Ventura Beaches Bacteria
Modifications to the 2014/2016 Clean Water Act 303(d) List of Impaired Waters

Staff Report

Los Angeles Regional Water Quality Control Board

January 2019

Acronyms

cfu	Colony Forming Unit
GM	Geometric Mean
ml	Milliliter
SSM	Single Sample Maximum
STV	Statistical Threshold Value
ISWEBE	Water Quality Control Plan for Inland Surface Waters, Enclosed Bays and Estuaries of California
TMDL	Total Maximum Daily Load
U.S. EPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirements
WQO	Water Quality Objectives

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1. Introduction

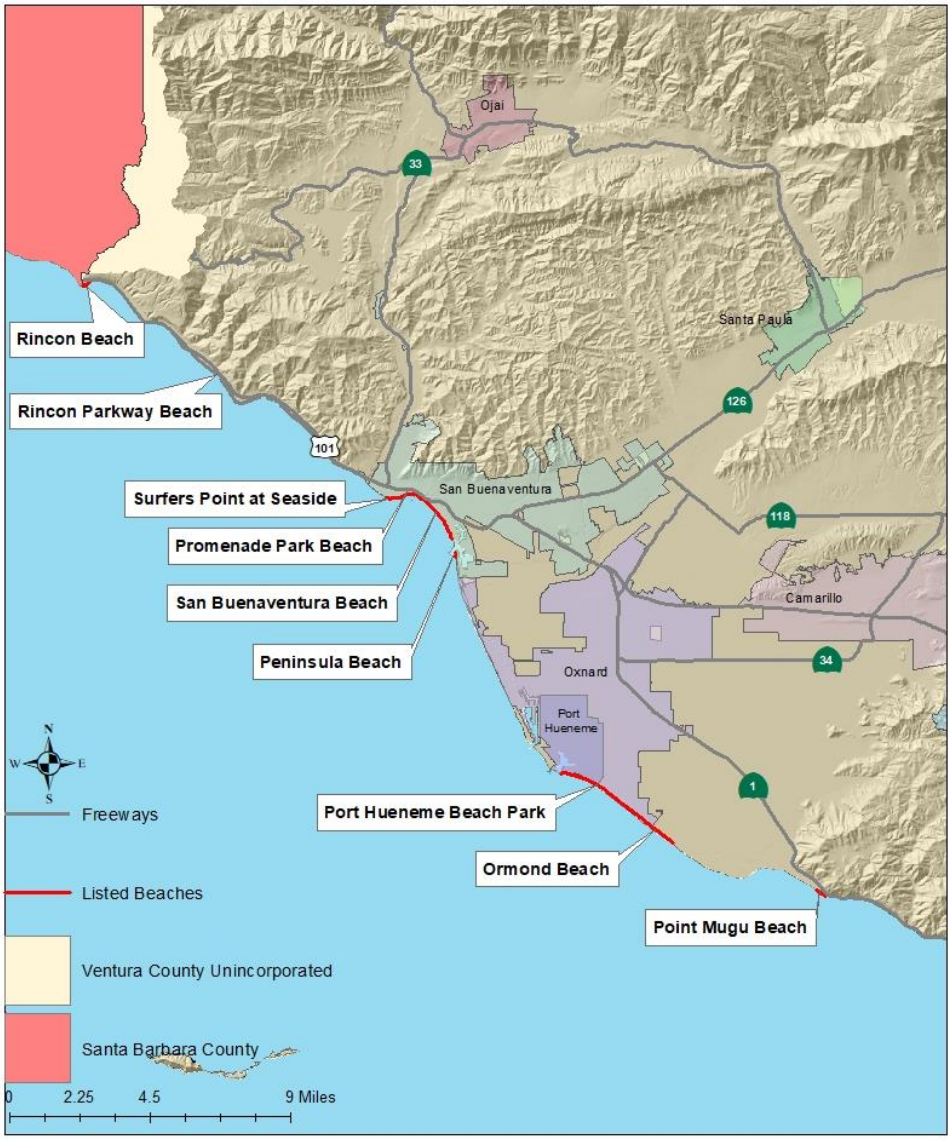
This Staff Report documents the Los Angeles Regional Water Quality Control Board's (Los Angeles Water Board) decision to reevaluate whether to include nine Ventura County Coastal Beaches (see Figure 1) on the State of California's Clean Water Act (CWA) section 303(d) list of impaired waters (303(d) list) for elevated levels of indicator bacteria.

Under section 4 of the "Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List" (Listing Policy), a water body may be re-evaluated and removed from the section 303(d) list when a water quality objective (WQO) or standard has been revised and the water body meets the revised WQO or standard. In 2018, the State Water Resources Control Board (State Water Board) adopted Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays and Estuaries of California (ISWEBE Plan) - Bacteria Provisions and a Water Quality Standards Variance Policy, and an amendment to the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) (collectively, the Bacteria Provisions). The Bacteria Provisions revised the previous WQOs for enterococcus in ocean waters based on the U.S. Environmental Protection Agency's (U.S. EPA) 2012 Recreational Water Quality Criteria. The Bacteria Provision retained the existing fecal coliform WQO in the Ocean Plan. The Bacteria Provisions become effective upon adoption by the State Water Board and approval by the state Office of Administrative Law (OAL)[1] and U.S. EPA. Once effective, the Bacteria Provisions will immediately supersede any conflicting numeric objectives for bacteria contained in a regional water board's Basin Plan.

The Staff Report re-evaluates beaches in Ventura County, which were previously identified as impaired for bacteria, based on the Bacteria Provisions in addition to the objectives for bacteria in the Los Angeles Water Board's Basin Plan.

[1] The Bacteria Provisions are expected to be approved by OAL no later than February 1, 2019. Once approved by OAL, the Bacteria Provisions are applicable under state law.

Figure 1 Ventura County Beaches on 2014/2016 303(d) List



The following beaches in Ventura County have been previously identified as impaired for indicator bacteria and included on the 303(d) list.

Table 1 Ventura County Beaches and Year First Included on the 303(d) List

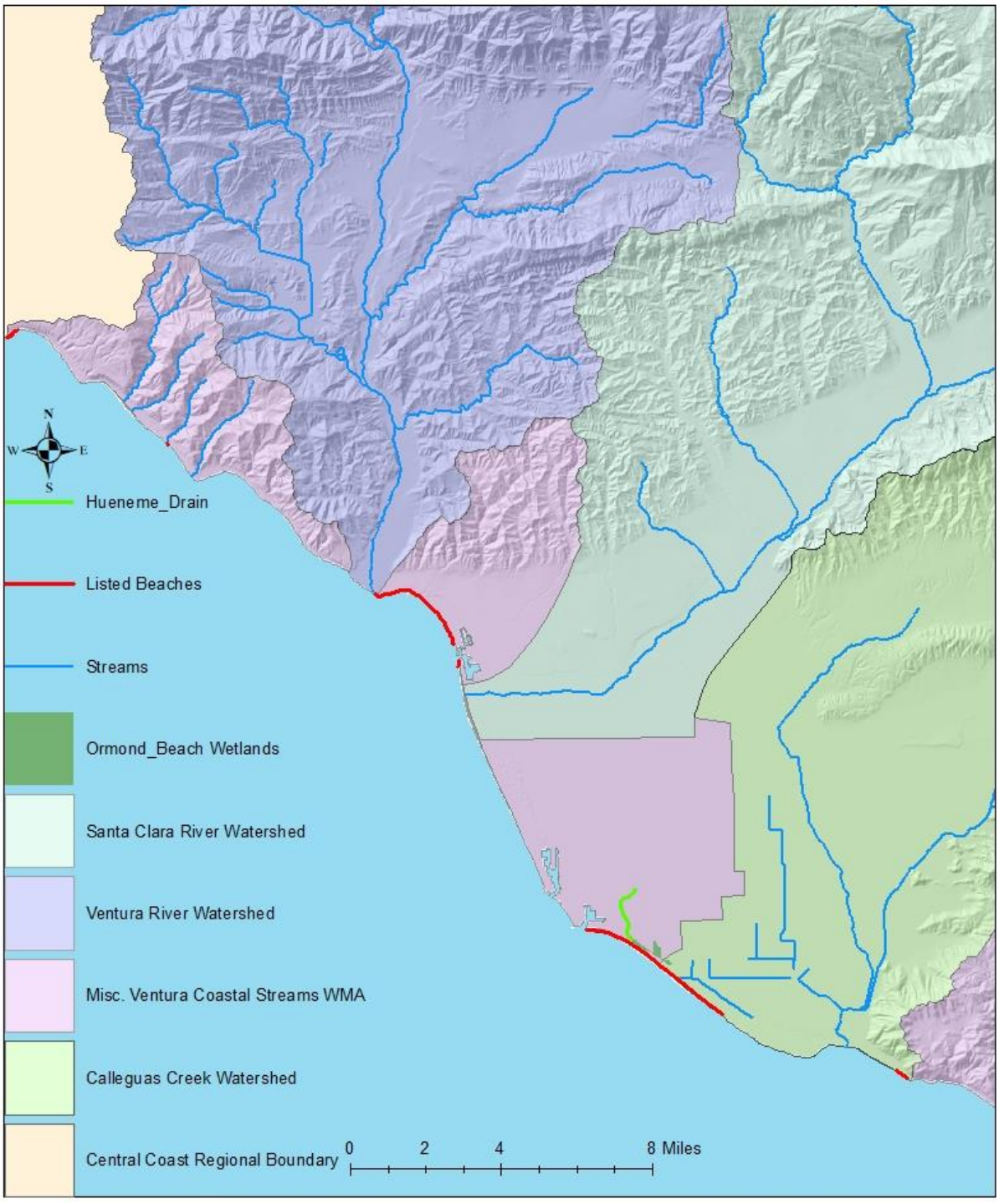
Beach	Year Listed
Ormond Beach	2002
Peninsula Beach	2002
Point Mugu Beach	2010
Port Hueneme Beach Park	2010
Promenade Park Beach*	2002
Rincon Beach	2002
Rincon Parkway Beach	2014/2016
San Buenaventura Beach	2002
Surfer's Point at Seaside (Seaside Park Beach)	2002

*Promenade Park Beach was removed from the 303(d) list during the 2014-2016 303(d) listing cycle

The 303(d) listed beaches in Ventura County are primarily located in the Miscellaneous Ventura Coastal Streams Watershed Management Area (WMA)[2] with Point Mugu and Ormond Beach located in the Calleguas Creek watershed (see Figure 2). The surrounding area for most of the beaches consists of densely populated urban areas while the area surrounding Point Mugu consists mostly of open space.

[2] WMAs are generally single large watersheds within which exist smaller subwatersheds. However, in some cases WMAs include areas that do not meet the strict hydrologic definition of a watershed but that are grouped together. The Miscellaneous Ventura Coastal Streams WMA is composed of four separate coastal drainage areas located between the Region 4 boundary, the Ventura River, Santa Clara River, and Calleguas Creek Watersheds, as well as the Santa Monica Bay WMA.

Figure 2 Ventura County Watersheds



2. Regulatory Background

The State of California's principal water quality law is the Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The Porter-Cologne Act is implemented in the Los Angeles Region (i.e., Los Angeles and Ventura Counties) through the Water Quality Control Plan, Los Angeles Region (Basin Plan) and other applicable statewide water quality control plans and policies. The Basin Plan and other statewide plans set water quality standards for the Los Angeles Region; these water quality standards include the existing and designated beneficial uses for surface and ground water and the numeric and narrative objectives necessary to support those uses along with state and federal antidegradation policies. The Basin Plan and other statewide plans and policies also describe implementation programs to protect all waters in the region. Numeric water quality objectives for indicator bacteria in marine waters, which apply to the Ventura County Coastal Beaches, are set forth in the Basin Plan and the California Ocean Plan. These objectives are discussed in more detail in Section 3. Other applicable statewide water quality control plans applicable in the Los Angeles Region include, but are not limited to, U.S. EPA's adopted water quality criteria in the National Toxics Rule and the California Toxics Rule as well as statewide plans and policies, such as the California Thermal Plan and the ISWEBE Plan.

2.1 Bacterial Standards

Bacterial water quality standards protect human health. Monitoring of all potential waterborne pathogens is infeasible; therefore, fecal indicator bacteria are used to predict the presence of pathogens and/or fecal sources. Epidemiological studies have been used to develop recreational water quality criteria given an accepted health risk. Recreational water quality criteria are based on epidemiological studies that simultaneously measured densities of fecal indicator bacteria and rates of highly-credible gastrointestinal illness and other adverse health effects in swimmers (Cabelli et al., 1981; Dufour, 1984; Haile et al., 1999).

Since the 1950s, numerous epidemiological studies have been conducted around the world to investigate the possible links between swimming in fecal-contaminated waters and health risks. However, as shown in several large-scale epidemiological studies of recreational waters, other health outcomes such as skin rashes, respiratory ailments, and eye and ear infections are also associated with swimming in fecal-contaminated water. Most of these studies have been conducted in areas of known human sewage contamination; others have been conducted in areas where the sources of fecal contamination were unknown. A Santa Monica Bay study (Haile et al., 1999) found swimming in urban runoff-contaminated waters resulted in an increased risk of chills, ear discharge, vomiting, coughing with phlegm and significant respiratory diseases. These studies demonstrate that there is a causal relationship between illness and recreational water quality, as measured by fecal indicator bacteria densities.

In 2012, pursuant to CWA section 304(a), U.S. EPA issued new recreational water quality criteria recommendations for protecting human health in all coastal and non-coastal waters designated for primary contact recreation use (U.S. EPA 2012). In 2018, the State Water Board adopted revised bacteria WQOs, also known as the Bacteria Provisions. The Bacteria Provisions are based on U.S.

EPA's 2012 criteria. Additionally, the Bacteria Provisions retain the fecal coliform WQO contained in the existing California Ocean Plan because California-specific epidemiological studies suggest fecal coliform may be a better indicator of gastrointestinal illness than enterococci during certain types of exposure and environmental conditions.

2.2 The 303(d) list

Section 305(b)(1) of the CWA requires each state to conduct a biennial assessment of its waters, while Section 303(d)(1)(A) requires each state to identify those waters that are not achieving water quality standards. In 2002, the U.S. EPA issued guidance to states requiring that the CWA Section 305(b) water quality assessment and the 303(d) list of impaired waters be integrated into a single report. This report is called the Integrated Report, and it satisfies both the CWA Section 305(b) and Section 303(d) requirements. The U.S. EPA then compiles these assessments into their biennial "National Water Quality Inventory Report" to Congress. Under CWA Section 303(d), states are required to review, makes changes as necessary, and submit to the U.S. EPA a list identifying waterbodies not meeting water quality standards and identifying the water quality parameter (i.e., pollutant) or condition (e.g. nuisance) not being met (303(d) list). The portion of the Integrated Report that lists waters not achieving water quality standards is referred to as the state's 303(d) list. Placement on this list generally triggers development of a total maximum daily load (TMDL)[3] for each waterbody/pollutant pair on the list.

To meet CWA Section 305(b) requirements for reporting on water quality conditions, the Integrated Report places each assessed waterbody segment into one of five non-overlapping categories based on the overall beneficial use support of the water segment and the need for a TMDL (Table 2). Water segments are evaluated for at least one of six "core" beneficial uses including: municipal and domestic supply, aquatic life support, fish consumption, shellfish harvesting, contact recreation, and non-contact recreation.

[3] A TMDL allocates pollutant loadings to point and nonpoint sources such that the capacity of the water body to assimilate pollutant loads is not exceeded. The elements of a TMDL are described in the Code of Federal Regulations, title 40, section 130.2 and section 130.7 (40 CFR §130.2 and §130.7) and Section 303(d) of the CWA, as well as in U.S. EPA guidance (U.S. EPA, 1999).

Table 2 Integrated Report Categories

Category	Description
1	All assessed beneficial uses supported and no beneficial uses known to be impaired.
2	There is insufficient information to determine beneficial use support.
3	There is insufficient data and/or information to make a beneficial use support determination, but information and/or data indicate beneficial uses may be potentially threatened.
4	At least one beneficial use is not supported, but TMDL is not needed.
4a	A TMDL has been developed and approved by U.S. EPA for any waterbody-pollutant combination and the approved implementation plan is expected to result in full attainment of the water quality standard within a specified time frame.
4b	Another regulatory program is reasonably expected to result in attainment of the water quality standard within a reasonable, specified time frame.
4c	The non-attainment of any applicable water quality standard for the waterbody segment is the result of pollution and is not caused by a pollutant.
5	At least one beneficial use is not supported and a TMDL is needed.

A waterbody will often have multiple impairments, i.e., several pollutants that are exceeding water quality objectives set to protect various beneficial uses. In these cases, when the waterbody has TMDLs for all the impairments (i.e., waterbody/pollutant/beneficial use combinations) the waterbody is placed in category 4a; when the waterbody is lacking a TMDL for at least one impairment, the waterbody is placed in category 5.

On September 30, 2004, the State Water Board adopted the Listing Policy in accordance with California Water Code Section 13191.3(a). The Listing Policy identifies the process by which the State Water Board and the Regional Water Quality Control Boards (Water Boards) will comply with the listing requirements of CWA Section 303(d). The Listing Policy became effective in December 2004.

In February 2013, the State Water Board announced a new strategy for the development of the State's Integrated Report including establishing three groups of Regional Water Boards and submitting an Integrated Report for one group per listing cycle (i.e. every two years). This strategy was formally described in an *Integrated Report Update Memo* in November 2013 (SWRCB, 2013). The Listing Policy was amended to reflect this and other changes on February 3, 2015.

The current 303(d) list is the 2014/2016 303(d) list, which was approved by U.S. EPA on April 6, 2018. The Los Angeles Water Board's 303(d) list was updated in the current list; however, the

2014/2016 303(d) list assessed only data from the 2010 data solicitation. The Los Angeles Water Board will develop its next complete Integrated Report, including an updated 303(d) list, in 2022. Los Angeles Water Board staff estimates that the 2022 303(d) list will include data submitted through 2021.

Per section 6.1.2.1 of the Listing Policy, "[i]f a Regional Water Board is "off cycle" pursuant to the State Water Board's notice of solicitation, that Regional Water Board or State Water Board may administer the process for one or more water [body] segments that would result in a direct listing change from the previous listing cycle pursuant to section 6.2." (SWRCB, 2004a) As discussed in the State Water Board's response to comments on the proposed 2014/2016 303(d) list for the Los Angeles Region, "[t]he Los Angeles Regional Water Board can examine more recent data if submitted into CEDEN and recommend a high priority listing or delisting off-cycle consistent with Section 6.1.2 of the Listing Policy." (SWRCB, 2017) As such, it is within the Los Angeles Water Board's discretion to consider high priority listings and delistings that are "off-cycle" from their scheduled period of data solicitation and resulting Integrated Report.

In 2015, U.S. EPA initiated a new "TMDL Vision" program to encourage states to set priorities for the waters on their 303(d) lists. In accordance with this program, the Los Angeles Water Board set a "Vision" priority of addressing the remaining 303(d) listings for fecal indicator bacteria in coastal areas of the Los Angeles Region (harbors, beaches, bays, estuaries, and coastal streams) by completing TMDLs where necessary. The Region's "Vision" plan includes the nine Ventura County Beaches discussed in this staff report. Because the data review was completed for these beaches as part of the "Vision" program and because the Los Angeles Water Board committed to addressing these beaches, the Los Angeles Water Board considers these delisting to be high priority delistings and appropriate to address off-cycle. Any changes to the approved 2014/2016 303(d) list that are made by the Los Angeles Water Board will be included in the 2018 303(d) list.

3. Data Assessment

Staff has evaluated the underlying data for the original 303(d) listing decisions along with more recent data to most accurately characterize beach conditions. Data were evaluated using both the existing bacteria water quality objectives for protection of the REC-1 use in marine waters contained in the Region's Basin Plan (Appendix A) and the newly adopted statewide Bacteria Provisions (Tables 4-13).

3.1 Summary of Relevant Water Quality Objectives

3.1.1 Regional Bacterial Objectives

The Basin Plan for the Los Angeles Region contains bacteria water quality objectives to protect the REC-1 and REC-2 beneficial uses of marine waters and the statewide Water Quality Control Plan for Ocean Waters of California (Ocean Plan) also contains bacteria water quality objectives to protect ocean waters.

On October 25, 2001, the Los Angeles Water Board adopted a Basin Plan Amendment updating the bacteria objectives for waters designated as REC-1 (LARWQCB, 2001). The State Water Board approved the Regional Water Board's Basin Plan amendment on July 18, 2002 (State Board Resolution No. 2002-0142), the Office of Administrative Law approved the amendment on September 19, 2002 (OAL File No. 02-0807-01-S), and the U.S. EPA approved the amendment on September 25, 2002. The amended objectives include geometric mean limits and single sample bacteria indicator limits including: total coliform, fecal coliform, the fecal-to-total coliform ratio, and *enterococcus*.[4]

The Ocean Plan's "Water-Contact" standards are expressed as follows: "Within a zone bounded by the shoreline and a distance 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline and in areas outside this zone used for water contact sports, as determined by the Regional Board (i.e., waters designated as REC-1) but including all kelp beds, the following bacteria objectives shall be maintained throughout the water column…" The geometric mean limits and single sample limits in the California Ocean Plan (SWRCB, 2015) are the same as the Basin Plan water quality objectives (LARWQCB, 2001).

These objectives are consistent with, but augment, prior U.S. EPA recommended ambient water quality criteria for bacteria (1986) published pursuant to CWA section 304(a), which recommended the use of *enterococcus* in marine water based on national epidemiological studies (LARWQCB, 2001; Cabelli, 1983).

The enterococcus objectives are based on a health risk in marine recreational waters of 19 illnesses per 1,000 exposed individuals (U.S. EPA, 1986), while the findings of the Santa Monica Bay epidemiological study indicate that the health risk associated with these objectives ranges from 7 illnesses per 1,000 (fecal coliform objective) to 28 illnesses per 1,000 (total coliform [when fecal-to-total ratio exceeds 0.1] objective).

The Basin Plan objectives for marine waters designated for Water Contact Recreation (REC-1) are as follows:

1. Rolling 30-day Geometric Mean Limits
    a. Total coliform density shall not exceed 1,000/100 mL.
    b. Fecal coliform density shall not exceed 200/100 mL.
    c. *Enterococcus* density shall not exceed 35/100 mL.

[4] These objectives are the same as those contained in state regulations (17 CCR §7958) implementing State Assembly Bill No. 411 (1997) (AB411), which relied upon the Santa Monica Bay epidemiological study (see Section 1.3.1). AB411 resulted in changes to regulations for public beaches and public water contact sports areas. These changes included (1) setting minimum protective bacteriological standards for waters adjacent to public beaches and public water contact sports areas based on three bacteria indicators (total coliform, fecal coliform, and *enterococcus*) and (2) altering the requirements for local agencies to monitor, post, and close beaches based on thresholds for these three bacteria indicators.

2. Single Sample Limits
    a. Total coliform density shall not exceed 10,000/100 mL.
    b. Fecal coliform density shall not exceed 400/100 mL.
    c. *Enterococcus* density shall not exceed 104/100 mL.
    d. Total coliform density shall not exceed 1,000/100 mL, if the ratio of fecal-to-total coliform exceeds 0.1.

The REC-1 bacteria objectives also state that "[t]he geometric mean values should be calculated based on a statistically sufficient number of samples (generally not less than 5 samples equally spaced over a 30-day period)" (LARWQCB, 2001).

To date, both the single sample limits, or single sample maximums (SSM), and the 30-day rolling geometric mean limits have been used to determine impairments.

Protecting REC-1 beneficial uses will result in the protection of REC-2 beneficial uses because REC-1 bacteria objectives are more stringent than REC-2 bacteria objectives.

3.1.2 Recent Revisions to Statewide Bacterial Objectives

In 2012, U.S. EPA released its final recreational water quality criteria recommendations to protect the primary contact recreation use (U.S. EPA, 2012). The criteria were developed based on more recent scientific information from the National Epidemiological and Environmental Assessment of Recreational (NEEAR) Water data (Wade et al., 2009). Pursuant to CWA Section 304(a), U.S. EPA water quality criteria recommendations are intended as guidance to states and tribes in establishing new or revised water quality standards.

On November 2, 2017, the State Water Board released the Proposed Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays and Estuaries of California (ISWEBE)—Bacteria Provisions and a Water Quality Standards Variance Policy, and an amendment to the Ocean Plan—Bacteria Provisions and a Water Quality Standards Variance Policy (Bacteria Provisions) for public comment. The Bacteria Provisions were subsequently revised on January 26, 2018 and July 6, 2018. The State Water Board adopted the Bacteria Provisions with revisions at a public hearing during the August 7, 2018 State Water Board meeting.

In this action, the State Water Board adopted updated water quality objectives (WQOs) and implementation provisions for *E. coli* and *enterococcus* to protect the REC-1 beneficial use in fresh, estuarine, and marine waters. Based on comments received and further evaluation, the State Water Board retained the existing fecal coliform WQO in the Ocean Plan.

The new WQO are based on U.S. EPA's 2012 recommended illness rate of 32 illnesses per 1,000 primary contact recreators to protect public health. In its action, the State Water Board also included elements related to implementation of the objectives including: an allowance for reference beach and natural sources exclusion approaches, options for a high flow suspension

and/or seasonal suspension, and a definition for a Limited REC-1 beneficial use and a policy for its implementation. The new Bacteria Provisions become effective upon OAL and U.S. EPA approval.

Once effective, the Bacteria Provisions supersede any numeric bacteria WQOs for protection of the REC-1 beneficial use that are included in a regional water board's Basin Plan prior to the effective date of the Bacteria Provisions, except for site-specific numeric WQOs for bacteria. The Bacteria Provisions will not supersede narrative bacteria objectives or any objectives for the protection of the REC-2 or Shellfish Harvesting (SHELL) beneficial uses in a regional water board's Basin Plan.

In summary, the State Water Board's newly adopted provisions for the Ocean Plan have maintained the existing WQOs for fecal coliform, revised the WQO for *enterococcus* to be consistent with the 2012 U.S. EPA recommended recreational water quality criteria for *enterococcus*, and removed total coliform WQOs. The revised *enterococcus* WQO for marine waters from the Bacteria Provisions is listed in Table 3 (SWRCB, 2018b).

Table 3 *Enterococcus* Objectives for Water-Contact in Ocean Waters

<table>
<tr><td rowspan="2">Indicator</td><td colspan="2">Estimated Illness Rate (NGI):
32 per 1,000 water contact recreators</td></tr>
<tr><td colspan="2">Magnitude</td></tr>
<tr><td rowspan="2">Enterococci</td><td>GM* (cfu/100 mL)</td><td>STV* (cfu/100 mL)</td></tr>
<tr><td>30</td><td>110</td></tr>
<tr><td colspan="3">The waterbody GM* shall not be greater than the GM* magnitude in any six-week interval, calculated weekly. The STV* shall not be exceeded by more than 10 percent of the samples collected in a calendar month*, calculated in a static manner.

NGI = National Epidemiological and Environmental Assessment of Recreational Water gastrointestinal illness rate
GM* = geometric mean cfu = colony forming units
STV* = statistical threshold value mL = milliliter</td></tr>
</table>

3.2 Data Analysis

3.2.1 Available Data

The majority of the bacteria data for the Ventura County Beaches were based on samples collected by the County of Ventura Environmental Health Division (VCEHD). These data were collected to demonstrate compliance with 17 CCR § 7959 (i.e., AB411 regulations). Samples were tested for total coliform, fecal coliform, and *enterococcus* on a weekly basis. For all sampling sites, the data period evaluated included some years when sampling was conducted in both summer and winter to address seasonality. However, during some part(s) of the data period, certain sites were not sampled during the winter months (i.e., November to March) because sampling is not required

during this period per AB411. In other cases, sampling was discontinued at certain sites in 2008 or 2014. The available data for each site is noted on Tables 4-13 and in Appendix A.

3.2.2 Review of the Data

Staff has evaluated the available data based on both the existing objectives in the Region's Basin Plan and the recent State Water Board-adopted Bacteria Provisions. The geometric mean for *enterococcus* is calculated over a six-week rolling period and calculated weekly. The geometric mean for fecal coliform is based on generally not less than five samples and is calculated over a 30-day rolling period on days sampled. The percent of samples exceeding the statistical threshold value (STV) is calculated monthly in a static manner. According to the Bacteria Provisions, for 303(d) listing purposes, data should be assessed using the geometric mean objective where there are a statistically sufficient number of samples, which is generally not less than five samples equally distributed over a six-week period. If a statistically sufficient number of samples is not available to calculate sample geometric means, then attainment of the water quality objective is to be determined based on comparison to the STV. While there was sufficient data to calculate a rolling six-week geometric mean, this Staff Report also includes analysis of the data relative to the STV.

Tables 4 through 13 summarize the analysis of the available data as compared to the Bacteria Provisions, which consist of the new rolling six-week geometric mean objective for enterococcus as well as the existing objectives of a rolling 30-day geometric mean and single sample maximum for fecal bacteria.

Other tables are included in Appendix A, which includes more detailed summaries of the available bacteria data compared to the existing Bacteria WQOs in the Los Angeles Region Basin Plan.

Table 4 Ormond Beach Bacteria Summary: *enterococcus*

	Ormond Beach Six-Week Rolling Geometric Mean (*enterococcus*) November 1998 to October 2017		
	Station 42000 No winter samples 1999/2000 and 2004/2005 – 2007/2008	**Station 43000** No winter samples 1999/2000 and 2004/2005 – 2007/2008	**Station 44000** No winter samples 1999/2000 and 2004/2005 – 2007/2008
Objective (cfu/100 ml)	**30**	**30**	**30**
Exceedance Count	45	41	0
Sample Count	793	650	650
Exceedance Percentage	5.67%	6.31%	0.00%

Table 5 Ormond Beach Bacteria Summary: Fecal Coliform

	Ormond Beach Bacteria Summary (Fecal coliform) November 1998 to October 2017					
	Station 42000		**Station 43000**		**Station 44000**	
	SSM	**Rolling 30-day GM**	**SSM**	**Rolling 30-day GM**	**SSM**	**Rolling 30-day GM**
Objective (cfu/100 ml)	**400**	**35**	**400**	**35**	**400**	**35**
Exceedance Count	0	1	0	0	0	0
Sample Count	794	731	650	500	650	449
Exceedance Percentage	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%

Table 6 Peninsula, Point Mugu, Port Hueneme, Rincon Parkway, and Surfer's Point Beach Bacteria Summary: *enterococcus*

	Bacteria Summary Six-Week Rolling Geometric Mean: *enterococcus* November 1998 to October 2017				
	Peninsula Beach No winter data after 2008/2009	**Point Mugu Beach No winter data after 2005/2006**	**Port Hueneme Beach No winter data 2005/2006 – 2014/2015**	**Rincon Parkway Beach* No winter data after 2004/2005**	**Surfer's Point No data winter 2008/2009**
Objective (cfu/100 ml)	**30**	**30**	**30**	**30**	**30**
Exceedance Count	73	6	45	0	104
Sample Count	686	614	294	366	898
Exceedance Percentage	10.64%	0.98%	15.31%	0.00%	11.58%

*****Data was available up to 2008

Table 7 Peninsula, Point Mugu, Port Hueneme, Rincon Parkway, and Surfer's Point Beach Bacteria Summary: fecal coliform

	Beach Bacteria Summary (Fecal coliform) November 1998 to October 2017									
	Peninsula Beach		**Point Mugu Beach**		**Port Hueneme Beach Park**		**Rincon Parkway North Beach***		**Surfer's Point Beach**	
	SSM	**Rolling 30-day GM**	**SSM**	**Rolling 30-day GM**	**SSM**	**Rolling 30-day GM**	**SSM**	**Rolling 30-day GM**	**SSM**	**Rolling 30-day GM**
Objective (cfu/100 ml)	**400**	**35**	**400**	**35**	**400**	**35**	**400**	**35**	**400**	**35**
Exceedance Count	16	0	0	0	9	0	2	0	24	7
Sample Count	739	573	613	446	810	729	387	324	923	832
Exceedance Percentage	2.17%	0.00%	0.00%	0.00%	1.11%	0.00%	0.52%	0.00%	0.52%	0.00%

*****Data was available up to 2008

Table 8 Promenade Park Beach Bacteria Summary: *enterococcus*

	Promenade Park Bacteria Summary Rolling Six-Week Geometric Mean *(enterococcus)* November 1998 to October 2017			
	Station 14000 No winter data 2008/2009	**Station 15000 No winter data after 2004/2005**	**Station 16000* No winter data after 2004/2005**	**Station 17000 No winter data after 2004/2005**
Objective (cfu/100 ml)	**30**	**30**	**30**	**30**
Exceedance Count	76	18	15	63
Sample Count	887	579	372	606
Exceedance Percentage	8.57%	3.11%	4.03%	10.40%

*****Data was available up to 2008

Table 9 Promenade Park Beach Bacteria Summary: fecal coliform

	Promenade Park Beach Bacteria Summary (Fecal coliform) November 1998 to October 2017							
	Station 14000		**Station 15000**		**Station 16000***		**Station 17000**	
	SSM	**Rolling 30-day GM***	**SSM**	**Rolling 30-day GM***	**SSM**	**Rolling 30-day GM***	**SSM**	**Rolling 30day GM***
Objective (cfu/100 ml)	**400**	**35**	**400**	**35**	**400**	**35**	**400**	**35**
Exceedance Count	22	2	7	0	7	0	11	3
Sample Count	909	824	631	448	390	319	663	473
Exceedance Percentage	2.42%	0.24%	1.11%	0.00%	1.79%	0.00%	1.66%	0.63%

*Data available up to 2008

Table 10 Rincon Beach Bacteria Summary: *enterococcus*

	Rincon Beach Bacteria Summary Rolling Six-Week Geometric Mean (*enterococcus*) November 1998 to October 2017			
	Station 1000 No winter data 1999/2000 and 2005/2006 – 2008/2009	**Station 1001*** No winter data after 2004/2005	**Station 1050**** No winter data 2004/2005 and after 2008/2009	**Station 1100** No winter data 2004/2005, no data 2008-2015, no winter data after 2015
Objective (cfu/100 ml)	**30**	**30**	**30**	**30**
Exceedance Count	142	285	58	22
Sample Count	813	286	571	444
Exceedance Percentage	17.47%	99.65%	10.16%	4.95%

*****Data was available up to 2008

******Data was available up to 2014

Table 11 Rincon Beach Bacteria Summary: fecal coliform

	Rincon Beach Bacteria Summary (Fecal coliform) November 1998 to October 2017							
	Station 1000		**Station 1001***		**Station 1050****		**Station 1100**	
	SSM	**Rolling 30 day GM**	**SSM**	**Rolling 30 day GM**	**SSM**	**Rolling 30 day GM**	**SSM**	**Rolling 30 day GM**
Objective (cfu/100 ml)	**400**	**35**	**400**	**35**	**400**	**35**	**400**	**35**
Exceedance Count	38	12	181	144	16	3	7	0
Sample Count	884	807	328	170	633	519	482	373
Exceedance Percentage	4.30%	1.49%	55.18%	84.71%	2.53%	0.58%	1.45%	0.00%

*****Data was available from November 1998 to October 2008

******Data was available from November 1998 to October 2014

Table 12 San Buenaventura Beach Bacteria Summary: *enterococcus*

	San Buenaventura Bacteria Summary Rolling Six Week Geometric Mean (*enterococcus*) November 1998 to October 2017			
	Station 18000 No winter data after 2004/2005	**Station 19000 No winter data 2005/2006 -2009/2010**	**Station 20000 No winter data after 2004/2005**	**Station 21000 No winter data after 2004/2005**
Objective (cfu/100 ml)	**30**	**30**	**30**	**30**
Exceedance Count	26	97	13	4
Sample Count	568	819	574	572
Exceedance Percentage	4.58%	11.84%	2.26%	0.70%

Table 13 San Buenaventura Beach Bacteria Summary: fecal coliform

	San Buena Ventura Beach Bacteria Summary (Fecal coliform) November 1998 to October 2017							
	Station 18000		**Station 19000**		**Station 20000**		**Station 21000**	
	SSM	**Rolling 30 day GM**	**SSM**	**Rolling 30 day GM**	**SSM**	**Rolling 30 day GM**	**SSM**	**Rolling 30 day GM**
Objective (cfu/100 ml)	**400**	**35**	**400**	**35**	**400**	**35**	**400**	**35**
Exceedance Count	14	0	25	2	9	0	4	0
Sample Count	633	438	874	788	640	462	634	450
Exceedance Percentage	2.21%	0.00%	2.86%	0.25%	1.41%	0.00%	0.63%	0.00%

4 Listing Recommendations

4.1 Ormond Beach, Peninsula Beach, Point Mugu Beach, Port Hueneme Beach Park, Rincon Parkway Beach, San Buenaventura Beach, Surfer's Point at Seaside

Based on the analysis of the available data over a 19-year period, including the data used for the original listings of these beaches, Ormond Beach, Peninsula Beach, Point Mugu Beach, Port Hueneme Beach Park, Rincon Parkway Beach, San Buenaventura Beach, and Surfer's Point at Seaside should be removed from the section 303(d) list for indicator bacteria because the number of measured exceedances of enterococci and fecal coliform WQOs meets the conditions for delisting in the Listing Policy as follows:

- The data described in Section 3 for these beaches (Tables 4-7 and 12-13) satisfy the data quality requirements of sections 6.1.4 and 6.1.5 of the Listing Policy.
- Table 4.2 of the Listing Policy is the "Maximum Number of Measured Exceedances Allowed to Remove a Water Segment from the Section 303(d) List for conventional or other pollutants." Section 4.3 of the Listing Policy indicates that section 4.2, including Table 4.2, should be used to evaluate bacteria data. Based on the analysis of the data, these beaches do not exceed the allowable frequency listed in Table 4.2 of the Listing Policy.
- The data quality and the limited exceedances of the objectives satisfy the conditions for delisting in the Listing Policy approach and no additional data and information are available indicating that standards are not met.

Based on the above, there is sufficient justification for removing Ormond Beach, Peninsula Beach, Point Mugu Beach, Port Hueneme Beach Park, Rincon Parkway Beach, San Buenaventura Beach, Surfer's Point at Seaside from the CWA section 303(d) list for indicator bacteria.

4.1.1 Recommendation

Staff recommend removing Ormond Beach, Peninsula Beach, Point Mugu Beach, Port Hueneme Beach Park, Rincon Parkway Beach, San Buenaventura Beach, Surfer's Point at Seaside from the 303(d) list of impaired waters for indicator bacteria. Because none of these beaches are included on the 303(d) list for other types of impairments, the Integrated Report Category will be Category 1, "*All assessed beneficial uses supported and no beneficial uses known to be impaired*."

4.2 Promenade Park Beach

While Promenade Park Beach was removed from the 303(d) list during the 2014/2016 listing cycle, this beach was also included as a Vision priority for the Los Angeles Water Board. As such, the Los Angeles Water Board Staff re-evaluated the available data for Promenade Park Beach to verify

the delisting was still appropriate in light of additional data and the revised bacteria WQO for enterococci.

Based on analysis of the available data over a 19-year period, including the data used for the original listing of this beach, Promenade Park Beach should not be listed on the section 303(d) list for indicator bacteria because the number of measured exceedances of enterococci and fecal coliform WQOs meets the conditions to "do not list" in the Listing Policy as follows:

- The data described in Section 3 for this beach (Tables 8-9) satisfy the data quality requirements of sections 6.1.4 and 6.1.5 of the Listing Policy.
- Table 3.2 of the Listing Policy is the "Minimum Number of Measured Exceedances Needed to Place a Water Segment on the Section 303(d) List for conventional or other pollutants." This beach does not exceed the allowable frequency listed in Table 3.2 of the Listing Policy.
- The data quality and the limited exceedances of the objectives satisfy the conditions in the Listing Policy to "do not list" and no additional data and/or information are available indicating that standards are not met.

Based on the above, there is sufficient justification for Promenade Park Beach not to be included on the CWA section 303(d) list for indicator bacteria.

4.2.1 Recommendation

Staff recommend not placing Promenade Park Beach on the 303(d) list of impaired waters for indicator bacteria. The Integrated Report Category will remain Category 1, "*All assessed beneficial uses supported and no beneficial uses known to be impaired*."

4.3 Rincon Beach

Based on the analysis of the available data over a 19-year period, including the data used for the original listing of Rincon Beach, Rincon Beach should remain on the 303(d) list for indicator bacteria because:

- The data described in Section 3 for Rincon Beach (Tables 10 and 11) satisfy the data quality requirements of sections 6.1.4 and 6.1.5 of the Listing Policy.
- This beach exceeds the indicator bacteria objectives in excess of the allowable frequency listed in Table 4.2 "Maximum Number of Measured Exceedances Allowed to Remove a Water Segment from the Section 303(d) List for conventional or other pollutants" of the Listing Policy.

For fecal coliform, all but one sampling station at Rincon Beach do not exceed the allowable frequency listed in Table 4.2 of the Listing Policy (Table 11). However, sampling station 1001 located at the mouth of Rincon Creak does exceed the allowable frequency listed in Table 4.2 for

fecal coliform for both the single sample maximum and geometric mean objectives. While the most recent sample for station 1001 was taken in 2008, Staff has not identified factors for rejecting the dataset for sampling station 1001.

For *enterococcus*, the water quality data at Rincon Beach evaluated per the State Water Board-adopted rolling six-week geometric mean objective show that two stations exceed the allowable frequency listed in Table 4.2, station 1000 and 1001 (Table 10). The most recent sample for station 1000 was taken in October 2017.

The locations of these stations can be seen on Figure 3.

4.3.1 Recommendation

Staff does not recommend a change to the 303(d) list status for Rincon Beach. Rincon Beach will remain identified as impaired due to bacteria in Category 5 of the Integrated Report.

Figure 3 Rincon Beach Sampling Stations

4.3.2 Addressing Bacteria Impairments at Rincon Beach

Staff does not recommend developing a TMDL at this time because discharges from Onsite Wastewater Treatment Systems (OWTS) are identified as the principal source of the impairment and compliance with the Statewide Water Quality Control Policy for Siting, Design, Operation,

and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy) will likely be sufficient to return Rincon Beach to attaining water quality standards.

The State Water Board adopted the OWTS Policy on June 19, 2012 and updated the Policy on April 17, 2018. The OWTS Policy establishes a statewide, risk-based approach for the regulation and management of OWTS (also known as septic systems).

The OWTS Policy requires actions for impaired water bodies specifically identified in the policy where OWTS contribute to the water quality impairment. Rincon Beach is identified in the policy as one of these water bodies because the beach water quality is impaired due to bacteria.

The OWTS Policy waives the requirement for owners of OWTS to apply for and receive waste discharge requirements (WDRs) to operate their systems when they meet the conditions set forth in the policy. However, for OWTS near an impaired water body, the OWTS Policy expects that the respective regional water board will either develop a TMDL that limits discharges from OWTS and other pollutants sources near these impaired waterbodies or issue WDRs to the OWTS.

For discharges from OWTS near Rincon Beach, the coverage under the policy's waiver expires on December 31, 2019. At that time, any operating OWTS with any part of its dispersal system discharging within 600 feet of Rincon Beach will require individual WDRs.

Section 10.4.1 of OTWS policy further states, "[i]f a Regional Water Board does not complete a TMDL within two years of the time period specified in Attachment 2, coverage under this Policy's waiver of waste discharge requirements shall expire for any OWTS that has any part of its dispersal system discharging within the geographic area of an Advanced Protection Management Program. The Regional Water Board shall issue waste discharge requirements, general waste discharge requirements, waivers of waste discharge requirements, or require corrective action for such OWTS."

Sections 13260(a) and 13260(a)(1) of the California Water Code (CWC) require that a discharger (e.g., OWTS owner) file an application for WDRs called a Report of Waste Discharge (ROWD)/Form 200 for the discharge of wastewaters and pay a permit fee. In the WDRs issued to the OWTS owner, the Los Angeles Water Board may require supplemental treatment of the wastewater discharge, routine inspections, monitoring of ground and/or surface waters, and other requirements as appropriate.

Rincon Beach property owners completed the *Rincon Point Septic to Sewer Conversion* in 2014. However, during the process of evaluating bacteria sources for Rincon Beach, Staff identified several properties with OWTS within 600 feet of Rincon Beach that have not connected to the sewer. If the remaining three properties choose not to connect to a sanitary sewer by 2019 per requirements in the OWTS Policy, the Los Angeles Water Board may issue waste discharge requirements, general waste discharge requirements, waivers of waste discharge requirements, or require corrective action for such OWTS in accordance with section 10.4.1 of the OWTS Policy.

5 Conclusion

Based on the data analyses in this Staff Report, Staff recommend the following modifications to the 2014/2016 303(d) list as shown in Table 14.

Table 14 Proposed Modifications to 2014/2016 303(d) List for Nine Ventura County Coastal Beaches

Beach	Recommendation
Ormond Beach	Delist
Peninsula Beach	Delist
Point Mugu Beach	Delist
Port Hueneme Beach Park	Delist
Promenade Park Beach	Do not list
Rincon Beach	Do not delist
Rincon Parkway Beach	Delist
San Buenaventura Beach	Delist
Surfer's Point at Seaside (Seaside Park Beach)	Delist

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