

California Regional Water Quality Control Board, Los Angeles Region

**Ventura River Estuary  
Total & Fecal Coliform**

**Summary of Proposed Action**

The Ventura River Estuary is proposed to be listed in the 2002 305(b) water quality assessment as “Partially Supporting (Impaired)” due to exceedance of the total and fecal coliform objectives. The beneficial uses that are affected by this impairment include water contact recreation and shellfish harvesting.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Ventura River Estuary	<b>Pollutants/Stressors</b>	Total and Fecal Coliform
<b>Hydrologic Unit</b>	402.10	<b>Source(s)</b>	Point Sources; Nonpoint Sources; Natural Sources
<b>Total Waterbody Size</b>		<b>TMDL Priority</b>	low
<b>Size Affected</b>	0.35 miles	<b>TMDL Start Date (Mo/Yr)</b>	2012
<b>Extent of Impairment</b>	Estuary	<b>TMDL End Date (Mo/Yr)</b>	2014

**Watershed Characteristics**

The Ventura River and its tributaries drain a coastal watershed in western Ventura County. The watershed covers a fan-shaped area of 235 square miles, which is situated within the western Transverse Ranges (the only major east-west mountain ranges in the continental U.S.). From the upper slopes of the Transverse Ranges, the surface water system in the Ventura River watershed generally flows in a southerly direction to an estuary, located at the mouth of the Ventura River. Groundwater basins composed of alluvial aquifers deposited along the surface water system, are highly interconnected with the surface water system and are quickly recharged or depleted, according to surface flow conditions. Topography in the watershed is rugged and as a result, the surface waters that drain the watershed have very steep gradients, ranging from 40 feet per mile at the mouth to 150 feet per mile at the headwaters.

Precipitation varies widely in the watershed. Most occurs as rainfall during just a few storms, between November and March. Summer and fall months are typically dry. Although snow occurs at higher elevations, melting snowpack does not sustain significant runoff in warmer months. The erratic weather pattern, coupled with the steep gradients throughout most of the watershed, result in high flow velocities with most runoff reaching the ocean.

**Water Quality Objectives Not Attained**

Ocean Plan total coliform limit of 1000/100ml exceeded with a frequency greater than 20%.

**Water Contact Recreation**

Basin Plan fecal coliform limit of 400/100 ml exceeded with a frequency greater than 10%.

“In waters designated for water contact recreation (REC-1), the fecal coliform concentration shall not ... nor shall more than 10 percent of total samples during any 30-day period exceed 400/100 ml.”

**Shellfish Harvesting**

“In all waters where shellfish can be harvested for human consumption (SHELL), the median total coliform concentration throughout the water column for any 30-day period shall not exceed 70/100 ml, nor shall more than ten percent of the samples collected during any 30-day period exceed 230/100 ml for a five-tube decimal dilution test or 330/100 ml when a three-tube decimal dilution test is used.”

**Beneficial Uses Affected**

Water Contact Recreation

Shellfish Harvesting

**Data Assessment**

**Table 2. Summary of Total & Fecal Coliform Data for the Ventura River Estuary**

	<b>Total Coliform</b>	<b>Fecal Coliform</b>
Dates of Sampling	1/21/98-7/26/00	1/21/98-7/26/00
Number of Samples (n)	37	37
Minimum Data Value	90	7
Maximum Data Value	24192	1722
Median Data Value	2200	153
Arithmetic Mean Value	6503	335
Standard Deviation	8894	475
Percent above Objective	65% based on 1000/100 ml 86% based on 230/100 ml 100% based on 70/100 ml	16% exceed 400/100ml objective

**Potential Sources**

One large land use within the Ventura River watershed is stables and horse property. Without BMPs implemented to contain horse feces from entering the river, this land use is a potential source.

**References**

Basin Plan (1994)

Watershed Management Initiative Chapter (2000)

California Regional Water Quality Control Board, Los Angeles Region

**Ventura River Watershed – Canada Larga  
Fecal Coliform**

**Summary of Proposed Action**

Canada Larga, a tributary to the Ventura River, whose confluence is in Reach 2, is proposed to be listed in the 2002 305(b) water quality assessment as “Partially Supporting (Impaired)” due to greater than 10 percent exceedance of the fecal coliform objective. The beneficial use that is affected by this impairment is water contact recreation.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Ventura River	<b>Pollutants/Stressors</b>	Fecal Coliform
<b>Hydrologic Unit</b>	402.10	<b>Source(s)</b>	Unknown
<b>Total Waterbody Size</b>		<b>TMDL Priority</b>	Low
<b>Size Affected</b>	8.01 miles	<b>TMDL Start Date (Mo/Yr)</b>	2012
<b>Extent of Impairment</b>	Entire reach of Canada Larga, a tributary to the Ventura River in Reach 2	<b>TMDL End Date (Mo/Yr)</b>	2014

**Watershed Characteristics**

The Ventura River and its tributaries drain a coastal watershed in western Ventura County. The watershed covers a fan-shaped area of 235 square miles, which is situated within the western Transverse Ranges (the only major east-west mountain ranges in the continental U.S.). From the upper slopes of the Transverse Ranges, the surface water system in the Ventura River watershed generally flows in a southerly direction to an estuary, located at the mouth of the Ventura River. Groundwater basins composed of alluvial aquifers deposited along the surface water system, are highly interconnected with the surface water system and are quickly recharged or depleted, according to surface flow conditions. Topography in the watershed is rugged and as a result, the surface waters that drain the watershed have very steep gradients, ranging from 40 feet per mile at the mouth to 150 feet per mile at the headwaters.

Precipitation varies widely in the watershed. Most occurs as rainfall during just a few storms, between November and March. Summer and fall months are typically dry. Although snow occurs at higher elevations, melting snowpack does not sustain significant runoff in warmer months. The erratic weather pattern, coupled with the steep gradients throughout most of the watershed, result in high flow velocities with most runoff reaching the ocean.

**Water Quality Objectives Not Attained**

**Water Contact Recreation**

Basin Plan fecal coliform limit of 400/100 ml exceeded with a frequency greater than 10%.

“In waters designated for water contact recreation (REC-1), the fecal coliform concentration shall not ... nor shall more than 10 percent of total samples during any 30-day period exceed 400/100 ml.”

**Beneficial Uses Affected**

Water contact recreation

**Data Assessment**

**Table 2. Summary of Fecal Coliform and E. coli Data for Canada Larga, a tributary to the Ventura River**

	<b>Fecal Coliform</b>	<b>E. coli</b>	<b>Combined</b>
Dates of Sampling	10/28/99-6/21/00	1/20/01-6/22/01	10/28/99-6/22/01
Number of Samples (n)	9	10	19
Minimum Data Value	2	74	2
Maximum Data Value	900	1860	1860
Median Data Value	80	334.5	201
Arithmetic Mean Value	187	453.3	N/a
Standard Deviation	285.2	507.2	N/a
Percent above Objective	11%	30% (see note below)	21.05%

Note: E. coli is a subset of fecal coliform and is compared to the fecal coliform objective of 400/100 ml.

**Potential Sources**

Horse stables, land use, cattle, wildlife

**References**

Basin Plan (1994)

Watershed Management Initiative Chapter (2000)

California Regional Water Quality Control Board, Los Angeles Region

**Ventura River Watershed – Canada Larga  
Dissolved Oxygen**

**Summary of Proposed Action**

Canada Larga, a tributary to the Ventura River, whose confluence is in Reach 2, is proposed to be listed in the 2002 305(b) water quality assessment as “Partially Supporting (Impaired)” due to greater than 10 percent exceedance of the instantaneous dissolved oxygen objective. The beneficial uses that are affected by this impairment relate to aquatic life and include warm freshwater habitat, coldwater habitat, wildlife habitat, spawning, reproduction and/or early development, and migration of aquatic organisms.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Ventura River	<b>Pollutants/Stressors</b>	Low Dissolved Oxygen
<b>Hydrologic Unit</b>	402.10	<b>Source(s)</b>	Unknown
<b>Total Waterbody Size</b>		<b>TMDL Priority</b>	TMDL Analytical Unit 88
<b>Size Affected</b>	8.01 miles	<b>TMDL Start Date (Mo/Yr)</b>	2003
<b>Extent of Impairment</b>	Entire reach of Canada Larga, a tributary to the Ventura River in Reach 2	<b>TMDL End Date (Mo/Yr)</b>	2005

**Watershed Characteristics**

The Ventura River and its tributaries drain a coastal watershed in western Ventura County. The watershed covers a fan-shaped area of 235 square miles, which is situated within the western Transverse Ranges (the only major east-west mountain ranges in the continental U.S.). From the upper slopes of the Transverse Ranges, the surface water system in the Ventura River watershed generally flows in a southerly direction to an estuary, located at the mouth of the Ventura River. Groundwater basins composed of alluvial aquifers deposited along the surface water system, are highly interconnected with the surface water system and are quickly recharged or depleted, according to surface flow conditions. Topography in the watershed is rugged and as a result, the surface waters that drain the watershed have very steep gradients, ranging from 40 feet per mile at the mouth to 150 feet per mile at the headwaters.

Precipitation varies widely in the watershed. Most occurs as rainfall during just a few storms, between November and March. Summer and fall months are typically dry. Although snow occurs at higher elevations, melting snowpack does not sustain significant runoff in warmer months. The erratic weather pattern, coupled with the steep gradients throughout most of the watershed, result in high flow velocities with most runoff reaching the ocean.

**Water Quality Objectives Not Attained**

The Basin Plan states, “At a minimum (see specifics below), the **mean** annual dissolved oxygen concentration of **all** waters shall be greater than 7 mg/L, and no single determination shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations.”

**Beneficial Uses Affected**

warm freshwater habitat  
coldwater habitat  
wildlife habitat  
spawning, reproduction, and/or early development  
migration of aquatic organisms

**Data Assessment**

**Table 2. Summary of Dissolved Oxygen Data for Canada Larga, a tributary to the Ventura River**

	<b>Dissolved Oxygen (mg/L)</b>
Dates of Sampling	6/28/99-6/22/01
Number of Samples (n)	21
Minimum Data Value	2.4
Maximum Data Value	13.33
Median Data Value	
Arithmetic Mean Value	9.26
Standard Deviation	3.41
Percent below Objective	23.8 % of the data are below the minimum objective of 5 mg/L

**Potential Sources**

Unknown – may be high BOD due to exceedances of fecal coliform objective.

**References**

Basin Plan (1994)  
Watershed Management Initiative Chapter (2000)

California Regional Water Quality Control Board, Los Angeles Region

**Ventura River Watershed – San Antonio Creek  
Total Nitrogen**

**Summary of Proposed Action**

San Antonio Creek of the Ventura River, a tributary to Reach 4 of the Ventura River, is proposed to be listed in the 2002 305(b) water quality assessment as “Partially Supporting (Impaired)” due to greater than 10 percent exceedance of the nitrogen objective listed in Table 3-8 of the Basin Plan.

**Table 1. 303(d) Listing/TMDL Information**

<b>Waterbody Name</b>	Ventura River	<b>Pollutants/Stressors</b>	Total Nitrogen
<b>Hydrologic Unit</b>	402.20 and 402.32	<b>Source(s)</b>	Unknown
<b>Total Waterbody Size</b>		<b>TMDL Priority</b>	TMDL Analytical Unit 88
<b>Size Affected</b>	14.44 miles	<b>TMDL Start Date (Mo/Yr)</b>	2003
<b>Extent of Impairment</b>	San Antonio Creek	<b>TMDL End Date (Mo/Yr)</b>	2005

**Watershed Characteristics**

The Ventura River and its tributaries drain a coastal watershed in western Ventura County. The watershed covers a fan-shaped area of 235 square miles, which is situated within the western Transverse Ranges (the only major east-west mountain ranges in the continental U.S.). From the upper slopes of the Transverse Ranges, the surface water system in the Ventura River watershed generally flows in a southerly direction to an estuary, located at the mouth of the Ventura River. Groundwater basins composed of alluvial aquifers deposited along the surface water system, are highly interconnected with the surface water system and are quickly recharged or depleted, according to surface flow conditions. Topography in the watershed is rugged and as a result, the surface waters that drain the watershed have very steep gradients, ranging from 40 feet per mile at the mouth to 150 feet per mile at the headwaters.

Precipitation varies widely in the watershed. Most occurs as rainfall during just a few storms, between November and March. Summer and fall months are typically dry. Although snow occurs at higher elevations, melting snowpack does not sustain significant runoff in warmer months. The erratic weather pattern, coupled with the steep gradients throughout most of the watershed, result in high flow velocities with most runoff reaching the ocean.

**Water Quality Objectives Not Attained**

Table 3-8 of the Basin Plan, located on page 3-12, states that the water quality objective for nitrogen for Reach 3 of the Ventura River is 5 mg/L.

**Beneficial Uses Affected**

N/A (objective is specific to waterbody)

## Data Assessment

**Table 2. Summary of Total Nitrogen Data for San Antonio Creek, a tributary to Reach 4 of the Ventura River**

	<b>Nitrogen (mg/L)</b>
Dates of Sampling	1/21/98-5/24/00
Number of Samples (n)	23
Minimum Data Value	0.06
Maximum Data Value	14.5
Median Data Value	
Arithmetic Mean Value	3.45
Standard Deviation	3.4
Percent above Objective	17.4%

## Potential Sources

Unknown.

## References

Basin Plan (1994)

Watershed Management Initiative Chapter (2000)