

February 15, 2013

**Summary of UAA Greenville-Banning Channel as described in the January 12, 2012 Staff Report (Section 5.6.4. [UAA Analysis Greenville-Banning Channel](#)) and with references from [CDM UAA Technical Report for Greenville-Banning Channel](#)**

[Note: The Regional Board staff report UAA sections utilize, in part, technical information presented in the CDM UAA technical report for each of the UAA waters. To the extent feasible, the technical information in the CDM reports was summarized/reiterated in the Regional Board staff reports to minimize the need for readers to review both reports. However, the CDM reports include additional photographs and figures that were not included in the Regional Board staff reports because of file size considerations. These additional photographs/figures are referenced as needed in the Regional Board staff reports, and in the summary below.

To avoid confusion, please note further that in some cases, the reach designations differ slightly between the Regional Board reports and CDM's reports. (Regional Board staff recommended slight revisions of CDM's approach, which was initiated first, based on review of applicable data and information.) References in the summary below to figures in the CDM reports as applicable to specific reaches are based on the Regional Board's reach designation scheme.]

**Summary of UAA Greenville-Banning Channel (Continued)**

Greenville-Banning Channel	REC1	REC2	40 CFR 131.10(g) Factors	
			131.10(g)(2) Low Flow Hydrologic Modifications	131.10(g)(4)
Tidal Prism	u	X	At high tides several feet deep at confluence with Santa Ana River. At low tides dry at upstream inflatable dam. At high tide on May 24, 2011, 1.5 ft. deep at inflatable dam. RB staff observation.	Concrete vertical wall channel, 60 ft. bottom width, 1.2 miles in length.
Reach 1	u	u	Immediately upstream of inflatable dam when it is in operation, water pools up to about 1.5 ft deep. Most of Reach 1 water levels are < 1 ft. At upstream areas waters sheet flows across bottom. RB staff observation.	Concrete vertical wall channel for 2 miles. The upper 0.20 mile section is concrete with steep (> 45° trapezoidal) walls.
<b>Representative Photographs</b>				
Tidal Prism	See Figures GB-3, GB-4, GB-5 in UAA Analysis GB See Figures 2-6, 2-7 in the CDM UAA Technical Report GB			
Reach 1	See Figures GB-6, GB-7, GB-10, and GB-11 in UAA Analysis GB See Figure 2-8, of the CDM UAA Technical Report GB			

- u REC1 and/or REC2 are not attainable uses as determined by UAA.
- X Existing or Potential Beneficial Use

**Summary of UAA Greenville-Banning Channel (Continued)**

**Nature of Flows**

(see Section 5.6.4.4 “Flow Conditions and Water Levels”)

<b>Tidal Prism</b>	<b>Tidal flows from the Santa Ana River Tidal Prism dominate the Reach. Water levels deeper at confluence with the Santa Ana River to ankle depth or dry at upstream inflatable dam, the upstream terminus of the tidal prism.</b>
<b>Reach 1</b>	<b>Low flows consist of groundwater and urban nuisance flows. No POTW flows.</b>

**Water Quality Conditions**

(See Section 5.6.4. UAA Analysis GB: 5.6.4.7 “Water Quality Conditions”; Tables GB-3, 4, 5, 6, 7 and Appendix 1

**Water quality data show that there has been no consistent compliance with REC1 objectives**

**Evidence of Use Investigations**

(See Section 5.6.4. UAA Analysis GB: 5.6.4.8 “Recreation Use Surveys”)

1. **Field Observation:**
  - a) **SWQSTF member surveys: July/August 2006 and July/August 2011.**
    - i. **No REC1 or 2 activities observed.**
  - b) **Channel maintenance and Park Ranger personnel communications**
    - i. **No REC 1 or 2 activities reported.**
  - c) **Weekly observations made in coordination with remote camera maintenance**
    - i. **No REC 1 or 2 activities reported. See below**
  
2. **Photographic Evidence: (Table below excerpted from Section 5.6.4. UAA Analysis GB)**

**Table GB-8**

<b>Survey Location<sup>+</sup></b>	<b>Start Date</b>	<b>End Date</b>	<b>Number of Images</b>
<b>Pedestrian Bridge</b>	<b>7/7/05</b>	<b>7/27/05</b>	<b>425</b>
<b>Adams Avenue Bridge</b>	<b>11/17/05</b>	<b>1/3//06</b>	<b>2,552</b>

**+ Both survey locations in Reach 1**

**Summary of UAA Greenville-Banning Channel (Continued)**

(Table below excerpted from Section 5.6.3 UAA Analysis GB)

<b>Table GB-9 Recreation Activity Recorded for Greenville-Banning Channel</b>					
<b>Location<sup>+</sup></b>	<b>Number of Individuals</b>			<b>Estimated Duration (min)</b>	<b>Types of Activities</b>
	<b>Total</b>	<b>Dry Season</b>	<b>Wet Season</b>		
Pedestrian Bridge	0	0	0	0	None
Adams Avenue Bridge	0	0	0	0	None

+ Both locations in Reach 1

**Conclusion: No photographic evidence of REC1 activity within the Greenville-Banning Channel**

**Control Measure Implementation**

- 1) **Established Regulatory Framework:**
  - a) **MS4 permit (and general statewide industrial/construction permits) for Orange County. Include:**
    - i) **Requirements to implement BMPs to assure that applicable standards in receiving waters are achieved.**
    - ii) **Requirements include investigations to identify/correction of illicit connections to the MS4 system (may be a pathogen/pathogen indicator source)**
- 2) **Diversion of low flows to sewer at inflatable rubber dam has been in operation for many years; has resulted in improvement in ocean beach water quality downstream. In addition, low flows will be diverted to a newly constructed wetland in the Talbert Nature Reserve to the east of the diversion dam area.**

**Other Factors Considered**

- 1) **Access and Safety (Section 5.6.4 UAA Analysis GB, 5.6.4.5)**
  - a) **Tidal Prism: Vertical walls and all fenced (six-foot), maintenance access limited and locked.**
    - i) **Access from Santa Ana River to Greenville-Banning channel difficult (fencing, concrete side-slopes).**
    - ii) **Proximity of ocean beaches (1.3 mi.) makes REC1 activity in Greenville-Banning channel highly unlikely; no photographic or field observations**

## **Summary of UAA Greenville-Banning Channel (Continued)**

of such activity. People were observed on the bicycle trail adjacent to the channel (see Figure GB-5).

- b) Reach 1: Vertical walls (except 0.20 mile steep trapezoidal walls, all fenced.
  - i) Channel considered unsafe for public access.

### **2) Adjacent Land Use (including proximity to other recreational sites) Section 5.6.4 UAA Analysis GB, 5.6.4.6**

- a) Tidal Prism: Santa Ana River (SAR) to the west, Talbert Nature Preserve to the East.
- b) Reach 1: Talbert Nature Preserve, golf course, and residential in most upstream section to the East. Santa Ana River to West. Back of residences to channel and separate by walls/fencing (Figure GB-12).
- c) Bicycle trail along most of both tidal prism and Reach 1, separated from channel by fence.

In addition to the results of field and photographic surveys, adjacent land use, channel morphology, accessibility and fencing or other barriers to viewing the channel (such as vegetative cover) were considered in recommendations regarding REC2 designations. Based on this evidence, designation of REC2 for Reach 1 was not found appropriate. While, in part, it runs through a residential area, it is separated from the backs of those residences by walls/fencing, limiting access and visibility. Channel morphology severely limits wildlife habitat and viewing opportunities. Given that a bicycle trail runs along the tidal prism, REC2 designation for the tidal prism is appropriate.

## Summary of UAA Analysis Greenville-Banning Channel (Continued)



Figure 2-6. Terminus of Greenville Banning Channel tidal prism (right); confluence w/ Santa River (left) (CDM UAA Technical Report GB)

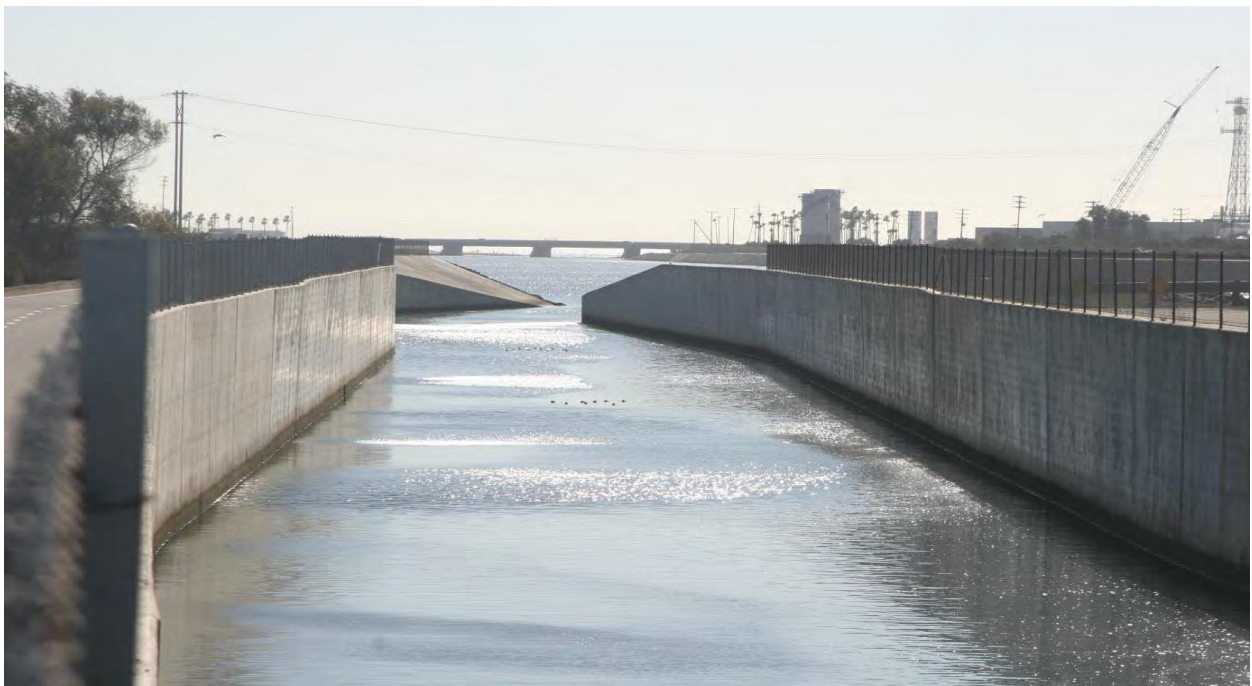


Figure GB-4. Tidal Prism Reach of the Greenville-Banning Channel Facing downstream. (UAA Analysis GB)

Summary of UAA Analysis Greenville-Banning Channel (Continued)



Figure GB-5. Tidal Prism of the Greenville-Banning Channel facing upstream. In Tidal Prism REC 2 use is attained, REC 1 use is not attainable. (UAA Analysis GB)



Figure GB-3. Rubber dam diversion at the Greenville-Banning Channel. The dam separates the Tidal Prism Reach from Reach 1. (UAA Analysis GB)

Summary of UAA Analysis Greenville-Banning Channel (Continued)



Figure GB-10. Reach 1, Photo REC Survey location, just upstream of inflatable dam. The water behind the dam can be about 1.5 ft. deep. (UAA Analysis GB)



Figure GB-7. Reach 1, facing upstream. REC1 and REC2 uses are not attainable in Reach 1. (UAA Analysis GB)



## Summary of UAA Analysis Greenville-Banning Channel (Continued)



Figures 2-9. Reach .1 Facing downstream, shows transition from vertical to trapezoidal channel. (CDM UAA Technical Report GB)



Figure GB-12. Reach 1. Facing upstream, the trapezoidal section is 0.20 mile in length.