

**ITEM No. 15
INFORMATION ITEM**

**DATA REVIEW AND PROBLEM
IDENTIFICATION FOR THE CLEAN
WATER ACT SECTION 303(d)
LISTING FOR BACTERIA IN THE
VENTURA HARBOR: (VENTURA
KEYS) WATERBODY**

**Regional Water Quality Control Board,
Los Angeles Region
April 12, 2018**



Outline of Presentation

- Environmental Setting
- Bacteria Water Quality Standards
 - Basin Plan
 - State Water Board's Proposed Bacteria Provisions
- Review of historical data used to place the Ventura Harbor (Ventura Keys) on the 303(d) list
- Review of water quality data from a special study conducted in 2008-09
- Staff Recommendation

Environmental Setting

- Located in Ventura Miscellaneous Coastal Watershed Management Area
- Divided into two areas
 - Ventura Marina
 - Ventura Keys
- Ventura Marina
 - 274-acre recreation and commercial marina
 - Owned by the Ventura Port District
- Ventura Keys
 - 40-acre residential marina
 - Managed by City of Ventura



Environmental Setting

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Basin Plan Objectives for Marine Waters

| Indicator | Geometric Mean | Single Sample |
|------------------|----------------|---------------|
| Enterococcus | 35/100ml | 104/100ml |
| Fecal coliform | 200/100ml | 400/100ml |
| Total coliform * | 1,000/100ml | 10,000/100ml |

*Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.

Proposed Bacteria Provisions for Marina Waters

| Indicator | Geometric Mean (cfu/100ml) | Statistical Threshold Value (STV) (cfu/100ml) |
|----------------------------|----------------------------|-----------------------------------------------|
| Enterococcus | 30/100ml | 110/100ml |
| cfu = colony forming units | | |

Geometric Mean

- Minimum of five samples distributed over a six-week period
- Six-week rolling Geometric Mean, calculated weekly

Statistical Threshold

- Not exceeded more than 10 percent of the samples collected in a single month's time.

Ventura Harbor (Ventura Keys) 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 2016 Integrated Report Assessment for Indicator Bacteria

Findings

Enterococcus

- Single sample: 48/595 exceeded
- 30-day geometric mean: 41/432 exceeded

Fecal coliform

- Single sample: exceeded 24/648 exceeded
- 30-day geometric mean: 3/464 exceeded

Total coliform

- Single sample: 64/648 exceeded
- 30-day geometric mean: 196/464 exceeded

Conclusion:

Impaired by Total Coliform

30-day geometric mean= 30-day rolling Geometric Mean



City of Ventura Data Compared to Proposed Bacteria Provisions- Ventura Keys

| Enterococcus Six-week Geometric Mean (30/100ml) | Total |
|----------------------------------------------------------------|--------------|
| # Exceedances | 54 |
| # Samples | 420 |
| # Exceedances to List ¹ | 70 |

¹ State Water Board's Listing Policy Table 3.2
Data collected from Jan. 2003-Aug. 2007

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

| Enterococcus STV Objective (110/100ml) | Total |
|-------------------------------------------------------|--------------|
| # Exceedances | 19 |
| # Samples | 78 |
| # Exceedances to List* | 13 |

STV= Statistical Threshold Value-used when insufficient samples available to calculate a geometric mean

*State Water Board's Listing Policy Table 3.2

Data collected from May 2008-Apr. 2009

UCLA Data Compared to Proposed Bacteria Provisions- Ventura Marina

| Enterococcus STV Objective (110/100ml) | Total |
|-------------------------------------------------------|--------------|
| # Exceedances | 1 |
| # Samples | 14 |
| # Exceedances to List* | 5 |

STV= Statistical Threshold Value-used when insufficient samples available to calculate a geometric mean

*State Water Board's Listing Policy Table 3.2

Data collected from May 2008-Apr. 2009

Data Review Summary

- Re-Assessment of the City of Ventura data using the Proposed Bacteria Provisions indicates no impairment in Ventura Keys
 - Data is 10 years old
- Assessment of the UCLA data using the Proposed Bacteria Provisions indicates that there is an impairment in Ventura Keys, but not Ventura Marina
 - Data is 10 years old
 - Dataset is only 1 year of data, collected monthly

Staff Recommendations

- Request more frequent monitoring in Ventura Keys and Marina
- Request the City of Ventura and the Ventura Harbor Port District to conduct bacteria monitoring for a minimum of two years
 - Until the Proposed Bacteria Provisions are adopted monitor for fecal coliform, total coliform, and enterococcus
 - Minimum of 5 sampling locations within the Ventura Keys and Ventura Marina
- Assess the data collected from the bacteria monitoring program to determine the impairment status of the Ventura Harbor.
- Develop TMDL if needed