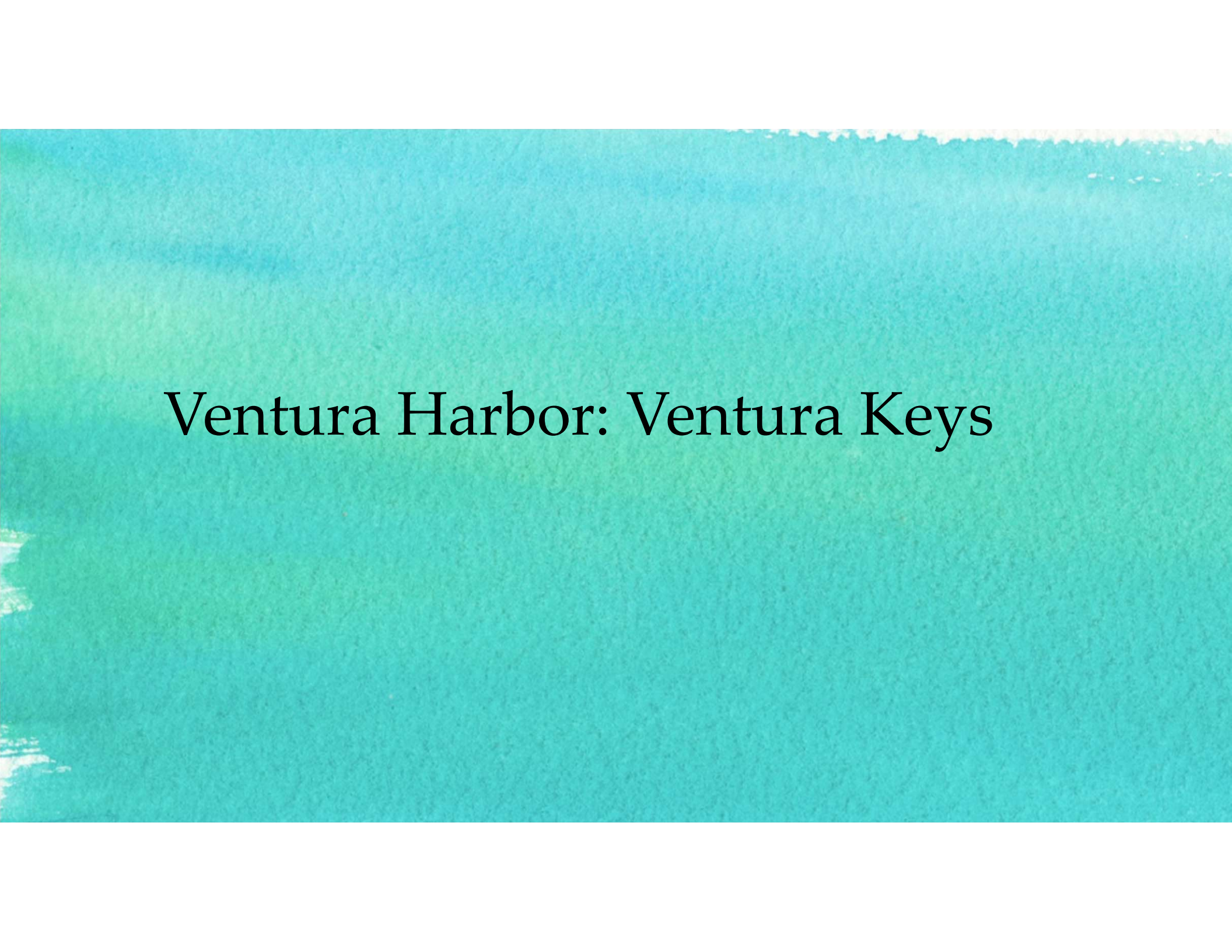
Draft Data Review
(proposed objectives)

Impaired	Not Impaired
Rincon Beach	Ormond Beach
	Rincon Parkway North
	Peninsula Beach
	Point Mugu Beach
	Port Hueneme
	San Buenaventura Beach
	Surfer's Point at Seaside park
	Promenade Beach

Is there sufficient winter data?

Options for Beaches

- TMDLs
  - TMDL public process
  - TMDLs are incorporated into permits
- Findings of non-impairment
  - Re-examine data during next Los Angeles 303(d) listing cycle
- Additional monitoring
  - Changes to 303(d) list
  - Development of TMDLs

Ventura Harbor: Ventura Keys

Ventura Harbor: Ventura Keys 2014/2016 Integrated Report Assessment for Indicator Bacteria

- Data Submitted by City of Ventura

- Three Ventura Keys sites (K1-K3) and one Ventura Harbor site (M2)

- Samples collected approximately weekly from January 2003 to August 2007

Ventura Harbor: Ventura Keys 2014/2016 Integrated Report Assessment for Indicator Bacteria

Findings

Enterococcus
- Single sample: 48/595 exceeded
- 30-day Geomean: 41/432 exceeded

Fecal coliform
- Single sample: 38/809 exceeded
- 30-day Geomean: 3 /464 exceeded

Total coliform
- Single sample: 64/648 exceeded
- 30-day Geomean: 196/464 exceeded

Fecal coliform/Total coliform ratio
- Ratio: 14/648 exceeded

Conclusion:

Impaired by Total Coliform

30-day Geomean = 30-day rolling Geometric Mean

Ventura Keys

Arundell Barranca

Ventura Marina

Legend
Ventura Harbor 303(d) Listed Area
Stream

0   0.05 0.1   0.2 Miles

City of Ventura Data Compared to Proposed Bacteria Provisions

Enterococci Six-week Geomean: (30/100ml)	Total*
# Exceedances	54
# Samples	420
# Exceedances to List According to Listing Policy	73

* Draft for discussion only

2008 UCLA Contract Sampling

- Bacterial contamination source tracking in Ventura Marina, Ventura Keys and in Arundell Barranca.

- Samples collected monthly from May 2008- April 2009.

  - Nine Ventura Keys sites:
    - D1-D6
    - Sailor
    - Beachmont
    - Marpark

  - One Ventura Harbor site:
    - Mardock

UCLA Data Compared to
Proposed Bacteria Provisions- Ventura Keys

Enterococci STV (110/100ml)	Total*
# Exceedances	19
# Samples	78
# Exceedances to List According to Listing Policy	13

STV= Statistical Threshold Value-used when insufficient samples available to calculate a geometric mean.
* Draft for discussion only

UCLA Data Compared to
Proposed Bacteria Provisions-Ventura Marina

Enterococci STV (110/100ml)	Total*
# Exceedances	1
# Samples	14
# Exceedances to List According to Listing Policy	5

STV= Statistical Threshold Value-used when insufficient samples available to calculate a geometric mean.
* Draft for discussion only

Ventura Harbor: Ventura Keys
Data Assessment Conclusions

- Re-Assessment of the City of Ventura data using the Proposed Bacteria Provisions demonstrates no impairment.

  – Data is 10 years old

- Assessment of the UCLA data using the Proposed Bacteria Provisions demonstrates impairment.

  – Data is 10 years old

  – Only one year of data, collected monthly

  – Documentation of data from month to month is inconsistent

- Possible impairment of the Ventura Harbor: Ventura Keys waterbody. More data is needed.

Summary of Options

- Ventura County Beaches
  - TMDLs,
  - Findings of non-impairment, and/or
  - Additional monitoring

- Ventura Harbor: Ventura Keys
  - No TMDL at this time – additional monitoring needed

Discussion

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- Los Angeles Water Board TMDL Webpage:
  https://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/tmdl_list.php