



# COUNTY OF EL DORADO

## Environmental Management Department

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*River Management Program*

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# El Dorado County

## River Management Plan

### 2011 Annual Report

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**El Dorado County River Management Plan  
2011 Annual Report**

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# El Dorado County River Management Plan 2011 Annual Report

## I. Introduction

Paragraph 7.2.2 of the River Management Plan (RMP) directs the County River Manager to compile RMP annual reports to provide evaluation and commentary on the County's whitewater recreation program. This is the tenth Annual Report since the adoption of the updated River Management Plan in November 2001.

### **Purpose**

The purpose of this Annual Report is to provide the Board of Supervisors, Planning Commission, River Management Advisory Committee (RMAC) and the public an opportunity to review the RMP and the County's performance in implementing the plan in 2011. The County River Program requests comments in the following areas:

- Evaluation of staff's performance in 2011 implementing the RMP.
- Identification of issues for attention during the 2011 season.
- Recommendations to modify plan implementation procedures.
- Recommendations to amend plan elements.
- Evaluation of plan elements that pertain to the carrying capacity system.

### **Report organization**

The report is organized into nine sections:

- The amount of whitewater recreation on the South Fork during 2011;
- A synopsis of how the RMP elements were implemented during 2011;
- An update on the Mitigation Monitoring Plan;
- River Use Trends;
- Water Quality Monitoring Plan;
- El Dorado County Sheriff's Department Boating Safety Unit Summary;
- River Trust Fund Budget Summary;
- RMAC comments on the whitewater program made at the conclusion of the 2011 season;
- Public comments made at the November 2011 RMAC meeting.

## II. 2011 River Use

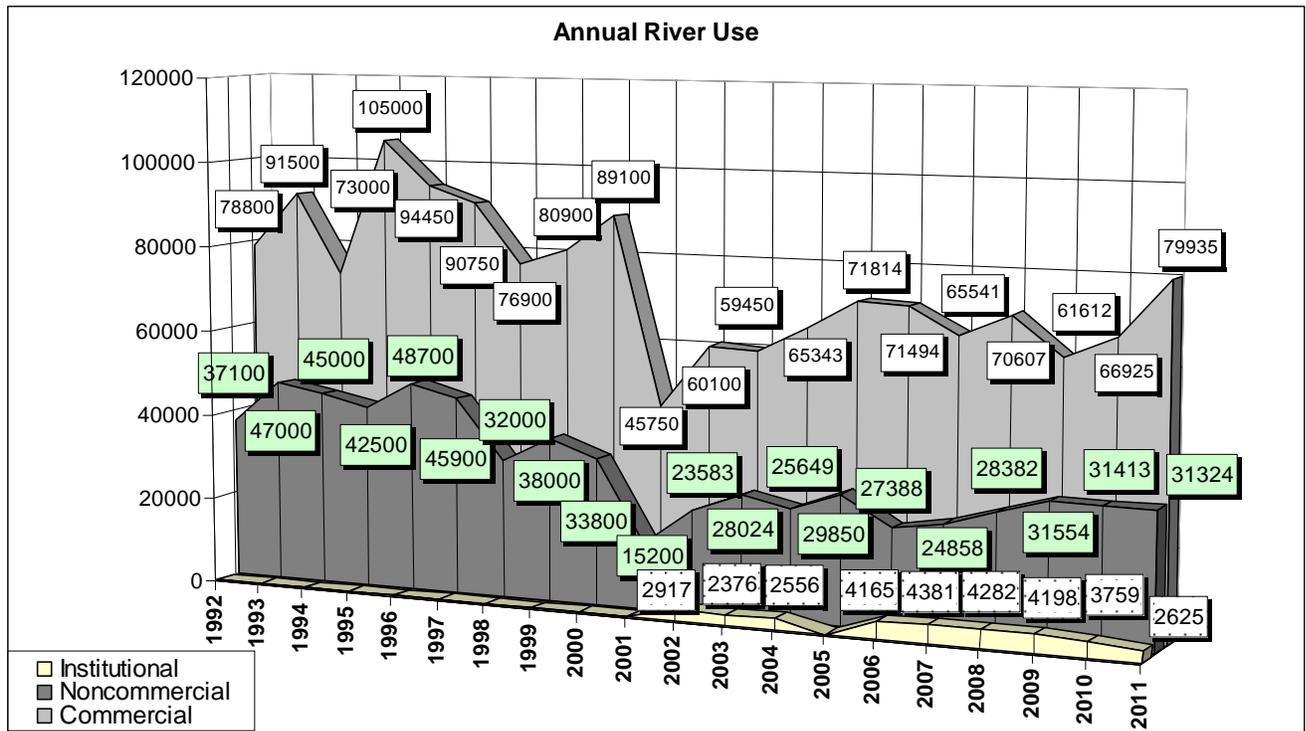
This section summarizes the amount of whitewater recreation for 2011 and provides information on river use trends in several categories:

- A. 1992-2011 annual river use;
- B. An assessment of river use in terms of the RMP's carrying capacity indicators; and
- C. Trends in weekend river use since the mid-1990s.

### A. Annual River Use

Figure 1 below displays information on the annual number of commercial and non-commercial boaters from 1992 through 2011.

- Commercial use numbers do not include paid guides, non-paying guests and guide trainees.
- Non-commercial use numbers from years 1992-2001 and 2005 include non-profit institutionally permitted organizations.
- Use numbers do not include private use between October-April, although there is private use almost everyday there are flows (Scheduled Releases) during this time period.
- 85% of the recorded use occurred between Memorial Day and Labor Day weekends in 2011.
- Use numbers do not reflect private use by boaters only floating the Coloma to Greenwood section which has utilization by beginning boaters, class 2 boaters and inner tubers (floaters).



B. Figure 1. Annual River Use 1992 - 2011 Carrying Capacity Indicators

The River Management Plan (RMP) established a carrying capacity (daily boater capacity) system with a dual focus. The system has two **indicators**, or ways the number of daily boaters are measured. For each indicator, there is a **standard or threshold**. If river use exceeds either

threshold twice in one season, the RMP requires the County to institute appropriate measures so that river use no longer exceeds the thresholds. This section provides a synopsis of the monitoring of the two indicators required by the RMP and its mitigation monitoring plan. Additional information on carrying capacity monitoring during 2011 can be found in Element 4- Monitoring and Reporting Programs on page 16. A detailed description of the carrying capacity system can be found in the RMP document in Section 5, *South Fork Carrying Capacity* (pgs. 5-3 and 5-4), and in Element 7, *Carrying Capacity Exceedance Actions and Implementation* (pgs 6-28 to 6-31).

### Total daily boaters

The first indicator, total daily boaters, is the RMP’s means for measuring cumulative impacts. The environmental analysis for the RMP concluded that if the number of total daily boaters exceeded the threshold of historic peak levels experienced in 1996, unacceptable impacts on the infrastructure could occur. Total daily boaters are the sum of all commercial and non-commercial boaters on one of two designated sections of the river in one day. This measure includes outfitter guides, trainees and non-paying guests in the commercial river use data.

Figure 2 displays the total daily boaters for the Chili Bar run on weekend days from Memorial Day to Labor Day in 2011. The total daily boater threshold on the Chili Bar run (Chili Bar to Coloma) is 2100 boaters, which is the maximum value on the figure’s y-axis.

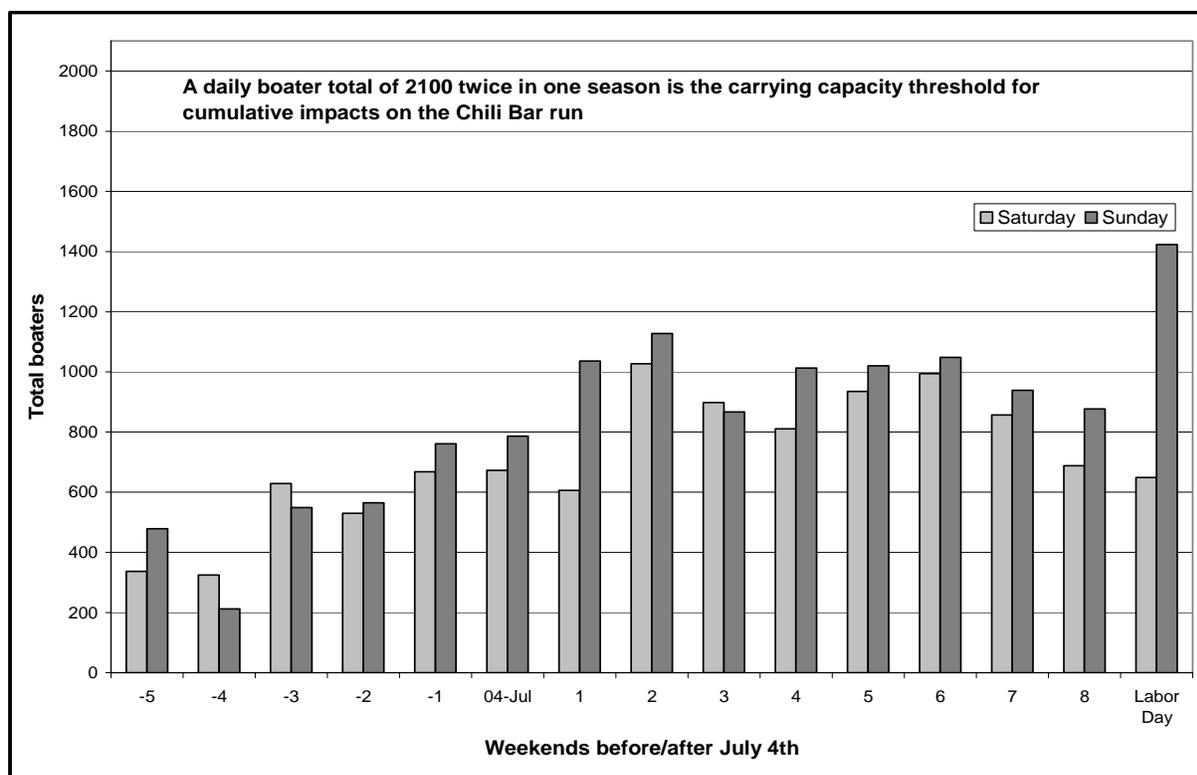


Figure 2. 2011 Daily Boater Totals - Chili Bar Run

Figure 3 displays the total daily boaters on the Gorge run during weekend days from Memorial Day to Labor Day in 2011. The total daily boater threshold on the Gorge run (Coloma to Salmon Falls) is 3200 boaters, which is the maximum value on the y-axis.

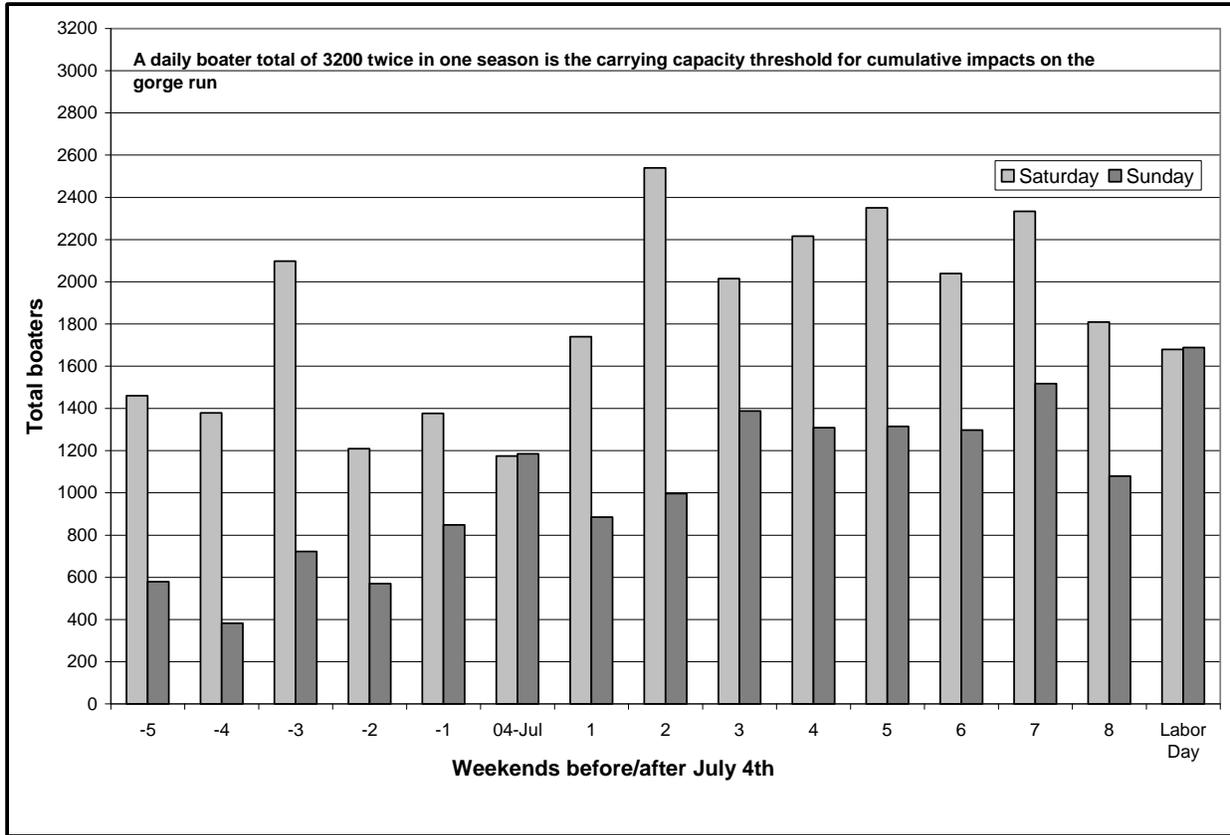


Figure 3. 2011 Daily Boater Totals - Gorge Run

Synopsis of 2011 monitoring for total daily boaters

- River use in 2011 on all weekend days was below the total daily boater thresholds on both runs.
- The County will not be required to implement any additional carrying capacity management actions for this indicator in 2012 because the thresholds on either run were not exceeded.

**Boat density**

The second indicator, boat density, is a safety measure designed to prevent boating safety hazards from arising due to boat congestion on weekends. Boat density is the total number of boats passing a prescribed point on the river in a two-hour period. The RMP planning analysis concluded that if the number of boats passing through several key rapids in a two-hour period exceeded 300, there may be potential impacts on boaters’ safety. If river use exceeds this threshold at one of these rapids more than twice in one season, a set of incremental management actions will be implemented with the objective of regaining those thresholds. There is a “low flow” exception to this indicator’s threshold which is discussed in the RMP’s Section 7.3.

County Parks had previously gathered data on boat density levels during the years 1995-1999. This monitoring effort showed: 1) boat density levels on the Gorge run on Saturdays had exceeded the plan’s eventual carrying capacity threshold during the late 1990s; 2) Boat density levels on the Chili Bar run had remained well below the plan’s carrying capacity threshold. That analysis and the results of monitoring during 2002 formed the basis for the decision to focus boat density monitoring on the Gorge run in 2011. Figure 4 displays the results of the monitoring on the Gorge which began

on the first weekend of scheduled releases which was not until July 23, 2011. Boat Counting occurred on the Chili Bar section during this same period. Boat counting below Marshall Gold State Park was done on July 4<sup>th</sup> 2010 showed levels well below the plan's carrying capacity and was not done in 2011. Previous years counting in the Coloma to Greenwood Creek section has indicated counts well below the carrying capacity threshold as well. Use in this section may be due to the new BLM parking lot at Greenwood Creek, it being classified as a Class II beginner section and the appeal to inner tubers may be increasing. Boat density details from peak days can be found at the end of Appendix B.

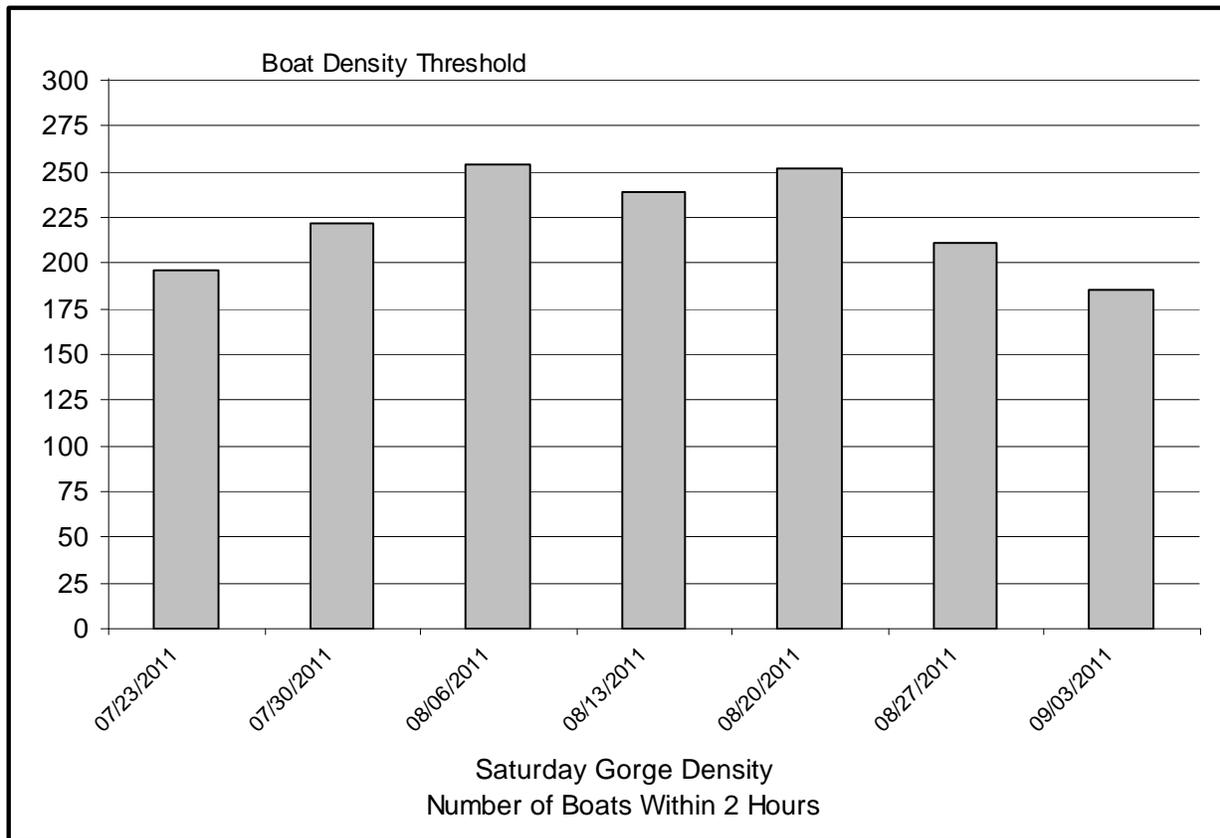


Figure 4. Boat Density Gorge Run in 2011

- Boat densities on the Gorge run did not exceed the carrying capacity indicator of 300 boats per two hours in 2011.
- Peak boat densities in 2011, which remained under 254 boats in two hours, were lower than the peak densities during 2010 (approximately 298).
- Boat densities on the Chili Bar run on Sundays were well below the 300 boat threshold and are not represented with a chart in this summary. The largest number of boats observed within two hours on the Chili Bar run was 130 on Sunday, August 14, 2011.

### C. Trends in River Use on Weekend Days

Figures 5 and 6 compare the current numbers of total daily boaters with river use in 1996. Record high numbers of total daily boaters were recorded in 1996, and those records eventually established the thresholds for the carrying capacity indicator. The top values on the y-axis in figures 5 and 6 are set at the threshold for total daily boaters on the Gorge and Chili Bar Runs.

#### Saturdays - Gorge Run:

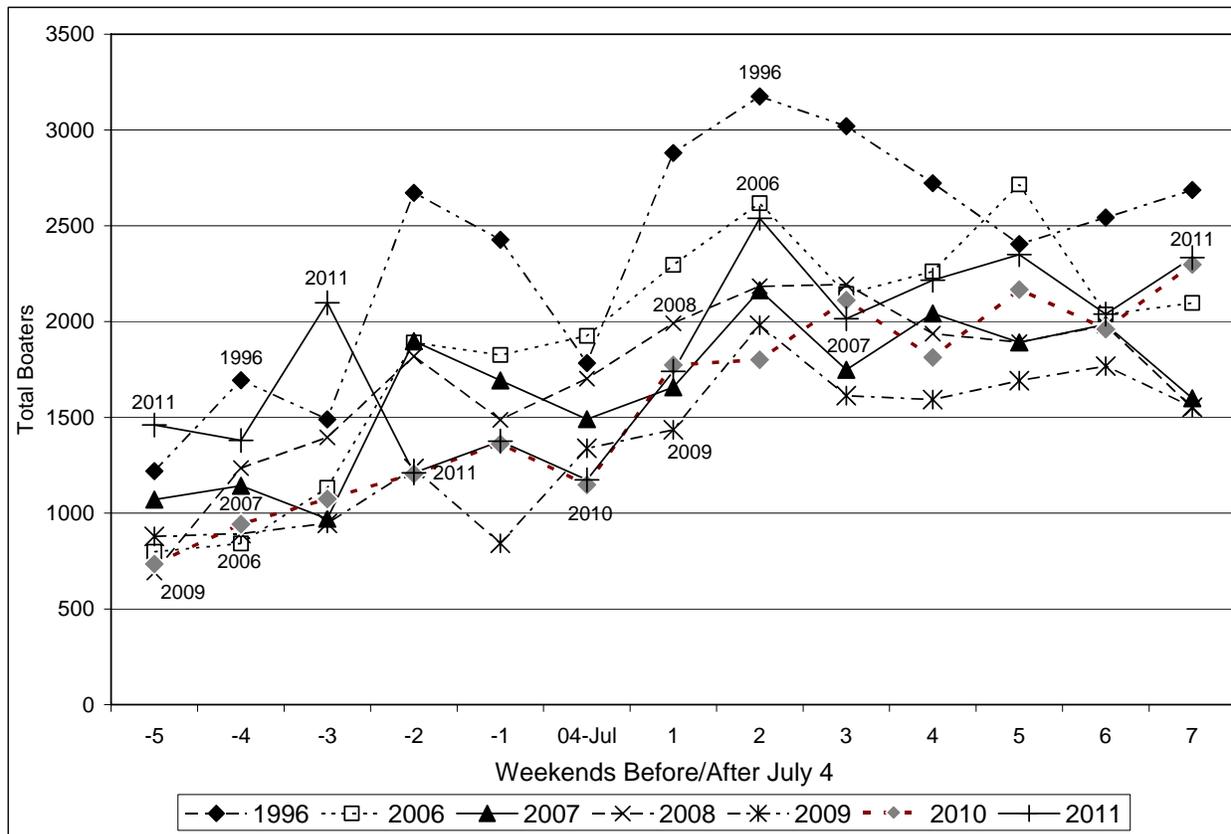


Figure 5. Gorge Run on Saturdays - Trends in Total Daily Boaters

- In 2011, the average number of boaters on the Gorge run was 20% lower than in 1996.
- In 2010, the average number of boaters on the Gorge run was 33% lower than in 1996.
- In 2009, the average number of boaters on the Gorge run was 40% lower than in 1996.
- In 2008, the average number of boaters on the Gorge run was 28% lower than in 1996.
- In 2007, the average number of boaters on the Gorge run was 30% lower than in 1996
- In 2006, the average number of boaters on the Gorge run was 19% lower than in 1996
- The daily boater total of 3175 in 1996 is the historic peak number of boaters for the Gorge run.

Sundays- Chili Bar run:

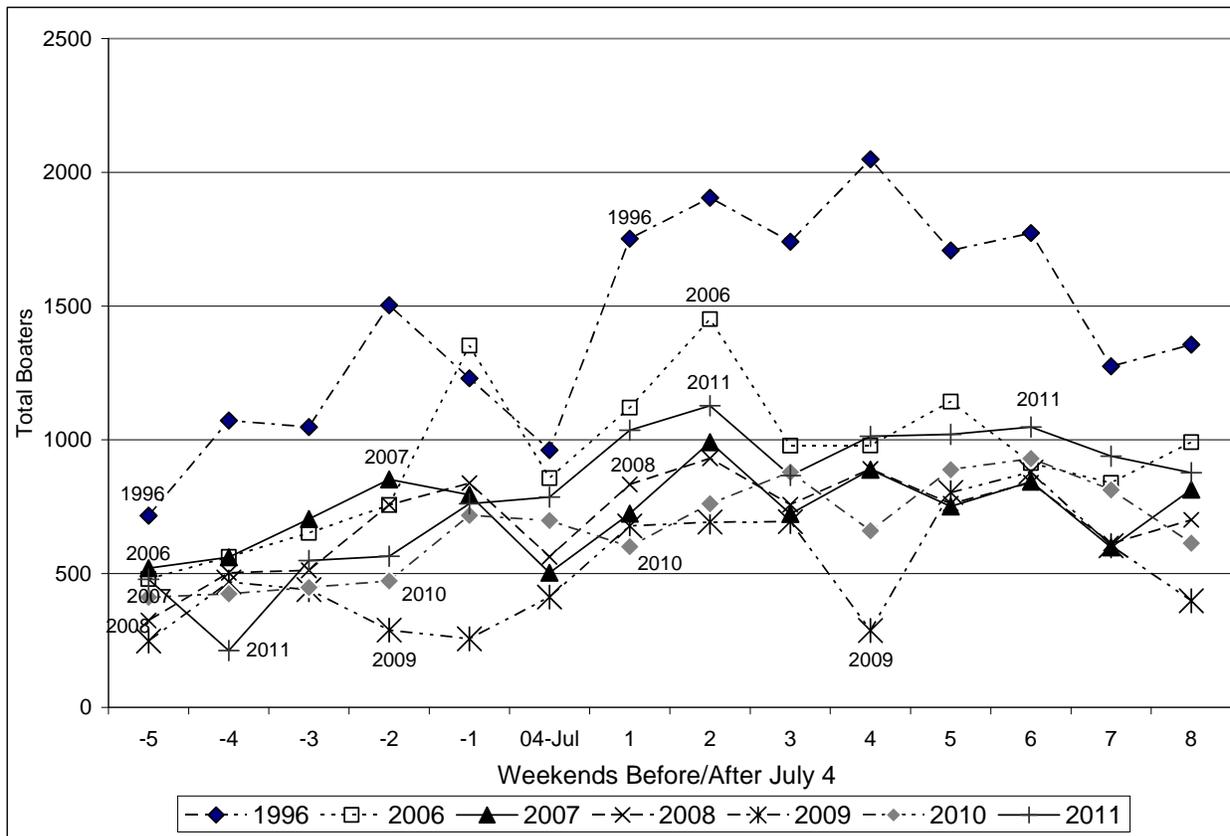


Figure 6. Chili Bar Run on Sundays - Trends in Total Daily Boaters

- In 2011, the average number of boaters on the Chili Bar run was 44% lower than in 1996.
- In 2010, the average number of boaters on the Chili Bar run was 52% lower than in 1996.
- In 2009, the average number of boaters on the Chili Bar run was 66% lower than in 1996.
- In 2008, the average number of boaters on the Chili Bar run was 52% lower than in 1996.
- In 2007, the average number of boaters on the Chili Bar run was 49% lower than in 1996
- In 2006, the average number of boaters on the Chili Bar run was 35% lower than in 1996
- The daily boater total of 2,049 in 1996 is the historic peak number of boaters for the Gorge run.

See **Appendix B** for additional information on two trends in commercial and noncommercial river use on weekends. Tracking the following trends over time will help County Parks to determine whether management actions will be needed to be taken in response to carrying capacity threshold's exceedances as defined in the RMP:

1. Trends in the average number of commercial and noncommercial boaters on weekends;
2. Trends in the choice of runs by commercial and noncommercial boaters; the trends are tracked for Saturdays and Sundays.

### III. Implementation of River Management Plan Elements

This section follows the organization of the Elements found in Section 6 of the RMP document. The County River Program has outlined the progress made in 2011 towards full implementation of each element.

The reader may want to refer to the RMP document to understand the context of the remarks on each element below. The numbered bullets correspond with the numbered bullets in the 2001 River Management Plan.

The descriptions fall into four categories:

1. Elements that have been implemented in 2011;
2. Elements that include a trigger or threshold (for example construction-related or carrying capacity-related) to require implementation and the trigger or threshold was not reached in 2011;
3. Element that will require coordination with the Bureau of Land Management (BLM). BLM representatives have indicated their preference to address coordination issues through a Memorandum of Understanding.
4. Elements that staff believes were not adequately implemented in 2011 and which should be more closely addressed in 2012.

#### Element 1 – Educational Programs

##### 1.1 Newsletter

- A quarterly newsletter was printed in the winter of 2010. These publications can be found on the County Parks website.

##### 1.2 Signage

- Signage at river access points was consistent with signage during 2010. Updates to the Land Status Map and minimum age requirement for life vests needs to be updated. Updating will be done as funds become available.

##### 1.2.3 Middle-run signage

- Maps should be revised to reflect the opening of a new parking lot on BLM public lands at Greenwood Creek. Updates will be completed once signs are replaced.

##### 1.3 Kiosks

- Kiosks were updated at Camp Lotus and Henningsen Lotus Park in 2004. The kiosks have three panels containing information on boating safety, public access to the South Fork and boater registration requirements.
- The new kiosk for Chili Bar was installed during the spring of 2005.
- A Kiosk was installed at the Greenwood Creek BLM parking area in the spring of 2008.

- All kiosks have river maps, private boater tags and large group registration forms available.
- Drop boxes for large group registration forms and visitor comments were added in 2008.
- Added educational graphic panels on swimming in river hydraulics, hypothermia prevention, proper river apparel and rope rescue were added to kiosk at Henningsen Lotus Park in the spring of 2008.
- An additional goal should be considered to be added to element 1.3 which would be to add kiosks at private riverside campgrounds which are private put ins and take out locations for river users to further educate the public about river safety and boating regulations.

#### 1.4 Flow Phone

In 2011 the County Parks staff continued to manually update the flow phone system which has the release schedule for the year as designated by SMUD and PG&E. That number is (530) 621-6616.

#### 1.5 County Internet

The County Rivers website [www.edcgov.us/Rivers/](http://www.edcgov.us/Rivers/) provides current river information through links to the American River web page [www.theamericanriver.com](http://www.theamericanriver.com), [www.DreamFlows.com](http://www.DreamFlows.com), [www.Coloma.com](http://www.Coloma.com) and [www.c-w-r.com](http://www.c-w-r.com). Information concerning RMAC, approved outfitter services, and shuttle services are updated [how often?].

#### 1.6 Resource/Habitat Education

- Annual Headwaters Institute guide workshop which includes segments with resource and habitat focus was not held in 2011.

#### 1.7 Quiet Zone education: see Element 2.4

#### 1.8 Toilet Location Education and 1.9, Public Access Education

- The boater registration system, river maps, brochures, kiosks, and boater education efforts at river access sites were implemented in 2002. Waterproof River maps were updated in 2011 with GPS coordinates, land status changes and the location of the new BLM parking area at Greenwood Creek.

#### 1.10 Commercial Guide Education and 1.11 Guide Workshops

- The annual South Fork guide meeting was held in May 2011.
- County Parks held additional meetings with individual outfitter's guides to provide information on: swiftwater rescue training standards; the carrying-capacity system; etiquette and safety measures outfitters should take to prevent river use from exceeding the carrying capacity threshold for boat density.
- Starting in 2008 County Parks has been collecting signed boating etiquette affirmations from all commercial guides.

## Element 2 – Safety Programs

### 2.1 River Safety Committee

- There was no activity by the committee in 2011. The Sheriff's Department formed the committee during the winter months of 2002, and held several organizational meetings. The committee is comprised of representatives from the Sheriff's boating safety unit, the El Dorado Fire Protection District, California State Parks – Auburn Whitewater Recreation Office, America River Paddling Club, a swiftwater rescue instructor, RMAC and County Parks. Reports on this committee are the responsibility of the Sheriff's Department.

### 2.2 Agency Safety and Rescue Training

- Sheriff's Boat Patrol
  - During the summer season of 2011 County Parks River Patrol coordinated with the Sheriff's Boating Safety Unit, BLM staff and California State Parks on river safety patrols.
- County Parks River Patrol
  - The fiscal year 2010/2011 river program budget did not include an allocation to train the lead river patroller as a swiftwater rescue instructor. River Patrol staff did not attend a swiftwater rescue recertification class in 2011.
- American River Paddling Club
  - This volunteer club was formed several years ago by a group of local expert paddlers to assist the County's river patrols during periods of high water or as a resource to aid a response to river emergencies. There was no club activity this season.

### 2.3 Boating Safety

- Sheriff's Department and County Parks provided boating safety education through the guide meetings described above, workshops with user groups, and the activities in Element 2.4.

### 2.4 County River Program Staff Activities

The river patrol was staffed by three people in 2011, the river recreation supervisor and two seasonal river patrol staff. The river patrol's daily activities typically included: boater education at the river access points; river safety patrol; quiet zone patrol; and river use monitoring. The emphasis among these four activities varied with the season, day of week and river section a patroller was working. On Saturdays, two patrollers usually worked on the gorge run, combining aspects from each of these activities during the work day. One patrol staff monitored river use at Chili Bar and performed a patrol on the Chili Bar run. On Sundays, two patrollers usually worked on the Chili Bar section, while one person patrolled and monitored river use on the gorge section. They also helped maintain the 3 BLM composting toilets regularly.

The components of the river patrol activities are outlined below:

Provide boater education for non-commercial boaters:

- Boating safety, boater responsibilities, and river flow information provided to boaters at river accesses and on river patrols.
- Implement private boater registration system.
- Implement large group and institutional group registration system.

River safety patrol:

- Aid boaters (i.e. wrapped boats and swimmers) on weekends at key rapids while monitoring river use.
- Provide a safety/sweep function by running the Class III sections late in the day.
- Annually place a backboard, c-collar and head stabilizers below Meat Grinder, Satan's Cesspool and Fowlers Rock rapids for the regular boating season.

Quiet Zone patrol:

- A dual education/enforcement on-river patrol through the Coloma to Greenwood section.
- Emphasis on controlling quiet zone noise, use of public lands, and use of lifejackets by all boaters and tubers.
- Provide safety information and aid to people floating/boating on the class II section.

River use monitoring:

- Conduct monitoring on weekends for the carrying capacity system.
- Audit commercial river use.
- Track non-commercial river use levels.

2.5 Element 2.5 through 2.7 direct agency responsibilities.

### **Element 3 – Transportation programs**

#### 3.1 River Shuttle Service

- The River Store Inc. received an El Dorado County Air Quality Management District Grant to start up a boater and community shuttle service in 2008. They received \$22,000 from the County River Trust Fund as matching funds in 2008/2009 and 2009/2010. This shuttle service ran May through October in 2011 and provided river users an opportunity to reduce the need to drive more than one vehicle to the County for river trips and opportunity to not drive personal shuttles for river trips.
- There are two privately owned business that offer shuttle services on the river. River Transportation offers passenger shuttles for larger groups. North Fork Shuttle's services are primarily aimed at kayakers. County River Program listed these businesses on the County website.

### 3.2 Off-River Parking and Staging Area.

This element was not required in 2011. This element would be implemented if either:

1. Whitewater recreation use grows to a level that exceeds the total parking capacity of the South Fork's river access points. The RMP establishes the threshold of total daily boaters as a trigger for this element; or
2. Boating use at the County Park increases to a level that creates conflicts with other park uses that can not be effectively managed through other measures.

### 3.3 Illegal Parking

- A double-fine zone ordinance has not yet been developed for Board of Supervisors action.
- Complaints about parking by boaters in the turn out on Hwy 49 near North Beach river access at Marshall Gold Discovery State Park have been received.

### 3.4 Mt. Murphy Bridge Policy: no comments.

### 3.5 Traffic studies

The Mitigation Monitoring Plan requires a detailed traffic study if any of the following three RMP elements are implemented:

- There were applications for new Special Use Permits or revised Special Use Permits in 2011 that included public river access in the proposed project area.
- The "interim shuttle" parking area was developed;
- There were applications for additional public access to the middle run through river access facilities near Highway Rapid.

#### 2011 Traffic counts

The County Department of Transportation continued its annual monitoring of the traffic volumes on RMP area roads during the summer of 2011. Daily traffic volumes were monitored at the same locations that were analyzed in the plan's Environmental Impact Report (see Table 1) Figures 7 and 8 show traffic trends on these segments as well.

- Note that traffic counts at each location are over a one week period and as such can be influenced by unpredictable events (special events/construction/etc.).
- Note that there have been 13 houses built within the Bassi Rd. Area of Benefit since 1995-2009.
- Traffic volumes at the monitored locations remain within the Level of Service standards described in the EIR.
- The 2011 traffic counts support the 2010 traffic counts: both counts indicate an increase in midweek traffic levels on all road segments in the project area since the 1997 EIR analysis.
- On weekends, however, several road segments have had lower traffic volumes than in 1997 and others higher. Lower number of boaters on weekends in 2011 than in 1997

possibly contributed to lower traffic volumes but further investigation would be needed to evaluate the cause for lower volumes.

Because no trip generation estimates were developed for the RMP EIR it is difficult to ascribe the proportion of whitewater recreation-related use on these roadways. Since there are lower levels of river use in 2011 than in 1997, the causes for the increase in traffic levels does not appear to reside with whitewater recreation. Trip generation estimates may prove to be of importance if Level of Service thresholds are exceeded in the future, as the RMP “project” may be responsible for a proportion of the mitigation needed to bring project area roadways within Level of Service standards.

**Table 1. Daily traffic volumes on County roads in the project area**

Segment	1997* summer weekday average	2010 summer weekday average	2011 summer weekday average	1997 summer weekend traffic volumes	2010 summer weekend traffic volumes (avg. Sat + Sun)	2011 summer weekend traffic volumes (avg. Sat + Sun)	Traffic count dates
Bassi Road	800	1090	1542	1800	1514	2292	Aug. 2-8 2011 Aug. 4-8 2010
Cold Springs S of Gold Hill Rd	3000	3117	2968	2500	3000	2167	July 6-12 2011 July 9-15 2010
Lotus Rd, S of Thompson Hill	4800	5103	5224	4800	5375	5716	Aug 2-8 2011 Aug 4-10 2010
Marshall Rd near Hwy 49	3100	3495	3365	2900	2759	2841	Aug 2-8 2011 Aug 2-8 2010
Salmon Falls Rd North of river	1300	1673	No Count	1700	1883	No Count	Aug 2-8 2011 Aug 10-16 2010
Salmon Falls Rd South of river	1800	2707	2362	1900	No Count	2213	Aug 2-8 2011 Aug 10-16 2010

- Traffic volumes reported in the RMP’s EIR (1997 column) rounded data to the nearest 100

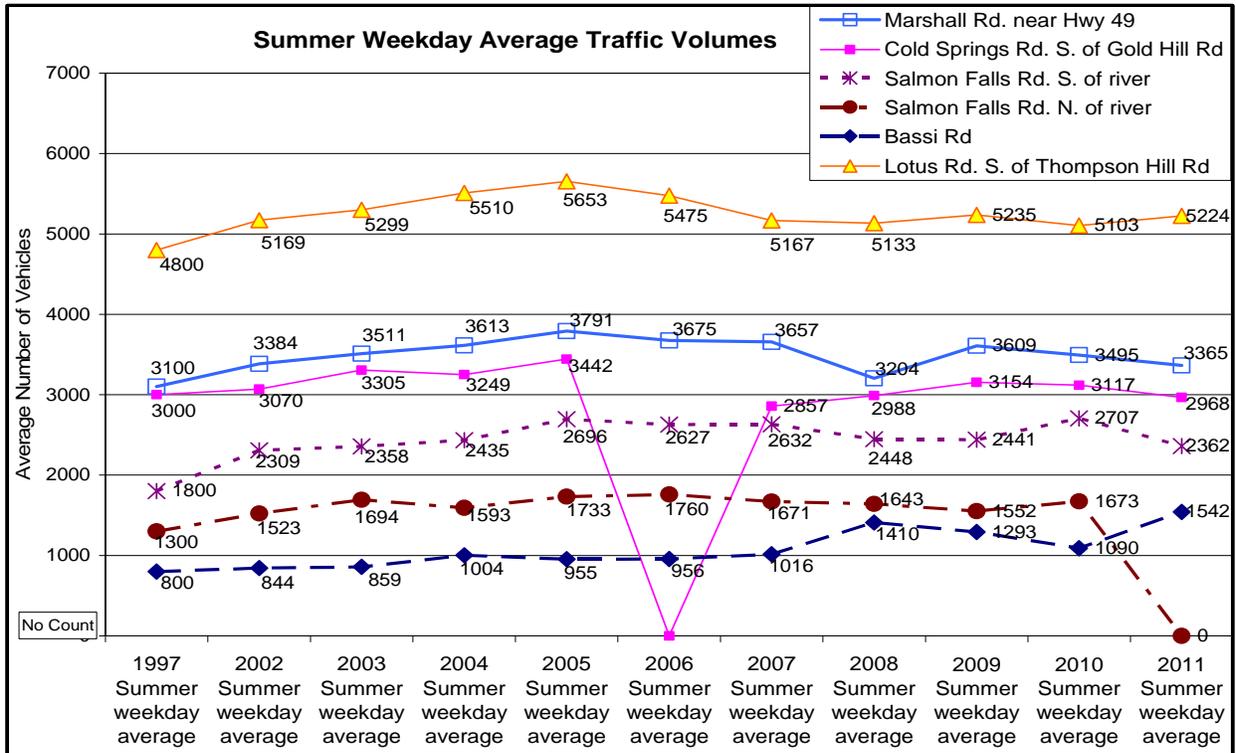


Figure 7. El Dorado County DOT Weekday Traffic Counts on Road Segments within the Project Area

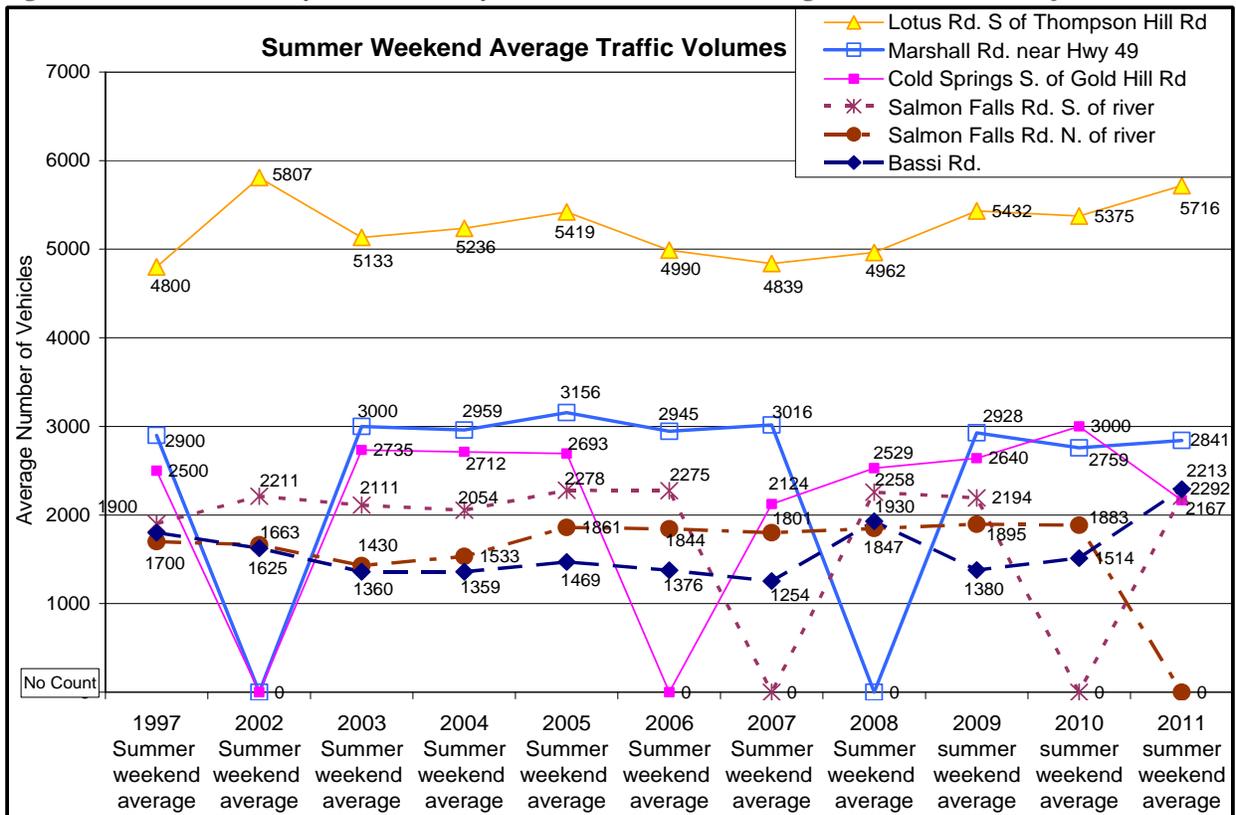


Figure 8. El Dorado County DOT weekend traffic counts on road segments within the project area.

Traffic volumes on California State Highways in the project area were obtained from the Caltrans Traffic and Vehicle Data Systems Unit website (see Table 2). The RMP EIR reported 1997 traffic volumes for mid-summer weekdays and mid-summer weekends. Current Caltrans data reports peak month average daily traffic volumes and average annual daily traffic volumes, so direct comparisons to the EIR volumes are not included in the table below. To allow general comparisons, the EIR reported the following 1997 weekend daily traffic volumes:

- 4600 on Route 49 north of the junction with RTE 153
- 5600 on Route 49 south of the junction with Lotus Road
- 2500 on Route 193 north of the junction with RTE 49

**Table 2. Caltrans 2010 Traffic Data for State Highways**

Count Location				South of count station			North of count station		
Route	County	Mile	Description	Peak Hr	Peak Month	AADT	Peak Hr	Peak Month	AADT
49	ED	22.87	COLOMA, JCT. RTE. 153 WEST	230	2750	2250	500	6500	5400
49	ED	24.48	MARSHALL GRADE ROAD (TO GEORGETOWN)	500	6500	5400	540	4100	3500
49	ED	28.19	HASTINGS CREEK BRIDGE	540	4100	3500	540	4100	3500
193	ED	26.95	JCT. RTE. 49; PLACERVILLE, NORTH	300	3350	3000			

Peak Month = average daily traffic for the month of heaviest traffic flow (month not listed)

AADT = average annual daily traffic is the total volume for the year divided by 365 days.

## Element 4 – Monitoring and Reporting Programs

### 4.1 Carrying Capacity Monitoring

The updated RMP includes two carrying capacity indicators, boat density and total daily boaters, which are described in the RMP document’s Element Seven. Carrying Capacity monitoring was conducted during the 2011 season as one of the requirements for the EIR mitigation measures 13-2 and 16-5. Monitoring results are summarized above in Section II River Use (pages 2-5).

#### Monitoring system

- During the RMP planning process, data were collected that established the boat density on the gorge run on Saturdays in 1996-1999, occasionally exceeded 300 boats in a two-hour period. County Parks, because of this history, monitored river use and boat density levels on the gorge run every Saturday from June through August of 2011.
  - On the gorge run, staff most often recorded river use at Fowler’s Rock Rapid on Saturdays and Trouble Maker on Sundays. Fowler’s Rock has had more incidents of boat wraps and swims than Satan’s Cesspool Rapid, making Fowler’s Rock a higher priority location for river safety activities on Saturdays when boat density and use are highest. This use of Fowler’s Rock as an acceptable location for monitoring boat density should be incorporated into the RMP’s implementation measures.

- Appendix D of the RMP should be amended to include the definition “two kayaks are equal to one boat” for the purposes of determining boat density.

### 2011 Flows and Carrying Capacity

Snowmelt runoff for the American River Watershed according to the CA Department of Water Resources May 1st forecast was 172% of average in 2011 compared to 110% in 2010. Precipitation in April provided a reduction in flows after the large March boost in snowpack accumulation with somewhat below average precipitation in many mountain basins. The month was also cooler than average; as a result the measured snowpack on May 1 was still around 85 percent of the large April amounts in Sierra Nevada mountain watersheds. The 2011 snow pack was similar to that of May 1, 2006. However, April precipitation that year was far above average. Water supplies from the South Fork American Watershed will be excellent this year.

Water year forecasts for April through July 2011 runoff were not much different from those issued in March and are about 165 percent of average compared to 115 percent last year on April 1.. Water year runoff prospects are also excellent at 145 percent of average statewide; last year’s water year runoff was about 90 percent of average.

Precipitation from October 2010 through April 2011 was about 135 percent of average, compared to 110 percent from October 2009 through April 2010. The heaviest precipitation fell on the southern Sierra regions in the 150-160 percent of average range. The lightest precipitation was in the two corners—North Coast and Colorado River—at 115 percent.

Statewide precipitation during the month of April 2011 was 70 percent of average. Runoff has been nearly 130 percent of average so far this season, much higher than the 75 percent reported one year ago. April runoff was about 165 percent of average. Estimated runoff of the eight major rivers of the Sacramento and San Joaquin River regions during April was 5.3 million acre-feet.

Reservoir storage volume increases were normal during April 2011 and were at 110 percent of average and 85 percent of total capacity.

Flows on the South Fork American River were regulated by scheduled dam releases based on the California Department of Water Resources snow surveys which resulted in good flows for boating with a relatively mild high water period (5-6,000 cfs on average through June). Summer flows were guaranteed in 2011 by Pacific Gas and Electric and the Sacramento Municipal Utility District six days a week with no water guaranteed on Wednesdays. In summer, Saturday flows began ramping up early in the morning and typically reached a peak of 1,500 cfs by 8:00 am. Peak flow was maintained until approximately 1-3 pm, when the flow was ramped downwards. Sunday flows followed the same pattern as Saturday flows with regard to ramping rates, flow volume, and the timing of peak flows. Peak flows were typically maintained for 3 to 5 hours.

The volume of 1,500 cfs flows provided a quality whitewater experience for commercial and private boaters. The relatively long-duration of weekend peak flows may have reduced boat density, resulting in safer boating conditions during the summer boating season. Boat density was close to exceedence on Saturdays on the lower (Gorge section) but with a longer release schedule there was more opportunity to spread boating use out.

Sacramento Municipal Utility District and Pacific Gas and Electric provided reliable and predictable post-Labor Day flows on the weekends through 2011 resulting in flows that mirrored the summer flow pattern. Commercial and private use continued mirroring the scheduled releases with more commercial use occurring in the fall and spring and more private use occurring in the fall, winter and spring (year around).

The Sacramento Municipal Utility District and Pacific Gas and Electric re-licensing agreements were completed in 2007 and are pending approval by the Federal Energy Regulatory Commission. This 50 year license will guarantee flows on the South Fork and continued operation of the hydroelectric facilities located upstream of the Chili Bar on the South Fork American River watershed. The flow schedule in 2011 was similar to a Wet Year flow schedule as designated in the license.

#### River Use on the Coloma to Greenwood Section

A number of elements and mitigation measures were integrated into the RMP to mitigate potential impacts related to increases in river use on the Coloma to Greenwood section of the river.

- The public river access situation at Greenwood Creek changed in 2005 from previous years, when the BLM constructed a parking lot and restroom. The new construction created a formal access to the river through the public lands downstream of Greenwood Creek reduced dangerous parking on the shoulder of Hwy 49, except for peak weekend use days when it still occurs.
- There is a second parking area built by BLM ¼ mile further down Hwy 49 which eliminates the need to park on the shoulder of Hwy 49 but it is still legal to park on the shoulder. Boating counts in 2011 on the section of river between Coloma and Greenwood Creek did not occur. Future monitoring coordinated with the BLM to better understand the extent of use of the Greenwood Creek access is being considered in the future.
- No campground owners near Highway Rapid applied to the County for a revision to their Special Use Permit that would allow public river access to their property in this stretch.

#### 4.2 Incident Reporting/Cooperating Agency Reports

The BLM and California State Parks provided information and data for several sections of this report.

County Parks

River Use Permit compliance issues are summarized in the table below. County Parks also performs an annual audit of outfitter reports and resolves discrepancies between reported and observed commercial river use after the September operation reports are submitted.

**Table 3. Summary of Commercial River Use Permit Violations in 2011**

Class I River Use Permit violation category	# violations/warnings issued	# final violations
Boat markings inadequate	2	0
Group size limits exceeded	3	1
Land use without authorization	0	0
Operating after sunset	0	0
Operating reports filed late	3	3
Permit/group allocations exceeded	3	0
Quiet Zone	2	0
Class II River Use Permit violations:	None issued in 2011	

4.3 Public Comments/Complaints

Complaints in nine river issue areas were received by the County Parks office in 2011:

1. Thefts from vehicles at river access points: Skunk Hollow parking lot and on Salmon Falls Road adjacent to the parking lot and Greenwood Creek parking area.
2. Highway 49 bridge trash.
3. On river drinking, littering, glass bottles and trespassing associated with inner-tubers.
4. Parking impacts associated with large events at Henningsen Lotus Park – Parking on shoulder of Lotus Road.
5. Non-permitted commercial river use activity.
6. Trespass across private property adjacent to Trouble Maker Rapid.
7. River channel modification to Barking Dog Rapid.
8. Quiet Zone violations.
9. Parking in a turn out along Hwy. 49 adjacent to North Beach river access at Marshal Gold Discovery State Park.

4.4 Geographic Information System (GIS)

No GIS data was added to the county database through the County Parks/Rivers Programs.

4.5 This report fulfills this element's requirements.

4.6 Water Quality Sampling and Analysis

The overall goal of the monitoring program is to collect data that provide defensible answers to two main questions: 1) is the river safe for contact recreation; 2) is whitewater recreation creating significant impacts to the water quality of the South Fork?

The RMP EIR identified three potential types of water quality degradation that could result from whitewater recreation. First, bacterial contamination of the river could result from either discharges from faulty septic systems or human defecation along the river banks. Second, storm water runoff may carry vehicle-related contaminants from parking lots into the river. Third, erosion from campgrounds, access facilities and trails may increase the river's turbidity. The RMP's mitigation monitoring plan requires that a monitoring program be implemented for the first two water quality indicators, bacteria levels and stormwater runoff (**see appendix C**). The third indicator, erosion and turbidity, are controlled through the County's grading permit and Special Use Permit inspection programs.

No exceedances were discovered from the river program's water testing results. Concerns about the number of resident Canadian Geese have been received from the public and their possible affects to the water quality.

4.7 Zoning and Special Use Permit requirements policy statement. This is an ongoing policy.

4.8 Noise Monitoring

- County Parks River Patrol currently monitors the Quiet Zone for violations by river users. The County Quiet Zone is an effort to limit the noise impacts to the residential properties along the river by people navigating the river.
- The County Parks River Patrol has the ability to fine commercially permitted outfitters only.
- The County Sheriff's Department and County Code Enforcement have the ability to fine and enforce violations by public river users, private campgrounds and private land owners.

4.9 Recreation Impact Monitoring

Bureau of Land Management: BLM recreation staff did not indicate that monitoring conducted on their parcels in 2011 revealed any substantial conflicts between people using those lands for non-whitewater recreation and whitewater boaters. The BLM adopted a management plan for its South Fork public lands in 2005. This plan contains elements that allow new recreation uses in the river corridor (such as recreational mining and horseback riding) that may create conflicts with existing uses such as whitewater recreation. Negative comments about horse manure and horse riders at picnic areas were fielded by County Parks River Patrol staff in 2011. There is a dredging moratorium currently so none occurred in 2011.

State Parks: Folsom State Parks personnel patrol the Salmon Falls day use area of Folsom Lake State Recreation Area. In the past State Park Rangers have indicated they are not aware of conflicts between non-whitewater recreation users and whitewater boaters at the Salmon Falls area. State Parks has observed more alcohol related violations related to inner

tubing in the past few years at Marshall Gold Discovery State Historic Park. The glass ban at Marshall Gold Discovery State Historic Park within 100 feet of the river has been successful in reducing the amount of broken glass according to park staff.

At both Salmon Falls and Greenwood Creek there were numerous reports of vehicle break-ins during 2011.

Henningsen Lotus Park: County Parks did not survey park users regarding conflicts between non-whitewater recreation uses and whitewater recreation uses in 2011:

- River use levels in 2011 were below the levels analyzed for the RMP's EIR.

#### 4.10 River Program staffing

- In 2011 the river patrol was staffed by two seasonal employees, a reduction from three in 2010, plus the river supervisor. The fiscal year 2011/2012 budget allows for the hiring of two seasonal personnel and the river supervisor.
- In 2011 Henningsen Lotus Park was staffed by 3 seasonal Park Aids.

#### 4.11 Geographic Information System: this element is the same as Element 4.4.

### **Element 5 – Agency and Community Coordination Programs**

#### 5.1 Pre- and Post-Season RMAC meetings

The 2011 post-season RMAC meeting was held November 9, 2011 in Coloma.

#### 5.2 Flow information

Through the coordination of PG&E and SMUD, PG&E provided a summer and fall flow regime (described on page 15 above) and timely forecasts of releases from Chili Bar dam. South Fork flow forecasts are posted on the County website and the websites [www.theamericanriver.com](http://www.theamericanriver.com), [www.dreamflows.com](http://www.dreamflows.com), [www.americanwhitewater.org](http://www.americanwhitewater.org) and also can be heard on the County Flow Phone.

#### 5.3 Volunteers

- Volunteers assisted county river patrol staff on river patrols, work projects including noxious weed pulling at Henningsen Lotus Park, bathroom maintenance and the annual River Festival.

#### 5.4 River Festival

This year's American River Festival charitable event and South Fork American River whitewater promotional event were held in September. The County River Program helped

facilitate and provided safety boaters for the slalom event, rodeo and various festival related activities at Henningsen Lotus County Park.

5.5 CEQA Compliance Statement; no comments

5.6 Litter Control

Three river cleanups were organized in 2011 coordinated with the American River Conservancy. The cleanup on the Chili Bar section was held in June. A cleanup on the middle section was held in August which was a low water cleanup and a cleanup on the lower section was held in July. Volunteers from a number of commercial companies, local residents, private boaters, BLM and State Parks staff participated. River Patrol conducted several other staff cleanup trips on all three sections of the river during the summer to remove various pieces of debris and hazards. Although the RMP goal of monthly cleanups is laudable, the limited number of volunteers for the existing cleanups and the small amount of debris that collects over a month long period indicates that increasing to monthly cleanups does not seem practical.

5.7 Agency Coordination

Weekend river patrols and vehicle shuttles were coordinated between El Dorado County river patrol staff, BLM river patrol staff and State Parks river patrol staff.

5.7.1 Recreation Conflicts: see Element 4.9.

5.7.2 Habitat/Environmental Impacts

Bureau of Land Management: Folsom BLM staff has implemented a statewide assessment program (utilizing their “Lotic Checklist Form”) on the public lands along the South Fork. Wildlife biologist Kim Bunn indicated that the BLM began collecting baseline data in 1993-1995. The BLM’s goal is to perform the assessment every five years in order to make general determinations on the health of the public lands.

On the South Fork, an assessment was compiled for the main stem of the river, along Weber Creek, and along the Greenwood Creek riparian area in 2001 and 2002. The assessment concluded that there are impacts from recreation use in the Greenwood Creek riparian zone including stream bank degradation and siltation of the creek. In 2011 this continues to occur. The BLM’s South Fork American River management plan addresses these impacts.

5.7.3 Agency Memoranda of Understanding

No formal Memoranda of Understanding were completed in 2011. With the completion of their South Fork American River Management Plan, BLM has indicated it is interested in entering into an MOU with the County. In 2011, the River Program continued its coordination and cooperation with both the BLM Folsom Area staff, California State Parks staff from Marshall Gold SHP and the Auburn Whitewater Recreation Office. The BLM

river patroller coordinated with County river patrol on work projects, restroom maintenance, river patrols and river monitoring activities.

## Element 6 – Permits and Requirements

The Board of Supervisors adopted the RMP elements pertaining to commercial river use permits through Ordinance 4594, the Streams and Rivers Commercial Boating Ordinance Chapter 5.48, on January 15, 2002. The Board adopted the RMP elements pertaining to non-commercial boater registration through Ordinance 4596, the Specific Use Regulations Ordinance Chapter 5.50 on March 19, 2002.

### 6.1 User Group and Definitions

County Ordinance Chapter 5.48 defines commercial boating. County Ordinance Chapter 5.50 defines noncommercial river trips, institutional groups and large groups.

### 6.2 River Management Fees

The 2002 Annual Report related the Board of Supervisors' action on November 20, 2001 regarding the River Trust Fund and user day fees. The Board maintained the user day fee amount at \$2.00 per person, set in 1997, which is the primary funding source to the River Trust Fund, which in turn funds the implementation of the River Management Plan. Costs of implementing the County River Program have increased since 2002 which could result in a reduced level of service starting in 2011.

#### 6.2.1 Commercial Guide Requirements

##### Swiftwater Rescue Course Standards:

At the conclusion of the 2002 season, County Parks reviewed the swiftwater rescue training standard issue with the County Risk Management Office. Since there is not an adopted state or national standard for swiftwater training, the Risk Management Office supported continuing the approach on training taken by County Parks in 2002:

- At least one guide per trip must have completed a swiftwater rescue training course.
- Outfitters may designate any guide as the swiftwater rescue trained person; he or she does not have to be the “trip leader”.
- In-house courses, taught by experienced outfitter employees are adequate, and to allow for lower cost courses, Rescue III or ACA cards of completion are not required. *County River Management Advisory Committee (RLAC) recommends that instructors be certified and that cards of completion be required to be issued to student.*
- Courses must teach at least the suite of skills found in an American Canoe Association (ACA) swiftwater rescue, Rescue III whitewater rescue technician, or equivalent course.
- Outfitters agreement to meet the County swiftwater rescue training standards are within their permit application agreement

Starting in 2008 County Parks has been collecting signed boating etiquette affirmations from all commercial guides.

## 6.2.9 Insurance, Business License and Water Flow Notice Requirements

There were no revisions to these requirements in 2011. The Board of Supervisors adopted Resolution 033-2002 on January 29, 2002. The Resolution amends the liability insurance requirements for outfitters to one million dollars (\$1,000,000) per occurrence.

## 6.3.6 Institutional Group Requirements

The registration process for both large and institutional groups was developed in conjunction with RMAC during its January and February 2002 meetings. The Board of Supervisors adopted the registration requirements through Ordinance Chapter 5.50 on March 19, 2002 the ordinance becoming effective on April 19, 2002. The following organizations registered with the County in 2011:

- Calvary Chapel of Concord
- Friends of the River, a river conservation organization
- Inner City Outings, a community outreach program of the Sierra Club
- Healing Waters, a non-profit organization that provides outdoor recreation activities for HIV and cancer patients.
- Prescott College, an accredited university offering experiential education to its students.
- Project Great Outdoors, an organization offering experiential education programs to disadvantaged youth.
- Travis Air Force Base outdoor recreation program.
- Beale Air Force Base outdoor recreation program.
- Chico State Kinesiology Dept.
- UC Santa Cruz

## 6.3.7 Large Group Requirements

El Dorado County requires all non-commercial boaters running the South Fork in a group of 4 or more boats having 3 or more occupants, or a total of 18 or more people to register their trip before launching. Large group registration forms along with deposit boxes have been available throughout the season at the major river access points along the river and at several campgrounds. Forms are also available on the County Parks website. One of the river patrols regular functions was to register large groups at Chili Bar and the County Park. County Parks was able to monitor Camp Lotus for large groups only on a sporadic basis. There were 36 large groups that registered in 2011 for 1 and 2 day trips (53 in 2008, 57 in 2009, and 24 in 2010).

## 6.4 Temporary Use Permit (TUP)

The 2002 Annual Report to the Planning Commission by the Planning Department included discussion of several outstanding issues related to Special Use Permits and Temporary Use Permits. The first issue pertained to whether Special Use Permit holders may be required to apply for a revision to the Permit in order to hold special events on their property that are beyond the approved uses of the existing permit's conditions. The second issue that

pertained to whether a Special Use Permit holder would be required to obtain a TUP is whether the property's Special Use Permit allowed for more than 250 people at one time. The County's threshold for an event size that requires a temporary use permit is 250 people.

No Temporary Use Permits were applied for in 2011

## 6.5 Special Use Permits

RMAC review of Special Use Permit applications:

- No modifications or new SUP's were applied for in 2011.

### Annual Inspections:

The Planning Commission accepted the December 2002 Planning Department staff recommendation to conduct campground inspections every second year for those camps that met the Department's criteria for passing the summer 2002 inspection. Code Enforcement does respond to individual complaints.

## **Element 7 – Carrying Capacity Exceedance Actions and Implementation**

- The monitoring program is discussed above in Element 4.1.
- There were no exceedances of either carrying capacity threshold in 2011.

## **Element 8 – Regulations and Ordinances**

### 8.1 Pirate Boater Ordinance Enforcement

The noncommercial boater registration system and large group registration process allow County Park's staff the opportunity to both inform and question people about their non-commercial status. County Park's staff does not have law enforcement and citation authority. Those suspected of pirate boating were identified for further investigation by the El Dorado County Sheriffs Dept.

### 8.2 Quiet Zone Regulations

Quiet Zone regulations were amended in 2002 to include non-commercial boaters through the revisions to Ordinance Chapter 5.50 which only the Sheriff's Department has authority to enforce. See the Sheriff's annual report for more information.

### 8.3 Trespass: see Sheriff's annual report.

### 8.4 Motorboats prohibited: County Ordinance 12.64.040 prohibits motorboats on the South Fork from Chili Bar dam to Folsom Reservoir. No known violations occurred in 2011.

## Element 9 – Facilities and Lands Management

### 9.1 Memorandum of Understanding with the American River Conservancy

County Parks continued its informal coordination with the American River Conservancy in 2011. The coordination enables County River Patrol staff to access the Chili Bar facility in order to implement the RMP.

### 9.2 Salmon Falls Parking

California State Parks is exploring options to expand parking at Skunk Hollow and Salmon Falls through a proposed Protection, Mitigation, and Enhancement Measure (PM&E) in the relicensing of SMUD's Upper American River Project. Skunk Hollow has experienced exceedences and congestion that may be associated with large private and institutionally permitted groups. State Parks has been requiring large Institutional group trips to take out at Salmon Falls. This has helped relieve some of the congestion at Skunk Hollow. The South Fork American River Trail which goes from Skunk Hollow Parking lot upstream paralleling the river to Greenwood Creek opened in the fall of 2010 and could result in impacts to parking at both locations.

### 9.3 Public River Access in Coloma

State Parks will begin to allow boating takes outs at Marshall Gold Discovery State Historical Park in 2012.

No reduction in river access occurred in 2011.

### 9.4 Additional Restrooms

El Dorado County continued to provide a portable bathroom at American River Resort by Trouble Maker rapid for the public who scout and portage this rapid.

### 9.5 Restroom Maintenance with BLM is Ongoing.

### 9.6 Public Access Near Highway Rapid

There were no applications for modifications of Special Use Permits to allow public river access to this section of the river in 2011.

### 9.7 Trails

- The County applied in October 2005 for Habitat Conservation Grant Program funds which would be used as part of a larger set of funds to purchase Cronan Ranch lands. There were 1,400 acres of Cronan Ranch purchased by the BLM and 67 acres were purchased by El Dorado County. This has resulted in a new trail system along 6 miles of the river. Planning for the county parcel has not initiated.

- The American River Conservancy received a grant to purchase 30 acres connecting Henningsen Lotus County Park and Marshall Gold Discovery State Park. This will provide an opportunity to link the State Park Monroe Ridge Trail to the County Park.
- The BLM completed a trail which links Skunk Hollow via a trail to the Cronan Ranch parcel along river right and to Greenwood Creek.

9.8 No new construction of new facilities or modifications

9.9 No Net Loss of Riparian Habitat

### **Element 10 – Funding**

10.1 River Trust Fund policies consistent with this element have continued under the updated RMP.

10.2 River Trust Fund Annual Budget

The river program budget for fiscal year 2011/2012 has been adopted by the Board of Supervisors **(see appendix E)**.

10.3 Adequate funds for RMP implementation

A River Trust Fund with a balanced revenue and expenditure stream should have funds available to meet the following objectives:

- Implement RMP elements;
- Implement the mitigation monitoring plan;
- Maintain an adequate fund balance to meet any income shortfalls due to below average commercial river use;
- Build the fund balance over time to fund habitat restoration projects as described in mitigation measure 8-2.

There is concern about the health of the fund from the reduction of commercial river use (revenue from use fees), and the past few years additional expenditures (\$67,000 for Chili Bar and \$44,000 for River Shuttle AQMD matching funds). Costs of implementing the County River Program have increased since 2001 (RMP adoption) which will likely result in a reduced level of service starting in 2011 unless there is an increase in revenue. Table 4 presents actual income and expenditure amounts for fiscal year 2010/2011. The fiscal year is from July 1<sup>st</sup> to June 30<sup>th</sup>.

**Table 4.  
River Trust Fund**

<b>Fiscal Year 2010/2011</b>	
Fund Balance as of July 1, 2010	\$158,732
Revenue ( <i>July 1, 2010 through June 30, 2011</i> )	\$162,014
Expenditures (FY 2009/2010 approved budget was \$161,843)	
River management program →	\$143,422
Total →	\$143,422
<b>River Trust Fund balance as of June 30, 2011</b>	<b>\$177,324</b>

**Element 11 – River Data Availability**

- The County website contains most of the information listed in Table 6-1 of the RMP document.
- Water quality data has been made available to El Dorado County Health Department and the El Dorado County Storm Water coordinator.

**APPENDIX A**

**RIVER MANAGEMENT PLAN  
2011 MITIGATION MONITORING PLAN**

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<b>Land Use</b>					
<b>Impact 4-1.</b> The River Management Plan (RMP) would be inconsistent with Program 10.2.2.2.1 of the El Dorado County General Plan.	<b>Mitigation Measure 4-1.</b> The County will ensure that adequate funding is secured prior to the implementation of elements that may require increased County expenditures or elements that could result in decreased revenue to levels below that necessary to conduct river management activities identified in the RMP.	Develop projection of RMP implementation expenditures and possible revenue reductions. Review River Trust Fund status and projections. Compare each analysis and prepare findings and 3-year projection. Adjust fees to ensure adequate RMP funding.	Document projected cost neutrality to the General Plan of the RMP over the 3-year projection period.	County Department of General Services	Within 6 months of RMP adoption and each 3 years thereafter
<b>Action: A projection of RMP implementation expenditures for FY 2010/2011 was incorporated into the river management program budget prepared in March, 2010. This fiscal year 2011/2012 budget was adopted by the Board of Supervisors in November 2011.</b>					
<b>Impact 4-2.</b> Increased river use could result in an increased occurrence of trespass on private lands within the river corridor.	<b>Mitigation Measure 4-2.</b> To reduce the occurrence of trespass the County shall: (a) Increase prosecution of trespass violations;  (b) Increase on-river and roadway signage to indicate private property boundaries and to warn trespassers of prosecution;  (c) Increase towing of vehicles parked in unauthorized areas; and  (d) Provide prompt response, towing and substantial fines and/or prosecution when property owners report vehicles blocking access to driveways.	(a) Provide rapid response to reports of trespassing. Record locations and timing of each occurrence and transmit summaries to County Division of Airports, Parks and Grounds (Parks).  (b) Post private property signage at prominent locations.  (c) Provide rapid citation and towing company dispatch to illegally parked vehicles. Record locations and timing of each occurrence and transmit summaries to County Parks Division.  (d) Provide rapid citation (including substantial fines and /or prosecution) and towing company dispatch to illegally parked vehicles. Record locations and timing of each occurrence and transmit summaries to County Parks Division.	(a) Provide rapid response to reports of trespassing. Record locations and timing of each occurrence and transmit summaries to County Division of Airports, Parks and Grounds (Parks).  (b) Post private property signage at prominent locations.  (c) Provide rapid citation and towing company dispatch to illegally parked vehicles. Record locations and timing of each occurrence and transmit summaries to County Parks Division.  (d) Provide rapid citation (including substantial fines and /or prosecution) and towing company dispatch to illegally parked vehicles. Record locations and timing of each occurrence and transmit summaries to County Parks Division.	(a), (c), and (d) Documentation of trespassing complaints and citations, and transmittal of summaries to the County Parks Division, Planning Department, and Department of Transportation. (b) Document signage installation at key locations.	(a), (c), and (d) Ongoing, in response to facility development. (b) Within 12 months of RMP adoption. Ongoing, in response to repeated incidence of trespass
<b>Action:</b> a) County Parks was informed of trespassing on the property on river left at Barking Dog Rapid. Land owners were requested to put up no trespassing signs and County Parks put out information on boaters land use rights to curb this problem. Contact, education, was also made regularly with boaters while on patrol. Trespass issues at this site reduced in 2008 but continue due to the popularity of the wave there. b) County Parks maintained and added signage that notifies boaters when one is entering and leaving public lands through the Quiet Zone.					

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p>Signage includes a notice of the penalty for violating the Quiet Zone noise ordinance that now applies to non-commercial boaters. Impact 4-2 (continued)</p>					
<p>c) The Sheriff's Dept. is responsible for reports on towed vehicles.</p>					
<p><b>Impact 4-3.</b> Conducting Special Use Permit (SUP) inspections on a complaint-driven basis only could result in repeated violations of unreported SUP violations.</p>	<p><b>Mitigation Measure 4-3.</b> Upon adoption of the updated RMP, the County shall incorporate an element that requires annual inspections for SUP violations on all privately owned lands within the RMP area subject to SUPs. Inspections based on complaints will also continue to be conducted. Observed violations, including written records and photographs will be provided to the County Code Enforcement Officer for enforcement actions as deemed appropriate by the Enforcement Officer.</p> <p>In addition to enforcement actions taken by Enforcement Officer, upon observation of violations of two or more permit conditions in successive years, a formal recommendation for revocation of the SUP shall be provided to the County Code Enforcement Officer and the Planning Director.</p>	<p>Inspect all RMP-related SUP areas and assess permit holder compliance with SUP standards. Report findings to County Code Enforcement Officer for enforcement action, if required, for remediation and sanctions.</p>	<p>Documentation of SUP inspections and observation of violations. Transmit SUP inspection summaries to County Code Enforcement Officer (County Planning Department).</p>	<p>County Parks Division, in coordination with County Code Enforcement Officer</p>	<p>Annually, or in response to complaints</p>
<p><b>Action:</b> RMP element 6.5.3 establishes the inspection requirement for properties with SUPs. The Planning Department conducted inspections of riverside campgrounds during the summer of 2002. A report on those inspections was presented to the Planning Commission in December 2002. This report contained a discussion of complaints filed against SUPs and the response by the Planning Department to those complaints. The Planning Commission directed that inspections be conducted on alternate years. Due to staffing this has not been done since 2002 but possible SUP violations are investigated to by County Code Enforcement when received.</p>					
<p>The responsible agency for Special Use Permit inspections in this Mitigation Monitoring Plan is the County Planning Department.</p>					

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<b>Geology and Soils</b>					
<p><b>Impact 5-1.</b> The construction of new facilities could result in temporary increases in wind and water erosion.</p>	<p>Mitigation Measure 5-1.</p> <p>(a) The County shall ensure that contracts for grading and other activities resulting in ground disturbance require the contractor to implement airborne dust suppression strategies.</p> <p>(1) Submit a construction emission/dust control plan for approval by the County prior to ground disturbance activities;</p> <p>(2) Water all disturbed areas in late morning and at the end of each day during clearing, grading, earth-moving, and other site preparation activities;</p> <p>(3) Increase the watering frequency whenever winds at the RMP site exceed 15 mph;</p> <p>(4) Water all dirt stockpile areas;</p> <p>(5) Use tarpaulins or other effective covers for haul trucks that travel on public streets and roadways;</p> <p>(5) Sweep streets adjacent to the construction entrance at the end of each day; and</p> <p>(6) Control construction and other vehicle speeds onsite to no more than 15 mph.</p> <p>(b) The contractor shall also implement Mitigation Measure 6-1</p>	<p>(a) Require that all RMP-related construction activities demonstrate evidence of an applicable County Grading Permit per the El Dorado County Grading, Erosion, and Sediment Control Ordinance and El Dorado Resource Conservation District's Erosion and Sediment Control Plan. The plan should include Best Management Practices (BMPs) to minimize and control pollutants in storm water runoff. The contractor will:</p> <p>(1) Submit a construction emission/dust control plan for approval by the County prior to ground disturbance activities;</p> <p>(2) Water all disturbed areas in late morning and at the end of each day during clearing, grading, earth-moving, and other site preparation activities;</p> <p>(3) Increase the watering frequency whenever winds at the RMP site exceed 15 mph;</p> <p>(4) Water all dirt stockpile areas;</p> <p>(5) Use tarpaulins or other effective covers for haul trucks that travel on public streets and roadways;</p> <p>(6) Sweep streets adjacent to the construction entrance at the end of each day; and</p> <p>(7) Control construction and other vehicle speeds onsite to no more than 15 mph.</p> <p>(b) The contractor will also implement Mitigation Measure 6-1.</p>	<p>Document delivery of applicable County Grading Permit, per the El Dorado County Grading, Erosion, and Sediment Control Ordinance and El Dorado Resource Conservation District's Erosion and Sediment Control Plan, to County Parks Division for RMP-related construction projects. Include BMPs to minimize and control pollutants in storm water runoff.</p>	<p>County Parks Division</p>	<p>Ongoing, in response to facility development</p>
<p><b>Action: No changes in 2011</b></p>					

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p><b>Impact 5-2.</b> Ground disturbance on private lands within the river corridor could result in temporary or long-term increases in wind or water erosion.</p>	<p><b>Mitigation Measure 5-2.</b> In the event that annual SUP monitoring associated with Mitigation Measure 4-3, or other monitoring based on complaints, identifies evidence of erosion or unpermitted grading in Special Use Permit and other areas, the County shall take the following actions:</p> <p>(a) Photograph erosion/grading areas and transmit with written report to County Environmental Management and Planning Departments for possible enforcement action.</p> <p>(b) Conduct water quality sampling in river downstream of subject site and report results to County Environmental Management Department.</p>	<p>(a) Photograph erosion/grading areas and transmit with written report to County Environmental Management and Planning Departments for possible enforcement action.</p> <p>(b) Conduct water quality sampling in river downstream of subject site and report results to County Environmental Management Department.</p>	<p>(a) Document transmittal of erosion/grading area photographs and written report to the County Environmental Management and Planning Departments.</p> <p>(b) Document water quality sampling in river downstream of subject site and transmittal of report results to County Environmental Management Department.</p>	<p>County Parks Division</p>	<p>Ongoing, in response to facility development on private lands within the RMP area.</p>
<p><b>Action: The Planning Department campground inspection report provided information on any unpermitted grading identified through the 2002 SUP inspection process.</b></p>					
<p><b>Hydrology and Water Quality</b></p>					
<p><b>Impact 6-1.</b> Potential short-term impacts to surface water quality could result from construction and operation of new facilities.</p> <p><b>Impact 6-1 continued</b></p>	<p>Practices to minimize and control pollutants in storm water runoff. Water quality control practices should include the following:</p> <p><i>Construction Measures</i></p> <ul style="list-style-type: none"> <li>Native vegetation will be retained where possible. Grading and excavation activities will be limited to the immediate area required for construction.</li> </ul> <p>Stockpiled topsoil shall be placed in disturbed areas outside natural drainageways. Stockpile areas shall be designated on project grading plans. Stockpiles will be stabilized, using an acceptable annual seed mix prepared by a qualified botanist.</p> <ul style="list-style-type: none"> <li>No construction equipment or vehicles will disturb natural drainageways without temporary or permanent culverts in place. Construction equipment and vehicle staging areas will be placed on disturbed areas and will be identified on project grading</li> </ul>	<p>Water quality control practices will include the following:</p> <p><i>Construction Measures</i></p> <ul style="list-style-type: none"> <li>Native vegetation will be retained where possible. Grading and excavation activities will be limited to the immediate area required for construction.</li> <li>Stockpiled topsoil shall be placed in disturbed areas outside natural drainageways. Stockpile areas shall be designated on project grading plans. Stockpiles will be stabilized, using an acceptable annual seed mix prepared by a qualified botanist.</li> <li>No construction equipment or vehicles will disturb natural drainageways without temporary or permanent culverts in place. Construction equipment and vehicle staging areas will be placed on disturbed areas and will be identified on project grading plans.</li> <li>If construction activities are conducted during winter or spring, temporary on-site detention basins will regulate storm runoff.</li> </ul>	<p>Document delivery of applicable County Grading Permit, per the El Dorado County Grading, Erosion, and Sediment Control Ordinance and El Dorado Resource Conservation District's Erosion and Sediment Control Plan, to County Parks Division. Include BMPs to minimize and control pollutants in storm water runoff.</p>		

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p><b>Impact 6-1 continued</b></p>	<p>plans.</p> <ul style="list-style-type: none"> <li>• If construction activities are conducted during winter or spring, temporary on-site detention basins will regulate storm runoff.</li> <li>• Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) will be used for disturbed slopes until permanent revegetation is established.</li> <li>• No disturbed surfaces will be left without erosion control measures during winter and spring, including topsoil stockpiles.</li> <li>• Sediment will be retained onsite by a system of sediment basins, traps, or other appropriate measures.</li> <li>• Immediately after the completion of grading activities, erosion protection will be provided for finished slopes. This may include revegetation with native plants (deep-rooted species for steep slopes), mulching, hydroseeding, or other appropriate methods.</li> <li>• Energy dissipaters will be employed where drainage outlets discharge into areas of erodible soils or natural drainageways. Temporary dissipaters may be used for temporary storm runoff outlets during the construction phase.</li> <li>• A spill prevention and countermeasure plan will be developed, identifying proper storage, collection, and disposal measures for pollutants used onsite. No-fueling zones will be indicated on grading plans and will be situated at least 100 feet from natural drainage ways.</li> </ul> <p><i>Operation Measures</i></p> <ul style="list-style-type: none"> <li>• All storm drain inlets will be equipped with silt and grease traps to remove oil, debris, and other pollutants, which will be routinely cleaned and maintained. Storm drain inlets will also be labeled "No Dumping - Drains to Streams and Lakes."</li> <li>• Parking lots will be designed to allow</li> </ul>	<ul style="list-style-type: none"> <li>• Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) will be used for disturbed slopes until permanent revegetation is established.</li> <li>• No disturbed surfaces will be left without erosion control measures during winter and spring, including topsoil stockpiles.</li> <li>• Sediment will be retained onsite by a system of sediment basins, traps, or other appropriate measures.</li> <li>• Immediately after the completion of grading activities, erosion protection will be provided for finished slopes. This may include revegetation with native plants (deep-rooted species for steep slopes), mulching, hydroseeding, or other appropriate methods.</li> <li>• Energy dissipaters will be employed where drainage outlets discharge into areas of erodible soils or natural drainageways. Temporary dissipaters may be used for temporary storm runoff outlets during the construction phase.</li> <li>• A spill prevention and countermeasure plan will be developed, identifying proper storage, collection, and disposal measures for pollutants used onsite. No-fueling zones will be indicated on grading plans and will be situated at least 100 feet from natural drainage ways.</li> </ul> <p><i>Operation Measures</i></p> <ul style="list-style-type: none"> <li>• All storm drain inlets will be equipped with silt and grease traps to remove oil, debris, and other pollutants, which will be routinely cleaned and maintained. Storm drain inlets will also be labeled "No Dumping - Drains to Streams and Lakes."</li> <li>• Parking lots will be designed to allow as much runoff as feasible to be directed toward vegetative filter strips, to help control sediment and improve water quality.</li> <li>• Permanent energy dissipaters will be included for permanent outlets.</li> <li>• The detention/retention basin system on the site will be designed to provide</li> </ul>			

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
	<p>as much runoff as feasible to be directed toward vegetative filter strips, to help control sediment and improve water quality.</p>	<p>effective water quality control measures. Design and operation features of detention/retention basins will include:</p> <ul style="list-style-type: none"> <li>- Constructing basins with a total storage volume that permits adequate detention time for settling of fine particles even during high flow conditions.</li> <li>- Maximizing the distance between basin inlets and outlets to reduce velocities, perhaps by using an elongated basin shape.</li> </ul>			
<p><b>Action: There were no site development/construction activities in 2011 that required a County grading permit.</b></p>					
<p><b>Impact 6-2.</b> Increased use of the river, roads and trails in the watershed would continue the degradation of water quality on the South Fork of American River.</p> <p><b>Impact 6-2 continued</b></p>	<p><b>Mitigation Measure 6-2.</b> The County shall:</p> <ul style="list-style-type: none"> <li>(a) Sample runoff from unpaved parking areas such as Chili Bar during initial season rainstorms and peak season afternoons for petroleum contamination according to Basin Plan requirements.</li> <li>(b) Sample human fecal coliform (as a key indicator of water quality impacts and management action needs) during peak-season weekend days.</li> <li>(c) Enhance water quality management and monitoring by the development of parking lot drainage collection and filter systems for new SUPs and SUP revisions with parking areas within the 100-year floodplain.</li> </ul> <p>In the event that water quality monitoring indicates an exceedance of any water quality standard defined by the Basin Plan, the County will:</p> <ul style="list-style-type: none"> <li>(1) Report exceedance(s) of standards to County Departments of Planning, Environmental Management, and Environmental Health and the California RWQCB for possible enforcement action.</li> <li>(2) Investigate and report relationship between exceedance of standards and river-related SUP permitted</li> </ul>	<ul style="list-style-type: none"> <li>(a) Sample runoff from unpaved parking areas such as Chili Bar during initial season rainstorms and peak season afternoons for petroleum contamination according to Basin Plan requirements.</li> <li>(b) Sample human fecal coliform (as a key indicator of water quality impacts and management action needs) during peak-season weekend days.</li> <li>(c) Enhance water quality management and monitoring by the development of parking lot drainage collection and filter systems for new SUPs and SUP revisions with parking areas within the 100-year floodplain.</li> <li>(d) In the event that water quality monitoring indicates an exceedance of any water quality standard defined by the Basin Plan, the County will: <ul style="list-style-type: none"> <li>(1) Report exceedance(s) of standards to County Departments of Planning, Environmental Management, and Environmental Health and the California RWQCB for possible enforcement action.</li> <li>(2) Investigate and report relationship between exceedance of standards and river-related SUP permitted activities.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>(a), (b), and (c (1)) Document transmittal of water quality sampling results to County Environmental Management Department and posting on the County RMP web site.</li> <li>(c) Document installation of parking lot drainage collection and filter systems for new SUPs and SUP revisions with parking areas within the 100-year floodplain, and transmittal of these observations to the County Environmental Management and Planning Departments.</li> <li>(d) Document exceedance of standards and river-related SUP permitted activities and transmittal of these observations to the County Environmental Management and Planning Departments.</li> </ul>	<p>County Parks Division</p>	<ul style="list-style-type: none"> <li>(a) and (b) Biweekly on Saturdays or Sundays, between May 1 and September 30 or by request</li> <li>(c) Ongoing, in response to facility development</li> <li>(d) Ongoing, in response to observations and requests</li> </ul>

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
activities.					
<p><b>Action:</b></p> <p>a) Stormwater Monitoring Program consistent with Basin Plan objectives was conducted in 2011.</p> <p>b) The South Fork through the project boundaries has water designated by the state for contact recreation (REC-1). The County has had a program of monitoring for bacteria in the S Fork for a number of years. Since 1998, the County Public Health lab has used the indicator organism E.coli to predict the health risk from pathogens residing in the South Fork. Please refer to the water quality monitoring program document for a description of bacteria monitoring program.</p> <p>c) There were no applications for new or revised Special Use Permits in 2011 that proceeded to the design phase.</p>					
<b>RECREATION</b>					
<p><b>Impact 7-1.</b> Increased whitewater recreation use levels could create conflicts with other river corridor recreational activities.</p>	<p><b>Mitigation Measure 7-1.</b> Evaluate potential conflicts between increased whitewater recreation use and other river corridor recreation activities. The County shall:</p> <p>(a) Coordinate with California State Parks and U.S. Bureau of Land Management (BLM) recreation staff to identify the occurrence of conflicts between non-whitewater recreation, historic interpretation, mining, and uses administered by the RMP. County Parks staff also will survey Henningsen-Lotus Park users about intended recreational uses and the potential limitation of recreational opportunities resulting from whitewater recreation use.</p> <p>(b) If RMP impacts on non-whitewater recreation, historic interpretation, or mining are identified by the above activities, County Parks shall conduct focused recreation conflict/impact surveys during the following season to identify and define specific conflicts. If focused recreation conflict/impact surveys identify potentially significant impacts on non-whitewater recreation, historic interpretation, or mining uses, the County will develop mitigation plan and/or modify facilities or management strategies and present mitigation plan to the RMAC and the Planning Commission for RMP modification and/or other action as determined appropriate. Such actions may include allocation of parking and river access for</p>	<p>(a) Coordinate with California State Parks and U.S. Bureau of Land Management (BLM) recreation staff to identify the occurrence of conflicts between non-whitewater recreation, historic interpretation, mining, and uses administered by the RMP. County Parks staff also will survey Henningsen-Lotus Park users about intended recreational uses and the potential limitation of recreational opportunities resulting from whitewater recreation use.</p> <p>(b) If RMP impacts on non-whitewater recreation, historic interpretation, or mining are identified by the above activities, County Parks shall conduct focused recreation conflict/impact surveys during the following season to identify and define specific conflicts. If focused recreation conflict/impact surveys identify potentially significant impacts on non-whitewater recreation, historic interpretation, or mining uses, the County will develop mitigation plan and/or modify facilities or management strategies and present mitigation plan to the RMAC and the Planning Commission for RMP modification and/or other action as determined appropriate. Such actions may include allocation of parking and river access for non-whitewater uses. Impact analysis of any proposed management actions will be conducted as necessary to comply with CEQA or other legal requirements. A focused recreation conflict/impact survey in addition to standard RMP monitoring and canvassing will continue following the implementation of mitigating actions, until such monitoring indicates that the impact is mitigated.</p>	<p>(a) Document annual coordination with California State Parks and BLM recreation staff to identify the occurrence of conflicts between non-white-water recreation, historic interpretation, mining, and uses administered by the RMP.</p> <p>(b) Document informal survey of Henningsen-Lotus Park users about intended recreational uses and the potential limitation of recreational opportunities resulting from whitewater recreation use</p>	<p>County Parks Division</p>	<p>Annually</p>

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
	<p>non-whitewater uses. Impact analysis of any proposed management actions will be conducted as necessary to comply with CEQA or other legal requirements. A focused recreation conflict/impact survey in addition to standard RMP monitoring and canvassing will continue following the implementation of mitigating actions, until such monitoring indicates that the impact is mitigated.</p>				
<p><b>Action:</b>            a) Coordination with California State Parks and Bureau of Land Management staff are summarized in RMP Element 4.9 of the 2002 Implementation of Plan Elements summary.            b) County Parks did not survey Henningsen Lotus Park users in 2011 because whitewater recreation use levels were lower this past season than the use levels analyzed in the Environmental Impact Report. See discussion in Element 4.9 of the Annual Report.</p>					
<p><b>Biological Resources</b></p>					
<p><b>Impact 8-1.</b> The construction of parking areas, restrooms, and trails could result in loss or degradation of various habitats, direct loss of individual special-status plants, filling of wetland areas, or increased disturbance or degradation of riparian habitats.</p> <p><b>Impact 8-1 continued</b></p>	<p><b>Mitigation Measure 8-1.</b> The County shall minimize the potential for the construction of parking areas, restrooms, and trails to impact biological resources.</p> <p>The County Shall:</p> <p>(a) Ensure that biological surveys are conducted on lands which may be disturbed during construction of facilities;</p> <p>(b) Avoid to the extent practicable, through design or site selection, special-status species, important habitats, and wetlands areas;</p> <p>(c) Avoid construction of facilities in areas containing gabbro soils and endemic plant species;</p> <p>(d) Initiate consultation with the appropriate state or federal jurisdictional agency if the potential for special-status species disturbance exists following final site selection; and</p> <p>(e) Appropriately mitigate for any impacts not avoided according to agreements with the appropriate local, federal, or state agency(ies).</p>	<p>The County will:</p> <p>(a) Ensure that biological surveys are conducted on lands which may be disturbed during construction of facilities;</p> <p>(b) Avoid to the extent practicable, through design or site selection, special-status species, important habitats, and wetlands areas;</p> <p>(c) Avoid construction of facilities in areas containing gabbro soils and endemic plant species;</p> <p>(d) Initiate consultation with the appropriate state or federal jurisdictional agency if the potential for special-status species disturbance exists following final site selection; and</p> <p>(e) Appropriately mitigate for any impacts not avoided according to agreements with the appropriate local, federal, or state agency(ies).</p>	<p>(a), (b), and (c)            Document completion of biological surveys of lands proposed for the construction of facilities and transmittal of surveys to the County Planning Department.</p> <p>(d) and (e)            Document successful completion of consultation with the appropriate state or federal jurisdictional agency if the potential for special-status species disturbance could occur during or after the construction of facilities. This documentation shall be transmitted to the County Planning Department.</p>	<p>County Parks Division</p>	<p>Ongoing, in response to facility development</p>
<p><b>Action: No changes in 2011. See Impact 5-1.</b></p>					

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p><b>Impact 8-2.</b> Increased whitewater boating use and associated public access could degrade riparian habitats.</p>	<p>The County shall:</p> <ul style="list-style-type: none"> <li>a) Request annual reports from the California State Parks and Recreation Department and BLM to identify specific riparian habitat and/or general environmental quality impacts (i.e., acceptable levels of change) occurring at their facilities or management areas.</li> <li>(b) Institute an educational program designed to provide the various stakeholders information about the value of plant, fish, and wildlife resources and the habitats on which they depend, encourage landowners to protect riparian vegetation, and include requirements in new or renewed SUPs for property managers to provide appropriate</li> </ul>	<p>The County will:</p> <ul style="list-style-type: none"> <li>(a) Request annual reports from the California State Parks and Recreation Department and BLM to identify specific riparian habitat and/or general environmental quality impacts (i.e., acceptable levels of change) occurring at their facilities or management areas.</li> <li>(b) Institute an educational program designed to provide the various stakeholders information about the value of plant, fish, and wildlife resources and the habitats on which they depend, encourage landowners to protect riparian vegetation, and include requirements in new or renewed SUPs for property managers to provide appropriate levels of signage related to restrooms, stopping locations and take-out points.</li> </ul>	<ul style="list-style-type: none"> <li>(a) Document receipt of annual reports from the California State Parks and Recreation Department and BLM to identify specific riparian habitat and/or general environmental quality impacts (i.e., acceptable levels of change) occurring at their facilities or management areas.</li> <li>(b) Document development, implementation, and maintenance of an educational program focused on plant, fish, and wildlife habitats.</li> <li>(c) Completed with the</li> </ul>	<p>County Parks Division</p>	<ul style="list-style-type: none"> <li>(a) Annually</li> <li>(b) One year after the adoption of the RMP; updated each third year thereafter</li> <li>(c) Not applicable</li> <li>(d) Periodically, in response to observation results and incidents</li> <li>(e) Periodically, in response to the proposals of willing program participants</li> </ul>

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p><b>Impact 8-2 continued</b></p>	<p>levels of signage related to restrooms, stopping locations and take-out points.</p> <p>(c) Ensure no net loss of riparian habitat (including wetlands) as a result of RMP-related facilities development.</p> <p>(d) In the event that photographic monitoring associated with Mitigation Measure 5-2 or other monitoring and reporting requirements indicate a loss of riparian resources suspected to be attributable to the whitewater boating-related activities, the County will:</p> <ol style="list-style-type: none"> <li>(1) Report potential impact to California Department of Fish and Game.</li> <li>(2) Coordinate biological monitoring program protocol development with California State Parks and Recreation Department and BLM recreation staff.</li> <li>(3) Conduct focused monitoring of impact site in conjunction with the following season's monitoring.</li> <li>(4) Identify ownership of subject property and report impact to County Planning Department if the impact occurs in Special Use Permit area.</li> </ol>	<p>(c) Ensure no net loss of riparian habitat (including wetlands) as a result of RMP-related facilities development.</p> <p>(d) In the event that photographic monitoring associated with Mitigation Measure 5-2 or other monitoring and reporting requirements indicate a loss of riparian resources suspected to be attributable to the whitewater boating-related activities, the County will:</p> <ol style="list-style-type: none"> <li>(1) Report potential impact to California Department of Fish and Game.</li> <li>(2) Coordinate biological monitoring program protocol development with California State Parks and Recreation Department and BLM recreation staff.</li> <li>(3) Conduct focused monitoring of impact site in conjunction with the following season's monitoring.</li> <li>(4) Identify ownership of subject property and report impact to County Planning Department if the impact occurs in Special Use Permit area.</li> <li>(5) Provide signage (or coordinate signage with State Parks, Recreation Department, or BLM recreation staff) and other management disincentives to minimize human use of affected areas.</li> </ol> <p>(e) Coordinate and provide funding contribution to focused habitat restoration project(s) with willing landowners, California State Parks and Recreation Department and/or BLM recreation staff, as appropriate.</p>	<p>adoption of RMP Element 9.</p> <p>(d) Documentation of:</p> <ol style="list-style-type: none"> <li>(1) Reporting potential impact to California Department of Fish and Game.</li> <li>(2) Coordination of a biological monitoring program protocol development with California State Parks and Recreation Department and BLM recreation staff.</li> <li>(3) Focused monitoring of impact site in conjunction with the following season's monitoring.</li> <li>(4) Identification of ownership of subject property and reporting the impact to County Planning Department (if the impact occurred in an SUP area).</li> <li>(5) Provision of signage (or coordination of signage with State Parks, Recreation Department or BLM recreation staff) and other management disincentives to minimize human use of affected areas.</li> </ol> <p>(e) Document coordination and provision of funding contributions (as feasible) to focused habitat restoration project(s) with willing landowners, California State Parks and Recreation Department and/or BLM recreation staff.</p>		

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING																																								
<b>Impact 8-2 Action:</b>																																													
<p>a) See Discussion in Element 5.7 of the 2001 Plan implementation summaries. The County Parks Division has received copies of the Bureau of Land Management's survey-level analysis of its riparian lands along the South Fork. The BLM program is not an annual program; updates on the status of riparian habitat on public lands will be conducted every five years. The County Parks Division received a copy of BLM's management plan for its lands along the South Fork.</p> <p>b) 1) County Parks participated in the development of the annual outfitter guide seminar which included sessions on fish and wildlife.</p> <p>c) Completed with the adoption of RMP Element 9.</p> <p>d) 1) Monitoring and reporting on this mitigation measure will be completed in coordination with the Planning Department upon its release of the SUP inspection report. 2) BLM's management plan includes mitigation measures and monitoring programs for the Greenwood Creek and Weber Creek areas. This action by the BLM fulfills the monitoring and reporting requirements of sections 2 and 3.</p> <p>e) No habitat restoration projects have been proposed or funded for fiscal year 2010/2011.</p>																																													
<b>Transportation and Circulation:</b>																																													
<p><b>Impact 9-1.</b> Approval of the RMP and the subsequent implementation of the Interim Shuttle Program may increase weekday and weekend traffic volumes on RMP area roadways such as SR 49 to an extent that would exceed the adopted level of service thresholds of El Dorado County.</p>	<p><b>Mitigation Measure 9-1.</b> When individual programs or actions of the RMP area advanced to implementation, El Dorado County shall conduct detailed transportation impact studies to ensure that the following performance measures are met.</p> <p>Project generated traffic will not cause study area roadways to operate worse than the levels of service (LOS) thresholds established by the El Dorado County General Plan, which are currently as follows.</p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;"><u>Roadway Segment</u></th> <th style="text-align: left;"><u>LOS</u></th> </tr> </thead> <tbody> <tr> <td>Cold Springs Road from Cool Water Creek to SR 49</td> <td>E</td> </tr> <tr> <td>Lotus Road between Gold Hill Road and SR 49</td> <td>D</td> </tr> <tr> <td>Marshall Road north of SR 49</td> <td>E</td> </tr> <tr> <td>Salmon Falls Road south of Manzanita Lane</td> <td>C</td> </tr> <tr> <td>Salmon Falls Road north of Manzanita Lane</td> <td>E</td> </tr> <tr> <td>SR 193 south of American River bridge</td> <td>E</td> </tr> <tr> <td>SR 49 Gold Hill Road to Coloma</td> <td>E</td> </tr> <tr> <td>SR 49 Coloma to Marshall Grade Road</td> <td>E</td> </tr> <tr> <td>SR 49 Marshall Grade Road to SR 193</td> <td>C</td> </tr> </tbody> </table>	<u>Roadway Segment</u>	<u>LOS</u>	Cold Springs Road from Cool Water Creek to SR 49	E	Lotus Road between Gold Hill Road and SR 49	D	Marshall Road north of SR 49	E	Salmon Falls Road south of Manzanita Lane	C	Salmon Falls Road north of Manzanita Lane	E	SR 193 south of American River bridge	E	SR 49 Gold Hill Road to Coloma	E	SR 49 Coloma to Marshall Grade Road	E	SR 49 Marshall Grade Road to SR 193	C	<p>El Dorado County shall conduct detailed transportation impact studies to ensure that the following performance measures are met. Project generated traffic will not cause study area roadways to operate worse than the levels of service (LOS) thresholds established by the El Dorado County General Plan, which are currently as follows.</p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;"><u>Roadway Segment</u></th> <th style="text-align: left;"><u>LOS</u></th> </tr> </thead> <tbody> <tr> <td>Cold Springs Road from Cool Water Creek to SR 49</td> <td>E</td> </tr> <tr> <td>Lotus Road between Gold Hill Road and SR 49</td> <td>D</td> </tr> <tr> <td>Marshall Road north of SR 49</td> <td>E</td> </tr> <tr> <td>Salmon Falls Road south of Manzanita Lane</td> <td>C</td> </tr> <tr> <td>Salmon Falls Road north of Manzanita Lane</td> <td>E</td> </tr> <tr> <td>SR 193 south of American River bridge</td> <td>E</td> </tr> <tr> <td>SR 49 Gold Hill Road to Coloma</td> <td>E</td> </tr> <tr> <td>SR 49 Coloma to Marshall Grade Road</td> <td>E</td> </tr> <tr> <td>SR 49 Marshall Grade Road to SR 193</td> <td>C</td> </tr> </tbody> </table>	<u>Roadway Segment</u>	<u>LOS</u>	Cold Springs Road from Cool Water Creek to SR 49	E	Lotus Road between Gold Hill Road and SR 49	D	Marshall Road north of SR 49	E	Salmon Falls Road south of Manzanita Lane	C	Salmon Falls Road north of Manzanita Lane	E	SR 193 south of American River bridge	E	SR 49 Gold Hill Road to Coloma	E	SR 49 Coloma to Marshall Grade Road	E	SR 49 Marshall Grade Road to SR 193	C	<p>Document analysis of potential for proposed individual RMP-related programs or actions that exceed current General Plan LOS standards and transmittal of this analysis to the County Department of Transportation for review and comment. Document attainment of LOS thresholds defined by current, adopted County General Plan.</p>	<p>County Parks Division</p>	<p>Ongoing, in response to program action, or facility development</p>
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## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
	<p>SR 49 Gold Hill Road to Coloma E SR 49 Coloma to Marshall Grade Road E SR 49 Marshall Grade Road to SR 193 C</p> <p>These thresholds represent the LOS that are projected to occur after implementation of the 2015 capital improvement program (CIP) developed for the 1996 General Plan. County Counsel has determined that these thresholds are also consistent with the policies added to the 1996 General Plan by Measure Y.</p> <ul style="list-style-type: none"> <li>• Modification of intersection traffic control devices such as installation of a traffic signal;</li> <li>• Addition of paved shoulders to roadway segments</li> <li>• Modification of horizontal or vertical curves;</li> <li>• Addition of new travel lanes to roadway segments;</li> </ul> <p>Alterations in local circulation patterns through traffic calming devices to maintain traffic volumes under established maximum thresholds</p>	<p>These thresholds represent the LOS that are projected to occur after implementation of the 2015 capital improvement program (CIP) developed for the 1996 General Plan. County Counsel has determined that these thresholds are also consistent with the policies added to the 1996 General Plan by Measure Y.</p> <ul style="list-style-type: none"> <li>• Project-generated traffic will not cause traffic volumes on a collector street with fronting residences to increase above 4,000 vehicles per day, or increase traffic on a collector street with fronting residences that currently carries in excess of 4,000 vehicles per day.</li> </ul> <p>Typical actions associated with maintaining a desired LOS or desired maximum traffic volume include the following:</p> <ul style="list-style-type: none"> <li>• Construction of new intersection turn lanes;</li> <li>• Modification of intersection traffic control devices such as installation of a traffic signal;</li> <li>• Addition of paved shoulders to roadway segments;</li> <li>• Modification of horizontal or vertical curves;</li> <li>• Addition of new travel lanes to roadway segments;</li> </ul> <p>Alterations in local circulation patterns through traffic calming devices to maintain traffic volumes under established maximum thresholds.</p>			

**Action:**

- a) **One RMP-related program or action was implemented in 2004 that required a detailed transportation impact study:**
  - A traffic study for Special Use Permit application #S02-42 by the outfitter All Outdoors concluded that the traffic resulting from the project would result in either no increase, or only a negligible increase, in traffic volumes along Lotus Road.
- b) **No additional RMP-related programs or actions were implemented in 2011 that would have required detailed transportation impact studies:**
  - The “interim shuttle” parking area was not developed in 2011
  - There were no applications for additional public access to the middle run through river access facilities near Highway Rapid in 2011;
- c) **The County Department of Transportation monitored traffic volumes on the County roadway segments listed above on various dates in 2011. The traffic counts on Level of Service (LOS) information are summarized in the comments on RMP Element 3.5 in the 2011 Annual Report. Bassi Road is the only collector street with fronting residences regularly used by boating shuttle traffic.**

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p><b>Impact 9-3.</b> Approval of the RMP and the subsequent implementation of allowing put-ins and take-outs near Highway Rapid through SUP modifications may increase weekday and weekend traffic volumes on RMP roadways to an extent that would exceed the adopted level of service thresholds of El Dorado County.</p>	<p><b>Mitigation Measure 9-3.</b> Implement Mitigation Measure 9-1.</p>	<p>See Mitigation Measure 9-1.</p>	<p>Meet requirements of Mitigation Measure 9-1.</p>	<p>See Mitigation Measure 9-1.</p>	<p>See Mitigation Measure 9-1.</p>
<p><b>Action: None required. There were no modifications to Special Use Permits near Highway Rapid in 2011</b></p>					
<p><b>Impact 9-4.</b> Approval of the RMP and the subsequent implementation of allowing put-ins and take-outs near Highway Rapid through SUP modifications may increase parking demand in the vicinity of the new access point that could exceed available supply or cause illegal parking.</p>	<p><b>Mitigation Measure 9-4.</b> When individual programs or actions of the RMP are advanced to implementation, El Dorado County shall conduct detailed transportation impact studies. to ensure that the following performance measure is met: d) RMP-generated parking demand will not exceed available supply or cause illegal parking at river accesses.</p>	<p>Conduct detailed transportation impact studies to ensure that: RMP-generated parking demand will not exceed available supply or cause illegal parking at river accesses</p>	<p>Document detailed transportation impact studies to ensure that RMP-generated parking demand will not exceed available supply or cause illegal parking at river accesses and transmittal of study results to County Department of Transportation for comment.</p>	<p>County Parks Division</p>	<p>Ongoing, in response to program, action, or facility development</p>
<p><b>Action: None required. There were no modifications to Special Use Permits near Highway Rapid in 2011</b></p>					
<p><b>Impact 9-5.</b> Approval of the RMP and the subsequent implementation of new trail construction may increase weekday and weekend traffic volumes on RMP area roadways to an extent that would exceed the adopted level of service thresholds of El Dorado County.</p>	<p><b>Mitigation Measure 9-5.</b> Implement Mitigation Measure 9-1.</p>	<p>See Mitigation Measure 9-1.</p>	<p>Meet the requirements of Mitigation Measure 9-1.</p>	<p>See Mitigation Measure 9-1.</p>	<p>See Mitigation Measure 9-1.</p>
<p><b>Action: None required. There was a new trail constructed in the RMP area in 2010 and opened to the public in the fall of 2010. This trail segment primarily utilizes Salmon Falls Rd. and Hwy 49 for access to it. Traffic levels will be continued to be monitored.</b></p>					

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p><b>Impact 9-6.</b> Approval of the RMP and the subsequent implementation of new trail development along the river may increase parking demand that could exceed supply or cause illegal parking.</p>	<p><b>Mitigation Measure 9-6.</b> Implement Mitigation Measure 9-4.</p>	<p>See Mitigation Measure 9-4.</p>	<p>Meet the requirements of Mitigation Measure 9-4.</p>	<p>See Mitigation Measure 9-4.</p>	<p>See Mitigation Measure 9-4.</p>
<p><b>Action: None required. There was a new trail constructed in the RMP area in 2010 and opened to the public in the fall of 2010. This trail ends at Skunk Hollow (Salmon Falls bridge). Parking at this location will be monitored for exceedence problems by BLM and State Parks.</b></p>					
<p><b>Impact 9-7.</b> Approval of the RMP and the subsequent implementation of the various individual plan elements may increase weekday and weekend traffic volumes on RMP area roadways to an extent that would exceed the adopted level of service thresholds of El Dorado County.</p>	<p><b>Mitigation Measure 9-7.</b> Implement Mitigation Measure 9-1.</p>	<p>See Mitigation Measure 9-1.</p>	<p>Meet the requirements of Mitigation Measure 9-1.</p>	<p>See Mitigation Measure 9-1.</p>	<p>See Mitigation Measure 9-1.</p>
<p><b>Action: The County Department of Transportation monitored weekday and weekend traffic volumes on RMP area roadways in 2010. No Level of Service thresholds was exceeded. See comments in RMP Elements 3.5 of the 2010 Annual Report.</b></p>					
<p><b>Impact 9-8.</b> Approval of the RMP and the subsequent implementation of the various plan elements may increase parking demand in the vicinity of river access points that could exceed available supply or cause illegal parking.</p>	<p><b>Mitigation Measure 9-8.</b> Implement Mitigation Measure 9-4.</p>	<p>See Mitigation Measure 9-4.</p>	<p>Meet the requirements of Mitigation Measure 9-4.</p>		
<p><b>Action: None required in 2011. River use levels in 2011 were lower than use levels analyzed in the RMP EIR.</b></p> <ul style="list-style-type: none"> <li>▪ <b>In the years between 1997, when the data on traffic and parking for the RMP EIR was collected, and RMP adoption in 2001, additional parking facilities for commercial whitewater recreation were developed through revisions to several Special Use Permits or purchase of commercial property:</b> <ul style="list-style-type: none"> <li>○ Mother Lode campground's SUP was revised in May 1997;</li> <li>○ the SUP of River's Bend was revised in August 1998;</li> <li>○ American River Resort's SUP was revised in July 1999;</li> <li>○ Coloma Resort's SUP revision, approved by the Board of Supervisors on appeal on February 2000, provided for additional campsites that may be utilized by non-commercial boaters.</li> <li>○ All Outdoors has purchased commercially zoned property along Lotus Road which is used to park both company and client vehicles.</li> </ul> </li> <li>▪ <b>The California State Parks project at Skunk Hollow increased the number of parking spaces for non-commercial boaters at that parking area.</b></li> </ul>					

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<b>Noise:</b>					
<p><b>Impact 10-1.</b> Noise generated during construction of new facilities or improvements to existing facilities could cause short-term increases to ambient noise levels and could exceed County noise standards.</p>	<p><b>Mitigation Measure 10-1.</b></p> <p>(a) All construction vehicles will be equipped with properly operating and maintained mufflers.</p> <p>(b) Construction activities will only occur between the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday and 8:00 a.m. to 6:00 p.m. on Saturdays. No noise-generating construction activities will occur on Sundays or Holidays.</p> <p>(c) Construction vehicle staging areas will be located as far from adjacent residences or businesses as practicable.</p>	<p>The County will ensure that:</p> <p>(a) All construction vehicles will be equipped with properly operating and maintained mufflers.</p> <p>(b) Construction activities will only occur between the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday and 8:00 a.m. to 6:00 p.m. on Saturdays. No noise-generating construction activities will occur on Sundays or Holidays.</p> <p>(c) Construction vehicle staging areas will be located as far from adjacent residences or businesses as practicable.</p>	<p>Document written receipt of contractor commitment(s) to these actions and limitations, and transmittal of this information to the County Planning Department.</p>	<p>County Parks Division</p>	<p>Ongoing, in response to facility development</p>
<p><b>Action: None required. There was no new construction or improvements to existing facilities in the RMP area in 2011.</b></p>					
<p><b>Impact 10-2.</b> Increased use could result in noise level increases at and near existing and new facilities and at shoreline locations along the river.</p>	<p><b>Mitigation Measure 10-2.</b></p> <p>(a) When determining locations for the parking areas and restrooms, the County will avoid selecting sites adjacent to sensitive noise receptors whenever feasible.</p> <p>(b) When determining routes for trail systems, the County will avoid selecting routes adjacent to sensitive noise receptors whenever feasible.</p>	<p>The County will ensure that:</p> <p>(a) When determining locations for the parking areas and restrooms, the County will avoid selecting sites adjacent to sensitive noise receptors whenever feasible.</p> <p>(b) When determining routes for trail systems, the County will avoid selecting routes adjacent to sensitive noise receptors whenever feasible.</p>	<p>Document implementation of noise control actions, and transmittal of this information to the County Planning Department.</p>	<p>County Parks Division</p>	<p>Ongoing, in response to increased RMP area use</p>
<p><b>Action: None required. River use levels in 2011 were below those use levels analyzed for the RMP EIR.</b></p>					
<p><b>Impact 10-3.</b> Increased use of the middle reach, as a result of a private boater put-in and take-out near Highway Rapid, could increase noise levels within Quiet Zones.</p>	<p><b>Mitigation Measure 10-3.</b></p> <p>(a) The County will increase efforts to educate boaters (especially those putting in at Marshal Gold State Historic Park and at Henningsen-Lotus Park) of the requirements and sensitivities of the Quiet Zone.</p> <p>(b) The County will increase on-river signage as a reminder to rafters when they are within the Quiet Zone.</p> <p>(c) The County will amend Quiet Zone regulations and enforcement mechanisms to enable the issuance of citations to private rafters violating</p>	<p>The County will:</p> <p>(a) Increase efforts to educate boaters (especially those putting in at Marshal Gold State Historic Park and at Henningsen-Lotus Park) of the requirements and sensitivities of the Quiet Zone.</p> <p>(b) Increase on-river signage as a reminder to rafters when they are within the Quiet Zone.</p> <p>(c) Amend Quiet Zone regulations and enforcement mechanisms to enable the issuance of citations to private rafters violating Quiet Zone requirements.</p>	<p>Document implementation of noise control actions, and transmittal of this information to the County Planning Department.</p>	<p>County Parks Division</p>	<p>Ongoing, in response to increased use of the middle reach of the RMP area</p>

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
	<p>Quiet Zone requirements.</p> <p>(d) The County will develop and implement a system for conducting noise monitoring and reporting for sensitive locations along the river, with focus on areas within the Quiet Zone. Observed or reported violations of Quiet Zone regulations or County noise standards will be reported to the County Code Enforcement Officer or the Sheriff Department, as appropriate, within 2 days of the occurrence</p>	<p>(d) Develop and implement a system for conducting noise monitoring and reporting for sensitive locations along the river, with focus on areas within the Quiet Zone. Observed or reported violations of Quiet Zone regulations or County noise standards will be reported to the County Code Enforcement Officer or the Sheriff Department, as appropriate, within 2 days of the occurrence</p>			
<p><b>Impact 10-3 Action:</b></p> <p>a) The Parks Division staffed Henningsen Lotus Park with a river patrol staff each Saturday and Sunday during the boating season. Staff educated non-commercial boaters about the RMP and provided a staggered patrol of the Quiet Zone. See discussion in River Patrol Summary.</p> <p>b) Quiet Zone signage was increased in 2002 and 2009.</p> <p>c) Ordinance Chapter 5.50 was amended in March 2002 to extent Quiet Zone regulations and fine system to non-commercial boaters. EDSO has citation authority.</p> <p>d) See discussion in 2011 Annual Report Element 2.4 which summarize the Quiet Zone monitoring conducted in 2011.</p>					
<p><b>Impact 10-5.</b> Campground noise levels could exceed County noise standards as a result of river-related visitation.</p>	<p><b>Mitigation Measure 10-5.</b></p> <p>(a) The County will develop and implement a system for conducting noise monitoring and reporting for noise-sensitive areas near RMP area campgrounds.</p> <p>(b) Observed or reported violations of Quiet Zone regulations or County noise standards will be reported to the County Code Enforcement Officer or the Sheriff Department, as appropriate, within 2 days of the occurrence.</p> <p>(c) More than two noise exceedance citations per year issued to SUP holders will result in the imposition of fines and other disciplinary measures on violators.</p> <p>(d) More than two noise exceedance citations in two consecutive years shall result in a formal recommendation for limitation or revocation of SUP to County Code Enforcement Officer and Planning Director.</p>	<p>The County will</p> <p>(a) Develop and implement a system for conducting noise monitoring and reporting for noise-sensitive areas near RMP area campgrounds.</p> <p>(b) Report observed or reported violations of Quiet Zone regulations or County noise standards to the County Code Enforcement Officer or the Sheriff Department, as appropriate, within 2 days of the occurrence.</p> <p>(c) Request that the Sheriff's Department impose fines and other disciplinary measures in response to more than two noise exceedance citations per year issued to SUP holders.</p> <p>(d) Formally recommend a limitation or revocation of SUP to County Code Enforcement Officer and Planning Director in the event that more than two noise exceedance citations in two consecutive years have occurred.</p>	<p>(a) Document development, implementation, and monitoring of an RMP area campground noise-monitoring program.</p> <p>(b) Documentation of observed or reported violations and transmittal of documentation to the County Code Enforcement Officer or the Sheriff Dept. as appropriate, within 2 days of the occurrence.</p> <p>(c) and (d) Documentation of observed or reported violations and transmittal of documentation to the County Code Enforcement Officer or the Sheriff Dept. County Parks will cite the applicable County Ordinance that fines or other disciplinary measures are required.</p> <p>In the event of multiple noise exceedance events in 2 consecutive years, County Parks will provide a recommendation to limit or</p>	<p>County Parks Division</p>	<p>(a) One year after the adoption of the RMP; updated each third year thereafter</p> <p>(b), (c), and (d) Periodically, in response to observation results and incidents</p>

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IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
			revoke the subject SUP to County Code Enforcement Officer and Planning Director.		
<p><b>Action:</b></p> <p>a) Noise monitoring of campgrounds was not conducted in 2011 by County Parks.</p> <p>b) The River Patrol staff has the authority to issue Quiet Zone violations to commercial outfitters only. The County Sheriff would have to witness a non-commercial boater in the act of a quiet zone violation in order to issue a citation. The current status of County noise standards: Decibel standards adopted into Special Use Permit conditions can only be enforced by a certified noise analyst using a calibrated noise measuring device. With the County General Plan there is no Noise Ordinance in effect at the moment. This situation means that the County cannot enforce a decibel standard (i.e. at a commercial business) unless one is included in a Special Use Permit. Further, an adopted Noise Ordinance would have to include the provisions stated in c) and d) above before they could be enforced.</p>					
<p><b>Aesthetics:</b></p>					
<p><b>Impact 11-1.</b> The construction or expansion of parking areas and restroom facilities could detract from the visual quality of areas adjacent to or within the river corridor.</p>	<p><b>Mitigation Measure 11-1.</b> The County will work to ensure that the construction or expansion of parking areas and restroom facilities does not detract from the visual quality of areas adjacent to or within the river corridor.</p> <p>(a) To reduce potential impacts of parking area development the County will:</p> <ol style="list-style-type: none"> <li>(1) Select parking areas that have been previously graded, cleared, or otherwise disturbed whenever possible; or select sights with low visual quality and limited visibility;</li> <li>(2) Design parking areas in a visually unobtrusive manner;</li> <li>(3) Retain natural features and vegetation (especially trees) whenever possible;</li> <li>(4) Provide refuse receptacles for parking area users to reduce litter and the scattering of debris; and</li> <li>(5) Use native plant species for landscaping.</li> </ol> <p>(b) To reduce the potential impacts of restroom facility construction the County will:</p> <ol style="list-style-type: none"> <li>(1) Select locations that are setback from the shoreline and allow vegetation to screen structures as viewed from the river, and</li> <li>(2) Design facilities with a simple unobtrusive architectural appearance and with exterior</li> </ol>	<p>To reduce potential impacts of parking area development the County will:</p> <ol style="list-style-type: none"> <li>(1) Select parking areas that have been previously graded, cleared, or otherwise disturbed whenever possible; or select sights with low visual quality and limited visibility;</li> <li>(2) Design parking areas in a visually unobtrusive manner;</li> <li>(3) Retain natural features and vegetation (especially trees) whenever possible;</li> <li>(4) Provide refuse receptacles for parking area users to reduce litter and the scattering of debris; and</li> <li>(5) Use native plant species for landscaping.</li> </ol> <p>To reduce the potential impacts of restroom facility construction the County will also:</p> <ol style="list-style-type: none"> <li>(1) Select locations that are setback from the shoreline and allow vegetation to screen structures as viewed from the river, and</li> <li>(2) Design facilities with a simple unobtrusive architectural appearance and with exterior colors that blend with the surrounding areas.</li> </ol>	<p>Document development, implementation, and monitoring of use of design and construction features described in Mitigation Measure 11-1 (a)-(b), as applicable, to the development of RMP area parking and restroom facilities. Transmittal of documentation to the County Planning Department for comment prior to finalization of grading or building permits.</p>	<p>County Parks Division</p>	<p>(a) Periodically, in response to facilities development projects</p>

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IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
	colors that blend with the surrounding areas.				
<p><b>Action: None required. BLM's 2004 Greenwood Creek restroom project was consistent with (a)(1) through (a)(5) above.</b></p>					
<p><b>Cultural Resources:</b></p>					
<p><b>Impact 12-1.</b> Construction of the new facilities could affect cultural or paleontological resources.</p>	<p><b>Mitigation Measure 12-1.</b></p> <p>(a) On-site cultural and paleontological resources surveys will be conducted by a qualified archaeologist and paleontologist prior to construction of a new facility. The purpose of this survey will be to more precisely locate and map significant cultural and paleontological resources.</p> <p>(b) In the event that unanticipated cultural or paleontological resources are encountered during project construction, all earth-moving activity will cease until the County retains the services of a qualified archaeologist or paleontologist. The archaeologist or paleontologist will examine the findings, assess their significance, and offer recommendations for procedures deemed appropriate to either further investigate or mitigate adverse impacts on those cultural or paleontological archaeological resources that have been encountered (e.g., excavate the significant resource). These additional measures will be</p> <p>(c) If human bone or bones of unknown origin is found during project construction, all work will stop in the vicinity of the find and the County Coroner, the County of El Dorado, and the County will be contacted immediately. If the remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission, who will notify the person believed to be the most likely descendant. The most likely descendant will work with the County to develop a program for re- interment of the human remains</p>	<p>To reduce potential impacts of new facilities on cultural or paleontological resources, the County will ensure that:</p> <p>(a) On-site cultural and paleontological resources surveys will be conducted by a qualified archaeologist and paleontologist prior to construction of a new facility. The purpose of this survey will be to more precisely locate and map significant cultural and paleontological resources.</p> <p>(b) In the event that unanticipated cultural or paleontological resources are encountered during project construction, all earth-moving activity will cease until the County retains the services of a qualified archaeologist or paleontologist. The archaeologist or paleontologist will examine the findings, assess their significance, and offer recommendations for procedures deemed appropriate to either further investigate or mitigate adverse impacts on those cultural or paleontological archaeological resources that have been encountered (e.g., excavate the significant resource). These additional measures will be implemented.</p> <p>(c) If human bone or bones of unknown origin is found during project construction, all work will stop in the vicinity of the find and the County Coroner, the County of El Dorado, and the County will be contacted immediately. If the remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission, who will notify the person believed to be the most likely descendant. The most likely descendant will work with the County to develop a program for re- interment of the human remains and any associated artifacts. No additional work will take place within the immediate vicinity of the find until the</p>	<p>Document implementation of:</p> <p>(a) Cultural and paleontological resources surveys during facilities planning activities and transmittal of survey results to the County Planning Department.</p> <p>(b) and (c) Implementation of procedures defined by this mitigation measure in the event of unexpected discovery of on-site cultural and paleontological resources.</p>	<p>County Parks Division</p>	<p>(a) Periodically, in response to facilities development projects</p> <p>(b) and (c) Periodically, in response to unexpected discovery of on-site cultural and paleontological resources</p>

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IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
	and any associated artifacts. No additional work will take place within the immediate vicinity of the find until the identified appropriate actions have been completed	identified appropriate actions have been completed			
<p><b>Impact 11-1 (continued)</b></p> <p><b>Action: None required.</b></p>					
<p><b>Public Safety:</b></p>					
<p><b>Impact 13-1.</b> Extension of the middle run could increase the number of less experienced river users creating the potential for increased whitewater-related injury.</p>	<p><b>Mitigation Measure 13-1.</b> In addition to the educational and safety programs identified in the RMP, the County would:</p> <p>(a) Increase signage specifically directed toward middle-run boaters, with warnings about the dangers of rafting with improper equipment, skills, and knowledge of rescue techniques and river flows;</p> <p>(b) Install signage at middle run put-ins and up-river from Highway Rapid informing boaters of the location of the Highway Rapid takeout and warning unprepared boaters of the dangers of continuing beyond Highway Rapid; and</p> <p>(c) Increase staffing at middle run put-ins and at the Highway Rapid take-out to provide safety equipment checks and to inform rafters of the dangers of the lower reach.</p>	<p>To reduce potential safety impacts potentially influenced by the extension of the middle run of the RMP area, the County will:</p> <p>(a) Increase signage specifically directed toward middle-run boaters, with warnings about the dangers of rafting with improper equipment, skills, and knowledge of rescue techniques and river flows;</p> <p>(b) Install signage at middle run put-ins and up-river from Highway Rapid informing boaters of the location of the Highway Rapid takeout and warning unprepared boaters of the dangers of continuing beyond Highway Rapid; and</p> <p>(c) Increase staffing at middle run put-ins and at the Highway Rapid take-out to provide safety equipment checks and to inform rafters of the dangers of the lower reach.</p>	<p>(a) and (b) Document provision of signage (or coordination of signage in the middle-run area.</p> <p>(c) Document increased staffing at middle-run put-ins and at the Highway Rapid take-out to provide safety equipment checks and to inform rafters of the dangers of the lower reach.</p>	<p>County Parks Division</p>	<p>Within the first year after the adoption of the RMP</p>
<p><b>Action:</b></p> <p>a) Revised river flow/safety signs were installed at Henningsen-Lotus Park, Camp Lotus and Marshall Gold SHP in 2003.</p> <p>b) Signage specific to the middle run was installed at Marshall Gold SHP in 2003. Parks Division staff revised signage after the Bureau of Land Management plan was adopted and the Greenwood Creek access was improved.</p> <p>c) The Parks Division maintained similar levels of staff time patrolling the quiet zone.</p> <ul style="list-style-type: none"> <li>▪ County Parks Division coordinated with BLM to provide occasional monitoring at Greenwood Creek.</li> <li>▪ Although staff does observe people with the intention of running the gorge who do not possess any knowledge of Class III boating skills, more prevalent are people floating the river from the Coloma access points to the County Park without either a lifejacket or moving water skills. Parks Division patrols have continued to emphasize the upper half of the Coloma-Greenwood section.</li> </ul> <p>See comments on use levels on the Coloma-Greenwood section in Element 4 of 2011 Annual Report.</p>					

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p><b>Impact 13-2.</b> Increased boat densities due to the absence of use restriction mechanisms in the RMP could increase the number of on river incidents.</p>	<p><b>Mitigation Measure 13-2.</b> County Parks shall:</p> <ul style="list-style-type: none"> <li>(a) Perform boater and boat counts at Troublemaker, Barking Dog, and Satan's Cesspool rapids. Peak-use period measurements will be conducted using a rolling two-hour period with 1/4-hour (15-minute) increments. For counting craft, two kayaks will be counted as one craft because of their superior maneuverability.</li> <li>(b) Compile incident and accident report summary and respondent recommendations as part of annual report, and present findings to the RMAC.</li> <li>(c) Institute non-commercial large group registration requirements (large groups are defined as four or more multiple-occupancy boats or 18 or more people). All registered groups will be provided information on boat dispersion techniques and river etiquette. Large groups shall be categorized as follows and will include the following initial requirements: <ul style="list-style-type: none"> <li>1. Institutional Group – Defined as a group organized by a non-profit organization meeting IRS tax-exempt requirements. Institutional groups will be subject to following: <ul style="list-style-type: none"> <li>➤ Pre-season annual registration with County Parks;</li> <li>➤ Proof of liability insurance;</li> <li>➤ Designation of trip leader having proof of guide certification on rescue training, first aid, and knowledge of County regulations; and</li> <li>➤ Post-season annual reporting of river use, by date.</li> </ul> </li> <li>2. Large Group – Defined as non-institutional group meeting the size criteria discussed above. Large groups will be subject to the following requirement:</li> </ul> </li> </ul>	<p>The County will enact the following measures as described in RMP Element 7.3 and related elements, and summarized below:</p> <ul style="list-style-type: none"> <li>(a) Perform boater and boat counts at Troublemaker, Barking Dog, and Satan's Cesspool rapids. Peak-use period measurements will be conducted using a rolling two-hour period with 1/4-hour (15-minute) increments. For counting craft, two kayaks will be counted as one craft because of their superior maneuverability.</li> <li>(b) Compile incident and accident report summary and respondent recommendations as part of annual report, and present findings to the RMAC.</li> <li>(c) Institute non-commercial large group registration requirements (large groups are defined as four or more multiple-occupancy boats or 18 or more people). All registered groups will be provided information on boat dispersion techniques and river etiquette. Large groups shall be categorized as follows and will include the following initial requirements: <ul style="list-style-type: none"> <li>1. Institutional Group – Defined as a group organized by a non-profit organization meeting IRS tax-exempt requirements. Institutional groups will be subject to following: <ul style="list-style-type: none"> <li>➤ Pre-season annual registration with County Parks;</li> <li>➤ Proof of liability insurance;</li> <li>➤ Designation of trip leader having proof of guide certification on rescue training, first aid, and knowledge of County regulations; and</li> <li>➤ Post-season annual reporting of river use, by date.</li> </ul> </li> <li>2. Large Group – Defined as non-institutional group meeting the size criteria discussed above. Large groups will be subject to the following requirement: <ul style="list-style-type: none"> <li>➤ Pre-trip registration with County Parks.</li> </ul> </li> </ul> </li> </ul> <p>No fees or insurance requirements will be imposed on non-institutional groups at this time.</p> <p>In the event that boat counts exceed a</p>	<p>Documentation of the results of the actions described herein and reporting this information in an annual summary, on the County Geographic Information System (GIS), and on the County RMP web site.</p>	<p>County Division of Parks</p>	<p>Within the first year after the adoption of the RMP</p>

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
	<p>➤ Pre-trip registration with County Parks.</p> <p>No fees or insurance requirements will be imposed on non-institutional groups at this time.</p> <p>In the event that boat counts exceed a threshold of 300 boats in two hours on any rapid twice in any season, the County shall develop management actions to allocate commercial and institutional groups (as defined in (b), above) use by river segment, and will conduct CEQA or other legal analysis as required prior to implementation of the management actions under consideration. Note that the management actions discussed below provide general actions that would be implemented under each level. Prior to the implementation of each action, specific conditions and implementation methods would be defined by the County.</p> <p><i>Level One (to be implemented in year following observed exceedance of threshold identified above):</i></p> <p>➤ Use incentives and/or disincentives, such as access fees for County operated facilities or commercial surcharge fee adjustments on peak days to encourage or discourage use of specific river reaches. <i>Level One</i> management actions will focus on commercial and institutional group use.</p> <p><i>Level Two (to be implemented in year following observed exceedance of threshold with Level One management actions in place):</i></p> <p>➤ Develop and implement commercial and institutional group density standards, such as trip time scheduling.</p> <p><i>Level Three (to be implemented in year following observed exceedance of threshold with Level Two management</i></p>	<p>threshold of 300 boats in two hours on any rapid twice in any season, the County shall develop management actions to allocate commercial and institutional groups (as defined in (b), above) use by river segment, and will conduct CEQA or other legal analysis as required prior to implementation of the management actions under consideration. Note that the management actions discussed below provide general actions that would be implemented under each level. Prior to the implementation of each action, specific conditions and implementation methods would be defined by the County.</p> <p><i>Level One (to be implemented in year following observed exceedance of threshold identified above):</i></p> <p>➤ Use incentives and/or disincentives, such as access fees for County operated facilities or commercial surcharge fee adjustments on peak days to encourage or discourage use of specific river reaches. <i>Level One</i> management actions will focus on commercial and institutional group use.</p> <p>Level Two (to be implemented in year following observed exceedance of threshold with Level One management actions in place):</p> <p>➤ Develop and implement commercial and institutional group density standards, such as trip time scheduling.</p> <p>Level Three (to be implemented in year following observed exceedance of threshold with Level Two management actions in place):</p> <p>Adjust commercial allocations by river segment and develop institutional group allocations.</p>			

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
	<i>actions in place):</i> Adjust commercial allocations by river segment and develop institutional group allocations.				
<b>Action:</b> a) See River Patrol Summary and Carrying Capacity Monitoring tables in RMP Element 7.3 of the 2011 Annual Report. b) Large group and Institutional group registration requirements were implemented through Ordinance Chapter 5.50.  The Carrying Capacity boat density thresholds were not reached in 2011. See discussion in 2011 Annual Report.					
<b>Public Services</b>					
<b>Impact 14-1.</b> Implementation of certain elements of the RMP and proposed mitigation measures to reduce potential impacts would increase the need for County Parks & Planning Dept. staff.	<b>Mitigation Measure 14-1.</b> Mitigation Measure 4-1 will serve to reduce this impact.	See Mitigation Measure 4-1.	Meet the requirements of Mitigation Measure 4-1.		
<b>Action: None taken. Overall County budget outlook has prevented the hiring of additional staff.</b>					
<b>Air Quality</b>					
<b>Impact 15-1.</b> The construction or expansion of parking areas would result in short-term construction vehicle emissions and fugitive dust that could exceed criteria pollutant thresholds of significance.	<b>Mitigation Measure 15-1.</b> Mitigation Measure 5-1 will serve to reduce this impact.	See Mitigation Measure 5-1.	Meet the requirements of Mitigation Measure 5-1.	See Mitigation Measure 5-1.	See Mitigation Measure 5-1.
<b>Action: See Impact 5-1</b>					
<b>Impact 15-2.</b> Construction of restroom facilities could create a new concentrated objectionable odor source that may result in nuisance complaints from area residents and facility users.	<b>Mitigation Measure 15-2.</b> (a) Select a location that is convenient to river users, yet not located near existing residences; and (b) Ensure that the type of facility constructed is designed to contain or suppress objectionable odors adequately in order to avoid nuisance to surrounding areas.	Prior to construction of restroom facilities, the County will: (a) Select a location that is convenient to river users, yet not located near existing residences; and (b) Ensure that the type of facility constructed is designed to contain or suppress objectionable odors adequately in order to avoid nuisance to surrounding areas.	Document compliance with the requirements of this mitigation measure and report this information in an annual summary and on the County GIS.	County Parks Division	Periodically, in response to facilities development projects
<b>Action: Mitigation Measures 15-2, a-b were followed in the construction of BLM's restroom facilities at Greenwood Creek in 2004.</b>					
<b>Impact 15-3.</b> Increased traffic in the RMP area would increase	<b>Mitigation Measure 15-3.</b> Mitigation Measure 9-1 will serve to reduce this	See Mitigation Measure 9-1.	Meet the requirements of Mitigation Measure 9-1.	See Mitigation Measure 9-1.	See Mitigation Measure 9-1.

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
vehicle emissions, which could exacerbate AAQS non-attainment.	impact.				
<b>Action: See Impact 9-1.</b>					
<b>Cumulative Impacts note: no mitigation has been proposed for impacts 16-1 and 16-2 in the RMP EIR.</b>					
<b>Impact 16-3.</b> Increased short-term emissions related to construction activities could be significant when combined with emissions from concurrent construction activities within the RMP area.	<b>Mitigation Measure 16-3.</b> The County will work to ensure that Increased short-term emissions related to construction activities could be significant when combined with emissions from concurrent construction activities within the RMP area.	Construction activities associated with development of new facilities under the RMP will be scheduled to avoid the occurrence of high-emission activities, such as ground disturbance and heavy vehicle use, concurrently with other similar activities within the RMP area.	Document project scheduling used to minimize the concentration of emissions and report this information in an annual summary and on the County GIS.	County Parks Division	Periodically, in response to facilities development projects
<b>Action: None required.</b>					
<b>Impact 16-5.</b> General impacts identified in this Revised Draft EIR resulting from increased river use associated with elements of the RMP and potential future growth.	<b>Mitigation Measure 16-5.</b> (a) Perform boater and boat counts at Troublemaker, Barking Dog, and Satan's Cesspool rapids. Peak-use period measurements will be conducted using a rolling two-hour period with 1/4-hour (15-minute) increments. For counting craft, two kayaks will be counted as one craft because of their superior maneuverability. (b) Institute non-commercial large group registration requirements (large groups are defined as four or more multiple-occupancy boats or 18 or more people). All registered groups will be provided information on boat dispersion techniques and river etiquette. Large groups shall be categorized as follows and will include the following initial requirements: 1. Institutional Group – Defined as a group organized by a non-profit organization meeting IRS tax-exempt requirements. Institutional groups will be subject to following: <ul style="list-style-type: none"> <li>• Pre-season annual registration with County Parks;</li> <li>• Proof of liability insurance;</li> <li>• Designation of trip leader having proof of guide certification on</li> </ul>	The County will enact the following measures as described in RMP Element 7.4 and related elements, and summarized below: (a) Perform boater and boat counts at Troublemaker, Barking Dog, and Satan's Cesspool rapids. Peak-use period measurements will be conducted using a rolling two-hour period with 1/4-hour (15-minute) increments. For counting craft, two kayaks will be counted as one craft because of their superior maneuverability.. (b) Institute non-commercial large group registration requirements (large groups are defined as four or more multiple-occupancy boats or 18 or more people). All registered groups will be provided information on boat dispersion techniques and river etiquette. Large groups shall be categorized as follows and will include the following initial requirements: 1. Institutional Group – Defined as a group organized by a non-profit organization meeting IRS tax-exempt requirements. Institutional groups will be subject to following: <ul style="list-style-type: none"> <li>• Pre-season annual registration with County Parks;</li> <li>• Proof of liability insurance;</li> <li>• Designation of trip leader having proof of guide certification on rescue training, first aid, and knowledge of</li> </ul>	(a) Document execution of boat counts and report this information in an annual summary, on the County's RMP web site, and on the County GIS. (b) Document execution of large group registration provisions and report this information in an annual summary, on the County's RMP web site, and on the County GIS.	County Parks Division	Within the first year after the adoption of the RMP

## River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
	<p>rescue training, first aid, and knowledge of County regulations; and</p> <ul style="list-style-type: none"> <li>• Post-season annual reporting of river use, by date.</li> </ul> <p>2. Large Group – Defined as a non-institutional group meeting the size criteria discussed above. Large Groups will be subject to the following requirement:</p> <ul style="list-style-type: none"> <li>• Pre-trip registration with County Parks.</li> </ul> <p>No fees or insurance requirements will be imposed on non-institutional groups at this time.</p> <p>In the event that data collected in a single year indicate daily boater totals are in excess of 2,100 in the upper reach or 3,200 in the lower reach twice in any season, the County shall develop management actions to allocate commercial and large groups (as defined in (b), above) use by river segment, and will conduct CEQA and or other legal analysis as required prior to implementation of the management actions under consideration. Note that the management actions discussed below provides general actions that would be implemented under each level. Prior to the implementation of each action, specific conditions and implementation methods would be defined by the County.</p> <p><i>Level One (to be implemented in year following observed exceedance of thresholds identified above):</i></p> <ul style="list-style-type: none"> <li>• Use incentives and/or disincentives, such as access to County operated facilities or commercial surcharge fee adjustments on peak days to encourage or discourage use of specific river reaches. <i>Level One</i> management actions will focus on commercial and institutional group use; and</li> <li>• Eliminate commercial outfitter guest</li> </ul>	<p>County regulations; and</p> <ul style="list-style-type: none"> <li>• Post-season annual reporting of river use, by date.</li> </ul> <p>2. Large Group – Defined as a non-institutional group meeting the size criteria discussed above. Large Groups will be subject to the following requirement:</p> <ul style="list-style-type: none"> <li>• Pre-trip registration with County Parks.</li> </ul> <p>No fees or insurance requirements will be imposed on non-institutional groups at this time.</p> <p>In the event that data collected in a single year indicate daily boater totals are in excess of 2,100 in the upper reach or 3,200 in the lower reach twice in any season, the County shall develop management actions to allocate commercial and large groups (as defined in (b), above) use by river segment, and will conduct CEQA and or other legal analysis as required prior to implementation of the management actions under consideration. Note that the management actions discussed below provide general actions that would be implemented under each level. Prior to the implementation of each action, specific conditions and implementation methods would be defined by the County.</p> <p><i>Level One (to be implemented in year following observed exceedance of thresholds identified above):</i></p> <ul style="list-style-type: none"> <li>• Use incentives and/or disincentives, such as access to County operated facilities or commercial surcharge fee adjustments on peak days to encourage or discourage use of specific river reaches. <i>Level One</i> management actions will focus on commercial and institutional group use; and</li> <li>• Eliminate commercial outfitter guest allocations.</li> </ul> <p><i>Level Two (to be implemented in year following observed exceedance of threshold with Level One management actions in place):</i></p> <ul style="list-style-type: none"> <li>• Adjust commercial allocations by river</li> </ul>			

**River Management Plan  
Mitigation Monitoring Plan**

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
	<p>allocations.</p> <p><i>Level Two (to be implemented in year following observed exceedance of threshold with Level One management actions in place):</i> Adjust commercial allocations by river segment and develop institutional group allocations.</p>	<p>segment and develop institutional group allocations.</p> <p><i>Level Three (to be implemented in year following observed exceedance of threshold with Level Two management actions in place):</i></p>			
<p><b>Action: See action in Impact 13-2, above. See Daily Boater Total table in Element 7.4.</b></p>					

**APPENDIX B**  
**2011 RIVER USE TRENDS**

## APPENDIX B RIVER USE TRENDS

### Trends in commercial and noncommercial river use on weekends

The two prior figures have illustrated the overall trend in weekend use, having combined the commercial and noncommercial uses together. This section will examine two components of the overall trends:

1. Trends in the individual commercial and noncommercial categories;
2. Trends in commercial and noncommercial choice of runs on Saturdays and Sundays.

**Gorge run on Saturdays:** Table 1 below provides data on the average commercial, noncommercial, and total number of boaters during the Memorial Day to Labor Day period during 1996, 2003, 2004, 2006, 2007, 2008, 2009 and 2010.

**Table 1. Average number of boaters – Gorge run on Saturdays**

	Commercial	Noncommercial	Total
<b>1996</b>	1752	544	2296
<b>2003</b>	925	424	1471
<b>2004</b>	925	527	1452
<b>2006</b>	973	408	1381
<b>2007</b>	1096	450	1546
<b>2008</b>	977	463	1440
<b>2009</b>	873*	520	1393
<b>2010</b>	1066	501	1567
<b>2011</b>	1161	486	1647
<b>% change 1996-2011</b>	44% decrease	11% decrease	28% decrease

- 1 The decrease in commercial use on the Gorge run is proportionally greater than the decrease in noncommercial use.
- 2 The average numbers of noncommercial boaters on the gorge run in 2011 decreased nearly 3% more compared to 2010. (see Figure 1 below).
- 3 Although the absolute number of noncommercial boaters has declined since 1996, because the percentage decrease in commercial use has been greater, noncommercial boaters had a larger "share of the pie" in 2011 than in 1996:
  - o In 2011, the noncommercial boater share of the pie was 28.8% of the total daily boaters on the Gorge run on Saturdays.
  - o In the mid-1990s, the noncommercial boater share of the pie was about 25% of the total daily boaters on the Gorge run on Saturdays.

\*Commercial data from 2009 did not include guides or whole river trips

**Chili Bar run on Sundays:** Table 2 below provides data on the average commercial, noncommercial, and total number of boaters during the Memorial Day to Labor Day period in 1996, 2003, 2004, 2006, 2007, 2008, 2009 and 2010.

**Table 2. Average number of boaters – Chili Bar run on Sundays**

	Commercial	Noncommercial	Total
1996	1015	420	1435
2003	506	263	768
2004	500	257	757
2006	525	198	723
2007	480	240	720
2008	325	215	613
2009	324*	214	611
2010	431	262	693
2010	431	262	693
2011	615	232	847
<b>% change 1996-2010</b>	40% decrease	45% decrease	41% decrease

- 1 Noncommercial use on the Chili Bar run on Sundays experienced a decrease in 2011. High flows on the South may have deterred more private boaters from running the Chili Bar which can be more challenging than the Gorge at those flows.
- 2 On the Chili Bar run, noncommercial boaters’ “share of the pie” had remained a relatively constant 25-30% of the total daily boaters on Sundays from the mid-1990s until 2002. In 2011, the noncommercial share of the pie was about 43%.

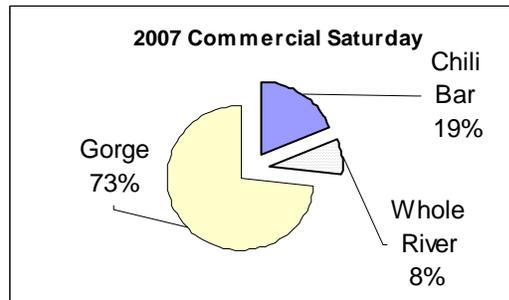
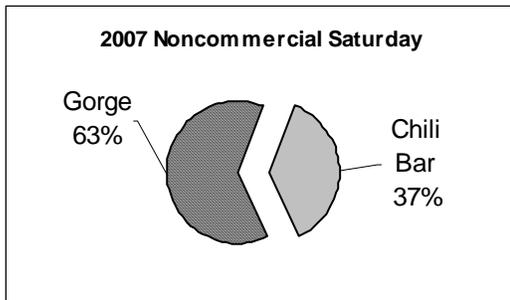
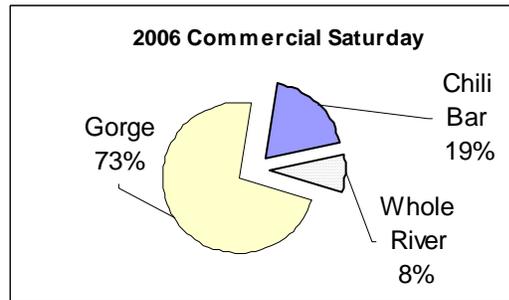
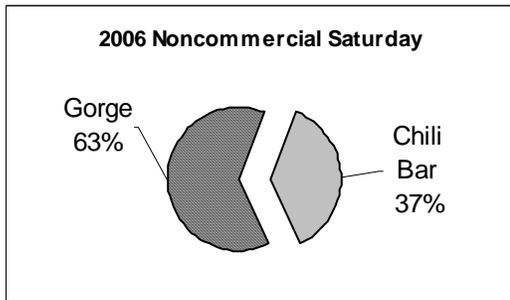
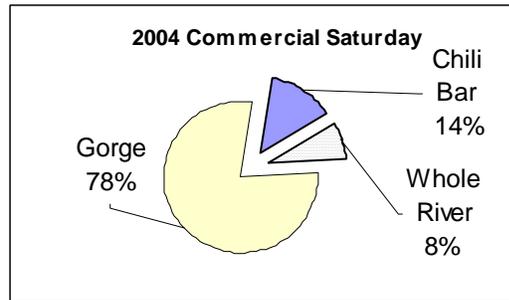
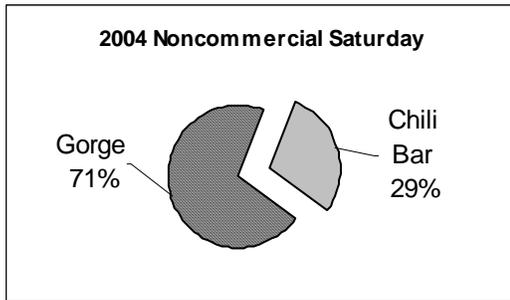
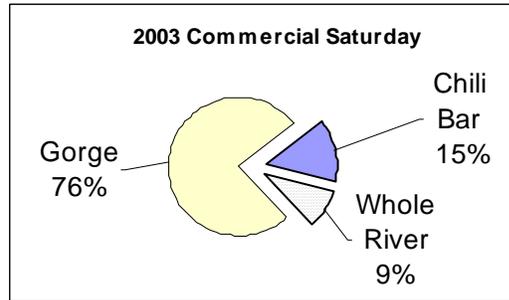
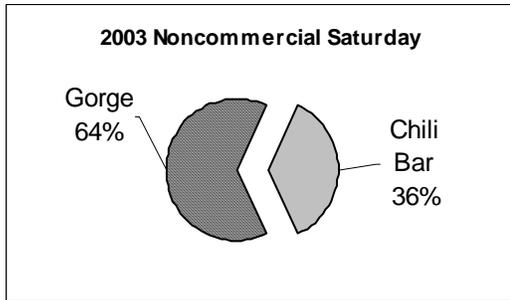
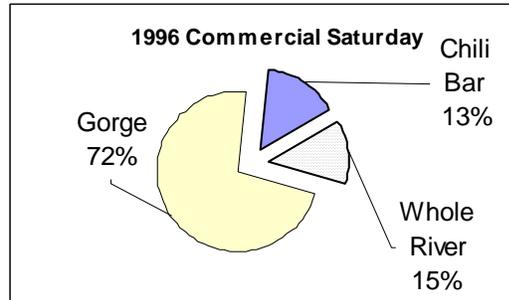
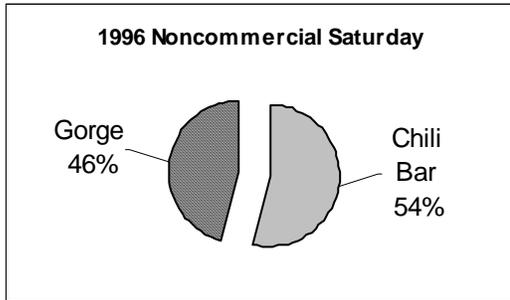
\*Commercial data from 2009 did not include guides or whole river trips

**Trends in choice of runs**

Over the coming years, the trends in choice of runs may guide County education efforts and track whether management actions related to the carrying capacity strategy are effective.

**Saturdays:** Between 1996 and 2002, noncommercial boaters exhibited a pronounced shift away from running the Chili Bar section and increasingly chose the gorge on Saturdays (see Figure 1). This pattern continued in 2011. The percentages in the following pie charts are based on the average river use by commercial and noncommercial boaters during the Memorial Day to Labor Day period.

Strong preference is exhibited by commercial clients and outfitters for Saturday gorge trips. Figure 1 also displays the downward trend in the proportion of whole river trips since the mid-1990s. In 2011 there was a significant increase in commercial whole rivers trips which may be a reflection of the higher flows and continues releases generated by the snow pack. Years with better snow pack – a longer runoff seem to reflect this trend. The relative lower flows from a scheduled release do not appear to support a preference toward whole river trips.



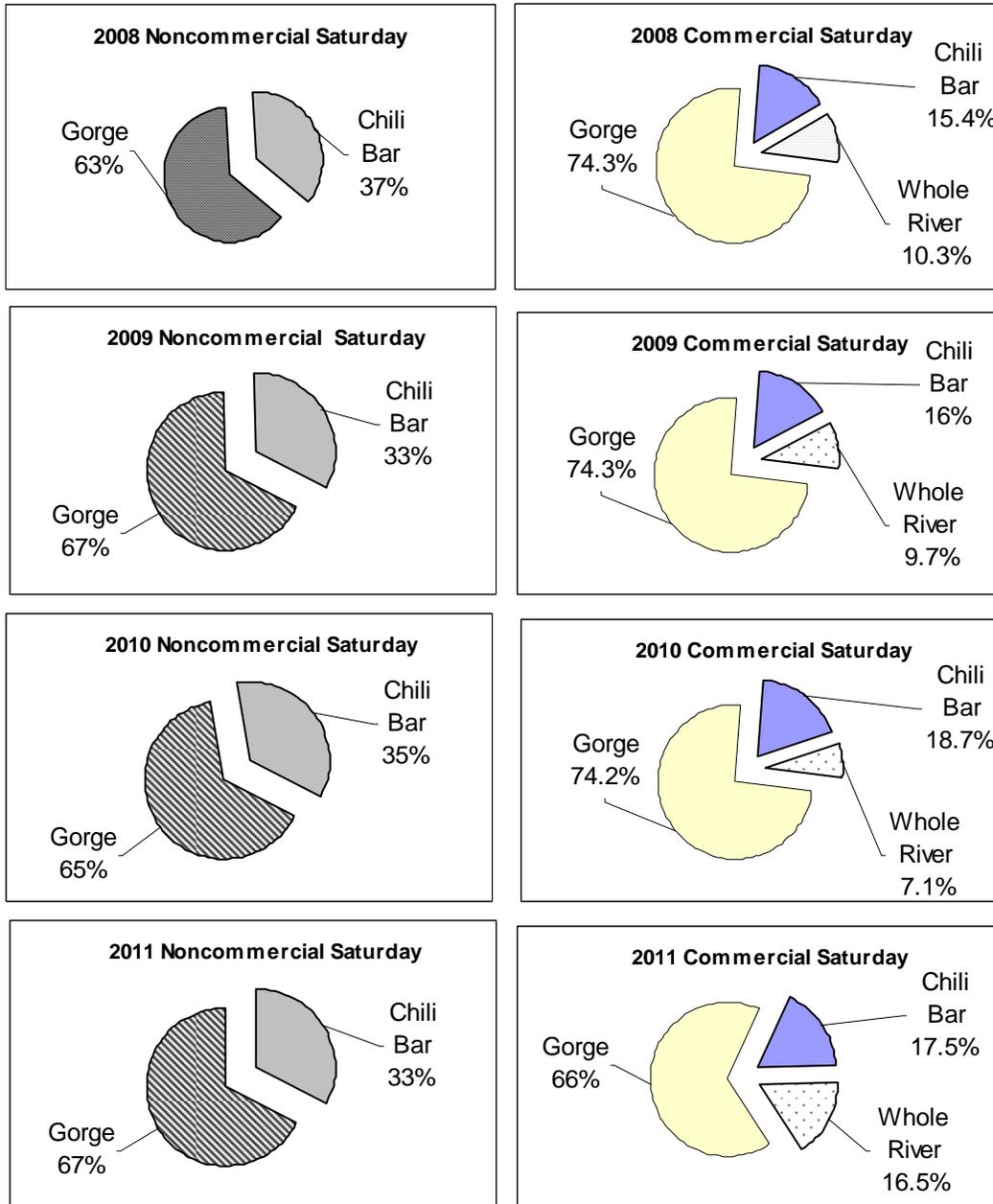


Figure 1. Noncommercial and Commercial choice of runs on Saturdays

**Sundays:** Since 1996, river use on the Chili Bar run has decreased more than river use on the Gorge run. Through 2002, noncommercial boaters increasingly favored the Chili Bar run over the Gorge run on Sundays. In 2004, however, noncommercial boaters preferred the Chili Bar run which was similar to the noncommercial use pattern in 1996. From 2006-2011 the pattern has shown a preference for the gorge run. (see Figure 2).

Figure 2 displays the increasing percentage of commercial customers choosing the Gorge run over the Chili Bar run for Sunday trips from the years 1996 to 2006. From 2007-2010 the percentage of commercial Gorge trips had been higher than those run solely on the Chili Bar run. In 2011 there was a significant increase in the number of commercial whole river trips which may be attributed to the higher flows and longer (continuous) releases which resulted in fewer commercial Gorge only trips.

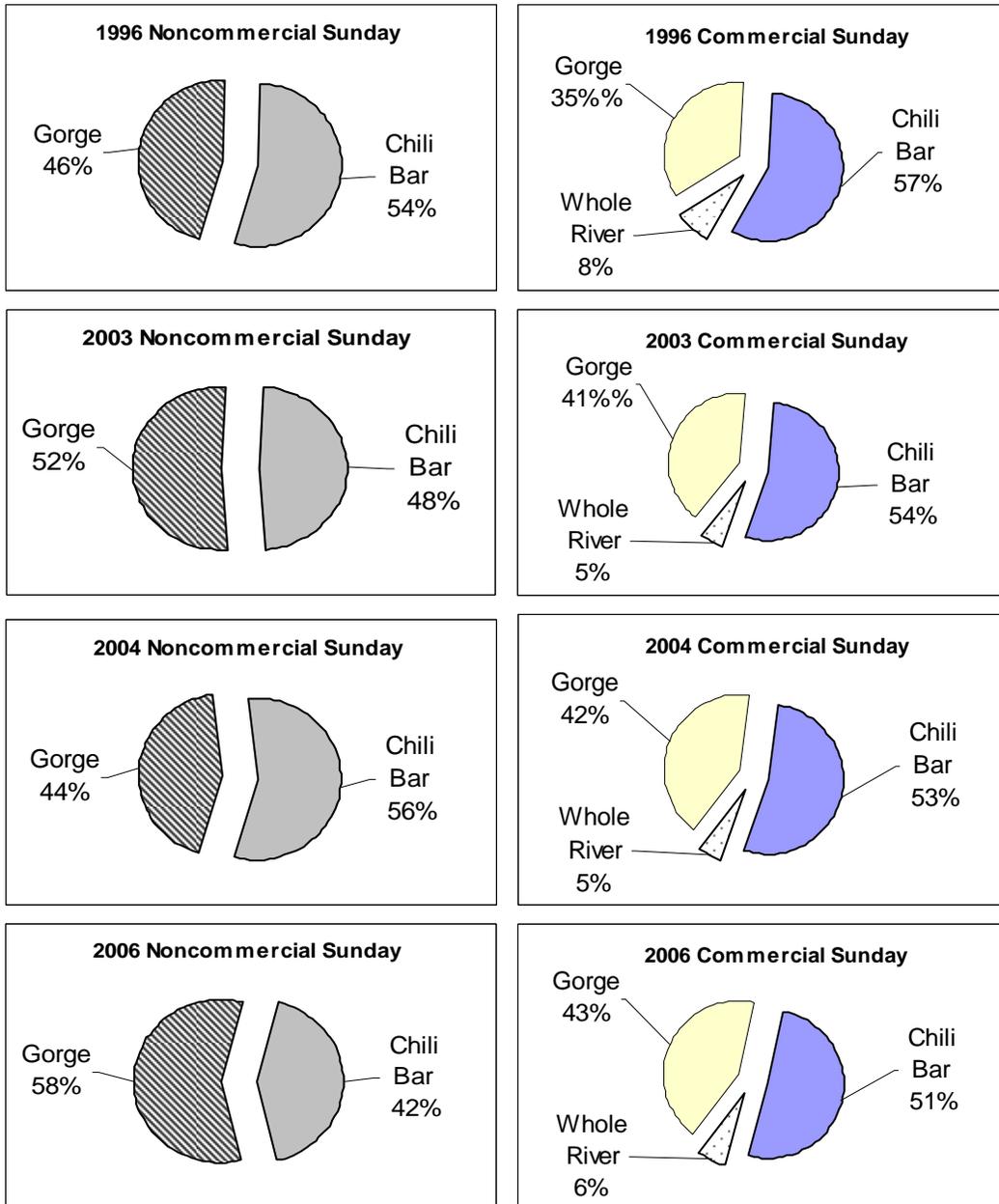




Figure 2. Noncommercial and Commercial choice of runs on Sundays

## **Sources of data and methods for estimating river use:**

### **Sources**

The primary sources of river use data that were used in the preparation of this summary include:

1. Outfitter monthly operating reports (which are audited by County Parks using boat density counts and photo's);
2. River Patrol on-river observations  
- weekend days from June through August, 2011;
3. Hotshot Imaging Photo data of noncommercial river use on the Chili Bar and Gorge runs from April 23 to September 30, 2011.

### **Total Daily Boaters**

Number of boaters are expressed in “user days” (more commonly referred to as “recreation visits”). One user day or recreation visit is one person on a section of the river during one day. Due to the requirements of the RMP’s carrying capacity strategy, total daily boater counts are obtained for each section of the river. As figures 1 and 2 show, a percentage of the commercial trips are running whole river trips from Chili Bar to Salmon Falls. Survey data from the planning process also established that, depending on the river’s flow, a varying percentage of noncommercial boaters also run whole river trips. The total daily number of boaters for the entire river is therefore usually less than the sum of the total daily boaters for the Chili Bar run plus the Gorge run.

### **Chili Bar run data compilation methods:**

- a) Commercial use numbers are complete data compiled from outfitter monthly operating reports.
- b) Noncommercial use numbers data on weekends was compiled from:
  - 1 County Parks on-river observations at Chili Bar, Meatgrinder rapid or Trouble Maker.  
-Sundays 9:30 am to 12:30 pm  
- In 2011, boatable releases typically ended by 3:00 pm at Chili Bar
  - 2 American River Conservancy observations of launches prior to 9:30 am
- c) Noncommercial use numbers on weekdays are data compiled from Hot Shot Imaging..

### **Gorge run data compilation and use estimation methods:**

- a) Commercial use numbers are data compiled from outfitter monthly operating reports.
- b) Noncommercial use numbers on weekends are data compiled from:
  - 1 County Parks on river observations  
- Saturdays at Fowler’s Rock from 12:00 to 4:00 pm  
- Noncommercial use estimates for Saturdays or Sundays without on-river observations were obtained from Hotshot Imaging data.
- c) Noncommercial use estimates for weekdays on the Gorge were obtained from Hotshot Imaging and Raft Photo data.

**Permitted Institutional and Non-Profit Organizations:**

- Institutional and Non-Profit use numbers include passengers and guides.
- The use numbers are the total number of people per day regardless if they are the same people (rafting more than one day) or whether it was a training trip.
- Registration and use by Institutional and Non-Profit organizations has increased since 2002 but has leveled out the last few years.
- Use numbers reflect self reported use at the end of each season and include guides and guests.

**Table 3. Total Annual River Use – Registered Institutional Groups**

<b>Organization</b>	<b>Reported annual river use 2006</b>	<b>Reported annual river use 2007</b>	<b>Reported annual river use 2008</b>	<b>Reported annual river use 2009</b>	<b>Reported annual river use 2010</b>	<b>Reported annual river use 2011</b>
Calvary Chapel	562	613	490	420	459	383
Sierra Nevada College	83	60	71	75	Received Commercial Permit	Not Reg.
Friends of the River	1272	1313	1047	1326	950	225
Inner City Outings	514	614	770	551	405	578
Healing Waters	424	321	250	310	496	543
Prescott College	0	0	0	0	0	0
Project Great Outdoors	616	441	797	566	765	342
River City Whitewater Club	92	41	Not Reg.	Not Reg.	Not. Reg.	Not Reg.
Travis Air Force Base – US Air Force	240	422	354	461	392	230
Beale Air Force Base – US Air Force	238	347	302	382	232	252
Chico State Adventure Outings	Not Registered	15	100	Not Reg.	Not Reg.	Received Commercial Permit
CSU Chico Kinesiology Class (2 days)	Not Reg.	Not Reg.	30	30	0	0
UC Santa Cruz Guide School (5-6 days)	Not Reg.	77	70	77	60	72
<b>Total</b>	<b>4165</b>	<b>4381</b>	<b>4282</b>	<b>4198</b>	<b>3759</b>	<b>2625</b>

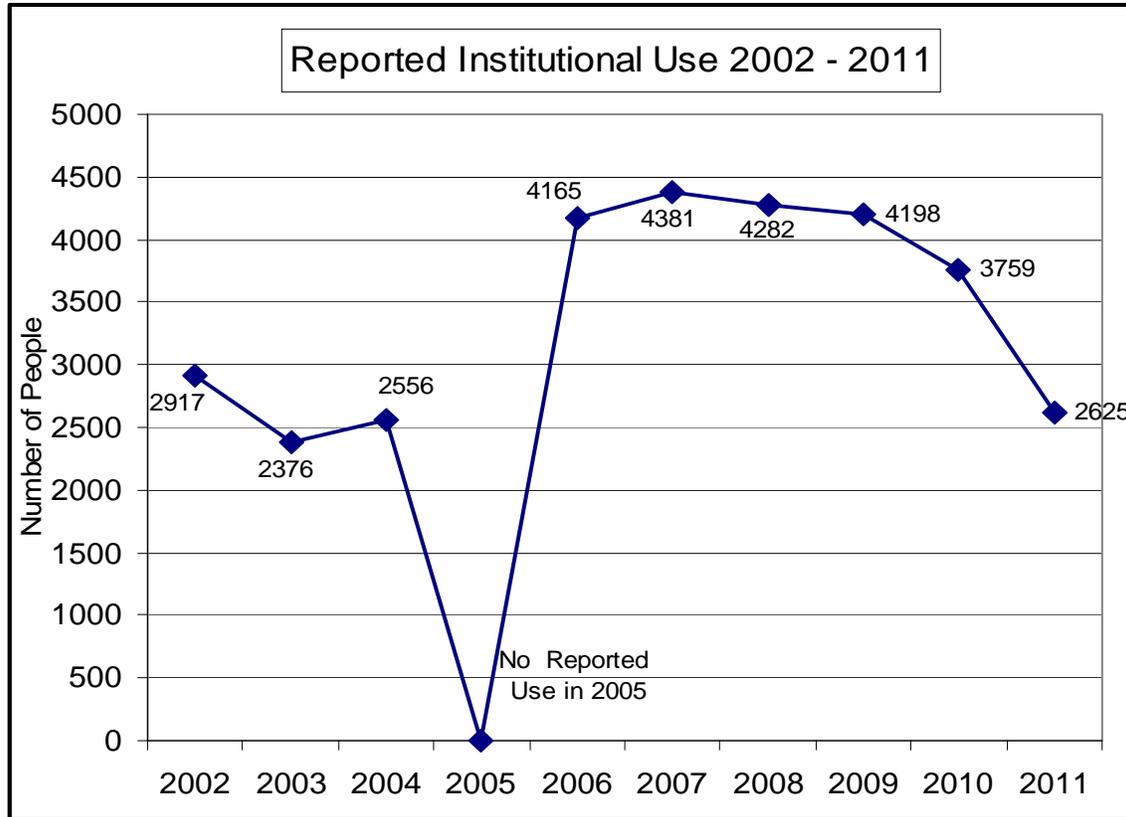


Figure 3.

**Peak Boat Density details from fig. 4 page 5 of the Annual Report**

8/6/11	Passengers	Total Boats	Rafts	Kayaks	Inflatable's	Other	Percent of Boats
<b>Total</b>	1438	254	221	33	7	26	
<b>Private</b>	402	86	54	33	7	24	33.9%
<b>Commercial</b>	945	152	152	0	0	0	59.8%
<b>Institutional</b>	91	16	15	0	0	2	6.3%
8/13/11	Passengers	Total Boats	Rafts	Kayaks	Inflatable's	Other	Percent of Boats
<b>Total</b>	1279	239	203	44	13	15	
<b>Private</b>	400	91	57	44	13	11	38.1%
<b>Commercial</b>	853	142	140	0	0	4	59.4%
<b>Institutional</b>	26	6	6	0	0	0	2.5%
8/21/11	Passengers	Total Boats	Rafts	Kayaks	Inflatable's	Other	Percent of Boats
<b>Total</b>	1418	251.5	227	34	11	4	
<b>Private</b>	414	87.5	63	34	11	4	34.8%
<b>Commercial</b>	949	155	155	0	0	0	61.6%
<b>Institutional</b>	55	9	9	0	0	0	3.6%

Figure 4.

**APPENDIX C**  
**2011**  
**WATER QUALITY MONITORING PROGRAM**

# WATER QUALITY MONITORING PROGRAM

## PROGRAM OVERVIEW

### Purpose and Scope of the Document

This water quality monitoring program is an implementation measure of the El Dorado County River Management Plan (RMP). Environmental Management (County Parks) is required by the River Management Plan Element 4.6 and RMP Mitigation Monitoring Plan to implement a water quality monitoring program for the South Fork of the American River.

The overall goal of the monitoring program is to collect data that provides defensible answers to two main questions: 1) is the river safe for contact recreation; 2) is whitewater recreation creating significant impacts to the water quality of the South Fork? The RMP EIR identified three potential types of water quality degradation that could result from whitewater recreation. First, bacterial contamination of the river could result from either discharges from faulty septic systems or human defecation along the river banks. Second, storm water runoff may carry vehicle-related contaminants from parking lots into the river. Third, erosion from campgrounds, access facilities and trails may increase the river's turbidity. The RMP's mitigation monitoring plan requires that a monitoring program be implemented for the first two water quality indicators, bacteria levels and stormwater runoff. This document describes the monitoring plans for the first two indicators that, combined, form the overall monitoring program. The third indicator, erosion and turbidity, are monitored through the County's grading permit and Special Use Permit inspection programs.

### Resources and Constraints

#### Regulatory

Physical area of the monitoring program is constrained by the project area of the RMP: Chili Bar to Salmon Falls. RMP Mitigation monitoring plan establish a requirement for a bacteria and stormwater runoff monitoring program. There are no SWQCB or RWQCB permit requirements.

#### Responsible agencies and roles

The RMP places joint-responsibility for the water quality monitoring program with the Departments of Environmental Management, the Public Health Department and the General Services Department's County Parks Division. All three agencies have contributed to the preparation of this monitoring program. To make optimal use of budget and time resources, County Parks' staff will conduct all sampling, the Public Health lab will analyze all samples obtained for bacteria monitoring, and the independent lab, California Laboratory Services, will analyze all samples obtained for stormwater runoff monitoring.

## Fiscal

The monitoring program will be funded through the County's River Trust Fund. This Fund is managed by the County Parks Division to provide a source of long-term funding for the implementation of the RMP. Fiscal Year 2010-2011 River Trust Fund appropriations include \$4000 for Public Health lab analysis of e. coli samples and approximately \$1000 for California Laboratory Service's analysis of stormwater runoff samples. County River Program staff time is paid by the River Trust Fund.

## **Document Organization**

The RMP monitoring program is comprised of two distinct monitoring plans, one for bacteria monitoring and the second for stormwater runoff monitoring. Each section of this document contains a description for both monitoring plans.

## **PROGRAM GOALS AND PURPOSE**

- *Goals are broadly defined results*
- *Objectives are specific, measurable, or time-bound results*
- *Strategy is the method or process used to reach the goals*
- *Program is the combined set of monitoring plans for bacteria and stormwater runoff*
- *Plan is the set of actions or methods to monitor bacteria and stormwater runoff*

The program's goals and purpose are derived from the RMP mitigation monitoring plan. The mitigation monitoring plan requires the County to provide data from the project area on several constituents in order to determine whether there is attainment of the RWQCB Basin Plan Objectives for bacteria and oil and grease. Therefore, the program's first goal is to comply with RMP mitigation monitoring plan. The second program goal is to allow comparison of the results to other studies, particularly the SMUD UARP relicensing *Water Quality Study Plan*. The third goal is to advance the state of knowledge of the water quality implications of stormwater flows from project area parking lots and tributary streams on South Fork.

## **Study Questions**

Three main study questions have been developed from the discussion and analysis contained in the EIR. They state the primary issues related to the potential effects of whitewater recreation on the South Fork of the American.

Question 1: Do bacteria levels exist on the South Fork that indicate a potential human health threat to boaters and swimmers?

Question 2: Do bacteria levels indicate potential problems with septic leach fields of whitewater recreation-related campgrounds and facilities that would trigger a more detailed sanitary survey?

Question 3: Does runoff from project area parking lots impact the water quality of the South Fork?

## **Objectives**

From these questions, a set of monitoring plan objectives are proposed:

- Objective 1: Bacteria monitoring frequency that provides information on whether Basin Plan standards for bacteria are being attained in the project area. Monitoring will have a primary focus on the May through September boating and swimming season of high recreation contact. A secondary focus will be placed on monitoring during the first major storm events each fall.
- Objective 2: The bacteria monitoring will be adequate to detect a failing septic system or leach field from any whitewater recreation-related campgrounds. This detection would trigger a more detailed sanitary survey by the County's Environmental Management Department.
- Objective 3: Monitor stormwater runoff from the parking lots of project area campgrounds and river access facilities to determine whether the runoff contains oil and grease levels that result, once the runoff enters the South Fork, in the river exceeding Basin Plan standards for oil and grease.

## **PROGRAM STRATEGY**

### **Bacteria monitoring:**

The strategy to monitor bacteria in this program has been developed to address Study Questions 1 & 2. Three inter-related sampling plans are proposed for bacteria monitoring: periodic screening, Basin Plan compliance, and First Flush. The three sampling plans are the process that will be used to provide data to answer the study questions. The rationale for the sampling plans is based on existing monitoring data, the Basin plan standards, and the *Water Quality Study Plan* adopted by SMUD for its UARP hydroelectric relicensing process.

#### Periodic screening

The County has conducted a periodic screening program to monitor the South Fork for levels of bacteria since 1995. Inferences from data collected from this monitoring appear to reveal some potential variations in water quality. Conditions causing or related to those variations have not been well established. The RWQCB has indicated that the continuation of the periodic screening would be adequate to meet that agency's interest in monitoring the river for potential long-term or chronic water quality impacts. The periodic screening will capture data on bacteria levels in the South Fork under a variety of flow regimes, which are described below in the Sampling Plan section.

### Basin Plan compliance

The South Fork's state-designated beneficial uses include contact recreation. The Basin Plan prescribes bacteria standards for contact recreation, and a monitoring protocol (five samples a 30-day period) to provide data to determine whether the standards are being met.

- Basin Plan compliance monitoring for fecal coliform will be conducted during the peak-use period of June-July-August each year.

### First flush

Data collected since 1995 indicate high (EPA standards) levels of e coli during first flush events (first widespread surface runoff, usually associated when a rain event results in the season to date total precipitation exceeding two inches).

- Monitor bacteria levels immediately after the first storm event each fall/winter that generates runoff into the S Fork from its tributaries in the project area (Greenwood, Dutch, Hastings, and Weber Creeks).

### **Stormwater runoff:**

The Caltrans Guidance Manual: *Stormwater Monitoring Protocols – July 2000* has been adapted to provide the approach to monitoring the whitewater recreation-related parking lots within the 100-year floodplain or parking areas that discharge runoff into the South Fork. This monitoring will occur during the first two significant rain events of each fall season.

The strategy to monitor stormwater runoff employs a two-phased approach. The first phase each fall season is an initial screening, which samples a broad set of constituents of potential concern. Constituents not detected, or measured at levels well below thresholds of concern, can be excluded from the second set of runoff monitoring.

## **ANALYTICAL CONSTITUENTS**

The bases for the selection of the analytical constituents for the monitoring program are: the RMP mitigation monitoring plan; the state's Basin Plan objectives; an EPA bacteria monitoring guidance document; the Caltrans Guidance Manual noted above; and input from the County Environmental Management Department and Public Health Lab.

### **Bacteria monitoring**

E. coli will be used as the constituent for periodic or screening program and first storm event monitoring. Although the current Basin Plan standard for bacteria is based on the constituent fecal coliform, the bacteria e. coli has been selected for the screening program for the following reasons:

- County Public Health Lab capabilities, cost efficient,
- EPA's draft *Implementation Guidance for Ambient Water Quality Criteria for Bacteria (May 2002)* recommends the adoptions of e. coli criteria to better protect waters designated for recreation.
- The RWQCB advised the County in 10/2002 that the SWRCB Basin Plan is expected to be revised in the future to include this constituent in the definition of water quality objectives for bacteria.

The Basin Plan compliance monitoring will use e. coli as the constituent. If any samples during the 30 day period exceed the EPA standard for bacteria, the County will switch to analysis of fecal coliform, and obtain five samples during a 30-day period.

### **Stormwater runoff**

The RMP mitigation monitoring plan drew upon the Basin Plan standards to require that oil and grease be the analytical constituents for monitoring storm water runoff from parking areas.

The County Environmental Management Department recommended several additional constituents be included in the storm water runoff monitoring plan:

- Electrical Conductivity (EC): EC measurements can give an estimate of the variations in the dissolved mineral content of storm water in relation to receiving waters (Caldrons)
- pH: pH is universally used to express the intensity of the acid or alkaline condition of a water sample. The pH of natural waters ranges between the values of 6 and 9. Extremes of pH can have deleterious effects on aquatic ecosystems.
- Total Suspended Solids (TSS): TSS In general, suspended solids are considered a pollutant when they significantly exceed natural conditions and have a detrimental effect on the beneficial uses designated for the receiving waters.
- Total Organic Carbon (TOC): TOC is a general indicator of the organic content of a sample.

## **MONITORING SITE SELECTION CRITERIA**

### **Bacteria Monitoring**

Sites have been selected for bacteria periodic screening according to the following criteria:

- Control site: The **Nugget site** is immediately below Chili Bar dam and immediately above the project area. The Nugget functions as a control site for bacteria monitoring. Data from this site provides bacteria values for the water before the river enters the project area. The bacteria values may indicate potential water quality impacts from upstream sources, which will have to be considered in the analysis of the monitoring results from the project area.

- Representative of project area: The **Marshall Gold Discovery State Historic Park (Marshall Gold SHP), Henningsen-Lotus County Park (County Park), Turtle Pond (below Greenwood Cr. confluence) and Skunk Hollow sites** represent the most popular swimming areas (both boating and non-boating related swimming) in the project area. These sites have been selected in the study design to achieve Objective 1 and provide data on Question 1.
- Sampling locations able to detect potential bacteria discharges from project campgrounds: The Marshall Gold SHP, County Park, and Turtle Pond sites are immediately downstream (within ½ mile) of significant concentrations of campgrounds and/or river access sites. These sampling locations will provide data to allow analysis of Question 2 and Objective 2.
- Site access: Each site is easily accessible year-round to County Parks' staff.
- Personnel safety: County Parks' staff can safely ferry boats across the river channel at each site at a wide range of flows in order to obtain samples.
- Time: County Parks' staff are able to obtain samples at each site within one workday and deliver the samples to the County Public Health Lab within the maximum holding time.

### **Stormwater monitoring**

The EIR mitigation monitoring plan for mitigation measure 6-2 requires the County to sample runoff from unpaved parking areas during initial season rainstorms and during the peak season afternoons for petroleum contamination(emphasis added). The Parks Division has determined that there is no rationale for eliminating paved parking areas from the monitoring plan. In fact, paved parking areas probably contribute a greater portion of a season's initial rain event to runoff than do unpaved parking areas.

Figure 1 shows the location of all properties with parking lots utilized for whitewater recreation. The parking lots include the properties with Special Use Permits (shown in pink), Marshall Gold SHP, the County Park and the Skunk Hollow lot within the Folsom Lake State Recreation Area. The properties selected for monitoring include: 1) properties where vehicle parking occurs within 100-year floodplain; 2) properties with lots above the floodplain, but the runoff appears to discharge directly into the South Fork. Following below, each parking lot from Chili Bar dam downstream to Folsom Lake will be listed, and a rationale for inclusion or exclusion from the monitoring plan will be provided.

**Table 1 Stormwater runoff site selection**

<b>Property name</b>	<b>Monitoring site</b>	<b>Rationale for inclusion/exclusion</b>
Nugget	No	Floodplain area not used for parking Parking areas (gravel) lightly utilized.
Chili Bar	Yes	Parking area (river cobbles) in floodplain. Little to no surface runoff going directly into river. Primary put in for private boaters on the upper section of river.
American River Resort	No	Most camping and parking areas (paved and gravel) above floodplain; no discharge to river observed during initial rain events.
Coloma Resort	No	Main camping and parking area (gravel and decomposed granite) discharges into South Fork. No rafting companies use campground.
Marshall Gold SHP	No	Parking areas (paved) do not drain towards river No discharge to river observed during rain events.
Point Pleasant	No	Parking areas (gravel) not in floodplain. Not open to the public.
Ponderosa RV Resort	No	Camp and parking area (gravel and decomposed granite) in floodplain; did not have runoff when visited in fall 2002. No rafting companies use campground and campground not open to the general public.
Beaver Point area – 3 SUPs	No	Parking areas (gravel) above the floodplain; no runoff towards river observed.
Henningsen Lotus County Park	Yes	Parking area (paved) within 10 year floodplain drains into vegetation and cobble.
Camp Lotus	No	Parking area (decomposed granite) within floodplain with large vegetation buffer from river.
Environmental Traveling Co	No	Parking area (gravel) above floodplain; no runoff towards river observed.
Bacchi Ranch	No	Parking area (gravel and decomposed granite) above floodplain; no runoff towards river observed during site visit.
River Bend	No	Parking area (gravel) within floodplain; did not have runoff when visited. Vegetation buffer between parking area and river.
Mother Lode	No	Parking area (gravel) above floodplain; additional parking may be within floodplain; no runoff towards river observed. Vegetation buffer between parking areas and river.
Skunk Hollow (State Park lot)	Yes	Parking area (paved) above floodplain; discharge from lot drained into Skunk Creek, which empties into river within 100+ yards.
Salmon Falls (State Park lot)	Yes in 2007	Skunk Hollow will provide adequate data
Greenwood Cr. (BLM lot)	Yes	Paved lot drains into drainage that flows into Greenwood Cr. 300 yards above S. Fork Confluence.

## SAMPLING PLANS

### Bacteria Periodic screening:

#### Frequency:

The periodic screening sampling plan incorporates event-based monitoring within a plan that divides the calendar year into two segments:

- Monthly sampling and analysis for E.coli from October through May at each monitoring site.
- Twice monthly sampling and analysis for E. coli from June, August and September at each monitoring site.
- Five samples taken in the month of July.

The sampling conducted for the screening effort will adjust the dates of collection to obtain data for several types of flow regimes the river has operated under in recent years:

- River experiencing daily fluctuating flows from fish flow (250) to 4000 cfs (this regime has occurred throughout the year).
- River experiencing extended periods on fish flow releases (typically during the fall or periods of hydro facility maintenance)
- River experiencing extended periods of flow of at least 2000 cfs (spring runoff)
- River experiencing high flows after winter storm events

Reviewers' input is requested on the number of samples that would have to be collected to conduct statistical analysis of differences in water quality for each flow regime.

#### Methods:

Shore grab samples and transect composite samples listed in Table 2

#### *Sample collection methods*

Five river transect composite samples are collected, with two near-shore grab samples collected at Marshall-Gold SHP and the County Park. Transect composite samples are obtained by drawing five individual samples: one near each bank, and three mid-river samples at the quarter, half and three quarter distance across the channel. The five samples are combined into a single sample that represents the cross-section of the river at that site.

Sample containers used for the individual grab samples are sealed and sterilized 120 ml obtained from the County Health lab. 500 ml polypropylene bottles are used to mix the transect samples. Sampling is done when the County Public Health Lab is open, Monday-Thursday.

### Grab sample methodology

Caps are removed from sample bottles, avoiding contamination of the inner surface of the cap or bottle. Samples are drawn from about one foot below the surface of the river. The container is filled without rinsing, and the cap is replaced immediately.

For the transect samples, the five individual samples for each transect are combined into the 500 ml polypro bottle. Sufficient air space is left in the large bottle to allow thorough mixing by shaking. 100 ml of the mixed sample is poured back into the bottle that was used to draw the individual samples.

All samples are placed in a cooler of ice and transported to the County Public Health Lab within five hours.

### Sample records and chain of custody

Sample bottles are numbered with an indelible marker to record the sampling location. A County Public Health Lab form is used to record information on each sample submitted (date and time collected; sampling point; river flow). Sample information (date and time collected and submitted) is also listed on a log-in sheet at the Public Health Lab.

These methods will also be utilized for the basin plan compliance and first flush sampling

### **Bacteria Basin Plan compliance:**

Frequency: 5 samples in 30 days during peak summer season

### **First Flush:**

- Obtain quantity of precipitation forecast and rainfall totals from NOAA website: [www.cnrfc.noaa.gov/precipMaps.php?group=sac&hour=24&synoptic=0](http://www.cnrfc.noaa.gov/precipMaps.php?group=sac&hour=24&synoptic=0)

### **STORMWATER SAMPLING PLAN**

- Stormwater sampling plan is derived from the two-phased approach.
- First phase outlined in the table below.
- Second phase sampling plan will be an outcome of results of first phase.

**Table 2**  
**Summary of the proposed monitoring program**

Monitoring activity	Monitoring sites	New, revised or ongoing	Constituents analyzed	Sampling frequency
Bacteria screening	<ul style="list-style-type: none"> <li>▪ Nugget bank</li> <li>▪ Nugget transect</li> <li>▪ Marshall Gold park bank</li> <li>▪ Marshall Gold park transect</li> <li>▪ County Park bank</li> <li>▪ County Park transect</li> <li>▪ Turtle Pond bank</li> <li>▪ Turtle Pond transect</li> <li>▪ Salmon Falls bank</li> </ul>	Ongoing	E.coli	Monthly October through April, twice monthly May, June, September with sampling conducted to capture the following flow regimes: <ul style="list-style-type: none"> <li>▪ Daily fluctuating flows from fish flow (200 cfs) to 4000 cfs (event possible throughout the year).</li> <li>▪ Extended periods of fish flow releases (typically during the fall or periods of hydro facility maintenance).</li> <li>▪ Extended periods of flow of at least 2000 cfs (spring runoff)</li> <li>▪ First flush (see below)</li> <li>▪ High flows after winter storm events</li> </ul>
Bacteria Basin Plan Compliance	<ul style="list-style-type: none"> <li>▪ Nugget bank</li> <li>▪ Nugget transect</li> <li>▪ Marshall Gold park bank</li> <li>▪ Marshall Gold park transect</li> <li>▪ County Park bank</li> <li>▪ County Park transect</li> <li>▪ Turtle Pond bank</li> <li>▪ Turtle Pond transect</li> <li>▪ Salmon Falls bank</li> </ul>	Ongoing	Fecal coliform	5 samples in 30-day period with the third set of samples obtained during third week of July. Justification: Basin Plan standards for a sampling plan.
Bacteria first storm event	<ul style="list-style-type: none"> <li>▪ Nugget</li> <li>▪ South Fork above Troublemaker</li> <li>▪ South Fork below Troublemaker</li> <li>▪ County Park</li> <li>▪ Greenwood Creek below confluence with South Fork</li> <li>▪ Salmon Falls</li> <li>▪ Weber Creek @ Luneman road ford</li> </ul>	Ongoing	E. Coli	First storm event that causes substantial run-off into South Fork from tributaries (the storm that pushes season total rainfall to above 2"). Sampling is done by transect.

Monitoring activity	Monitoring sites	New, revised or ongoing	Constituents analyzed	Sampling frequency
Stormwater runoff from project area parking lots	Chili Bar parking lot - outflow County Park - outflow Greenwood Cr. parking lot - outflow Skunk Hollow - outflow and river	Ongoing	Oil and Grease PH EC TSS TOC	<p>For paved parking areas, first rain event each season that produced more than .10" of rain as measured at the Auburn Dam Ridge site on the NOAA California Nevada River Forecast Center web page.</p> <p>For gravel and decomposed granite parking areas, first rain event each season that produces runoff from these parking areas. 2002 observations indicated that a least 1" of rain in 24 hours preceding the sampling would have to occur to produce runoff from typical project parking areas.</p>

## **LABARATORY ANALYTICAL METHODS**

The analytical method for the bacteria analysis has been supplied by the County Health Lab and describes its procedures for analysis of samples for levels of E. Coli. The analytical method for the stormwater runoff have been supplied by California Lab Services, Sacramento, Ca, and describes its procedures for analysis of samples for a suite of stormwater runoff constituents

### **Quality Assurance**

The quality assurance procedures for the bacteria analysis has been supplied by the County Health Lab and describes its quality assurance procedures for analysis of samples for levels of E. Coli. The quality assurance procedures for the stormwater runoff analysis have been supplied by California Lab Services, Sacramento, CA.

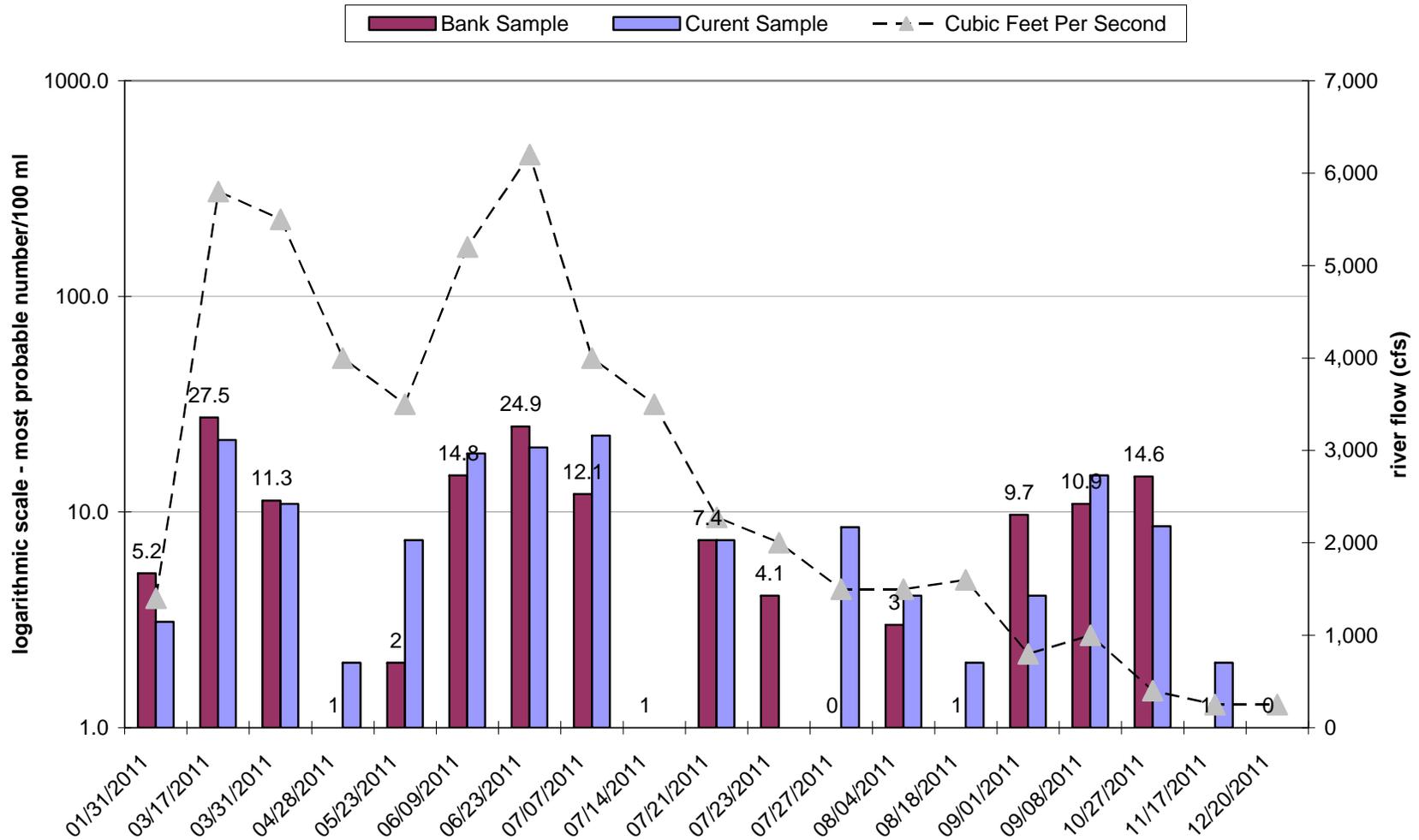
### **Data Quality Evaluation**

- Circulate to Environmental Management for comments

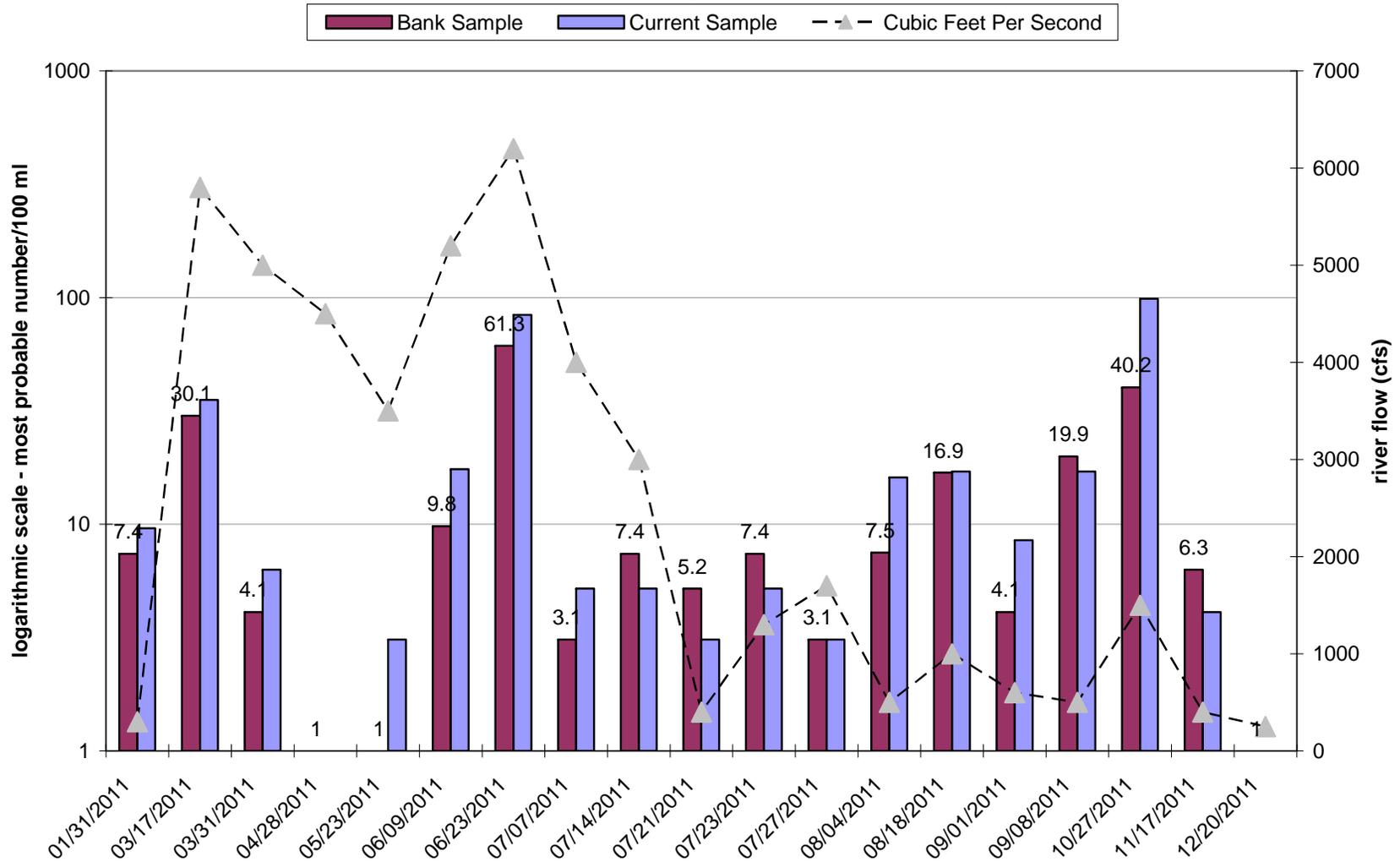
### **Data Validation and Reporting**

- Circulate to Environmental Management for comments

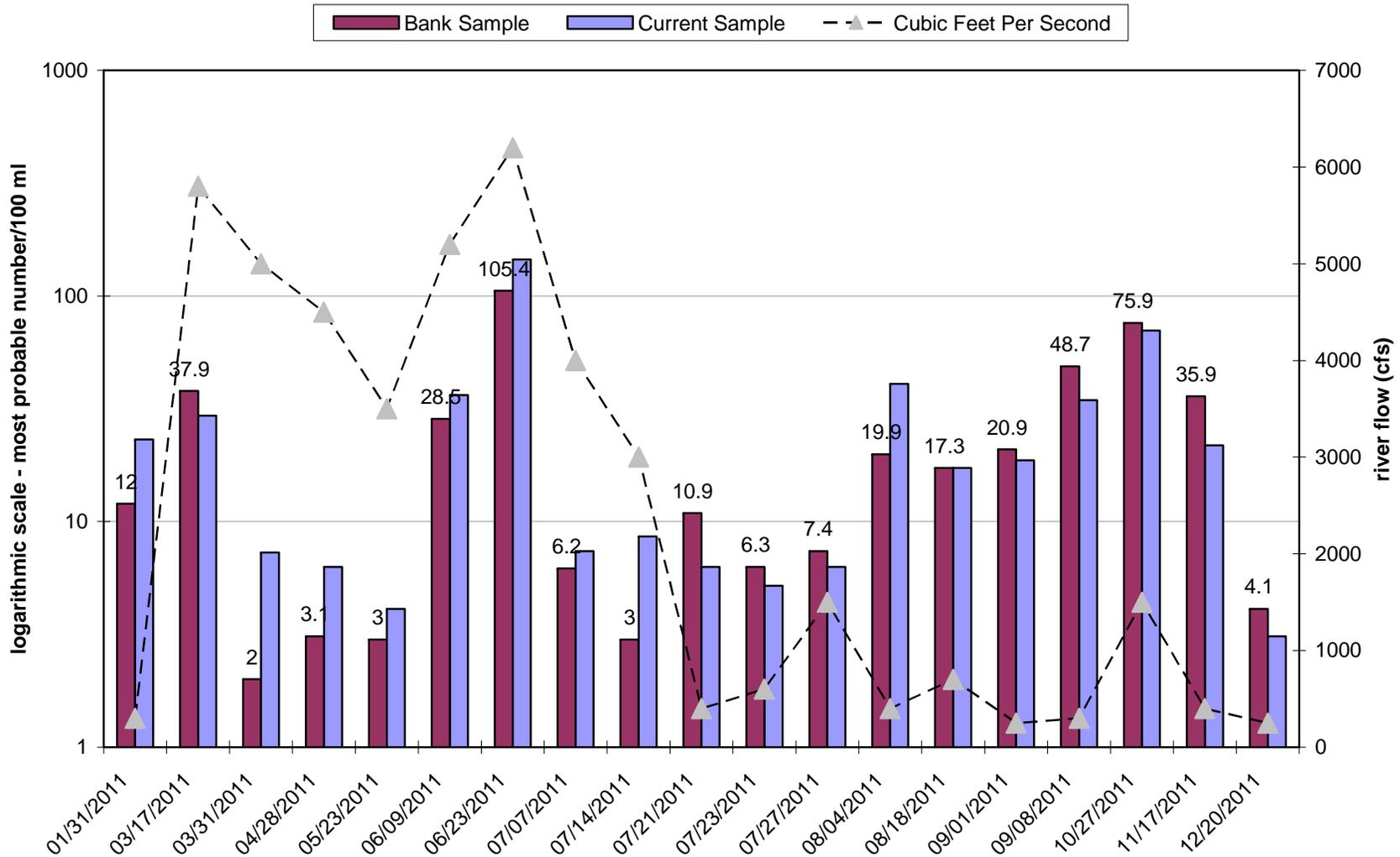
## E. Coli levels Below Chili Bar Dam 2011



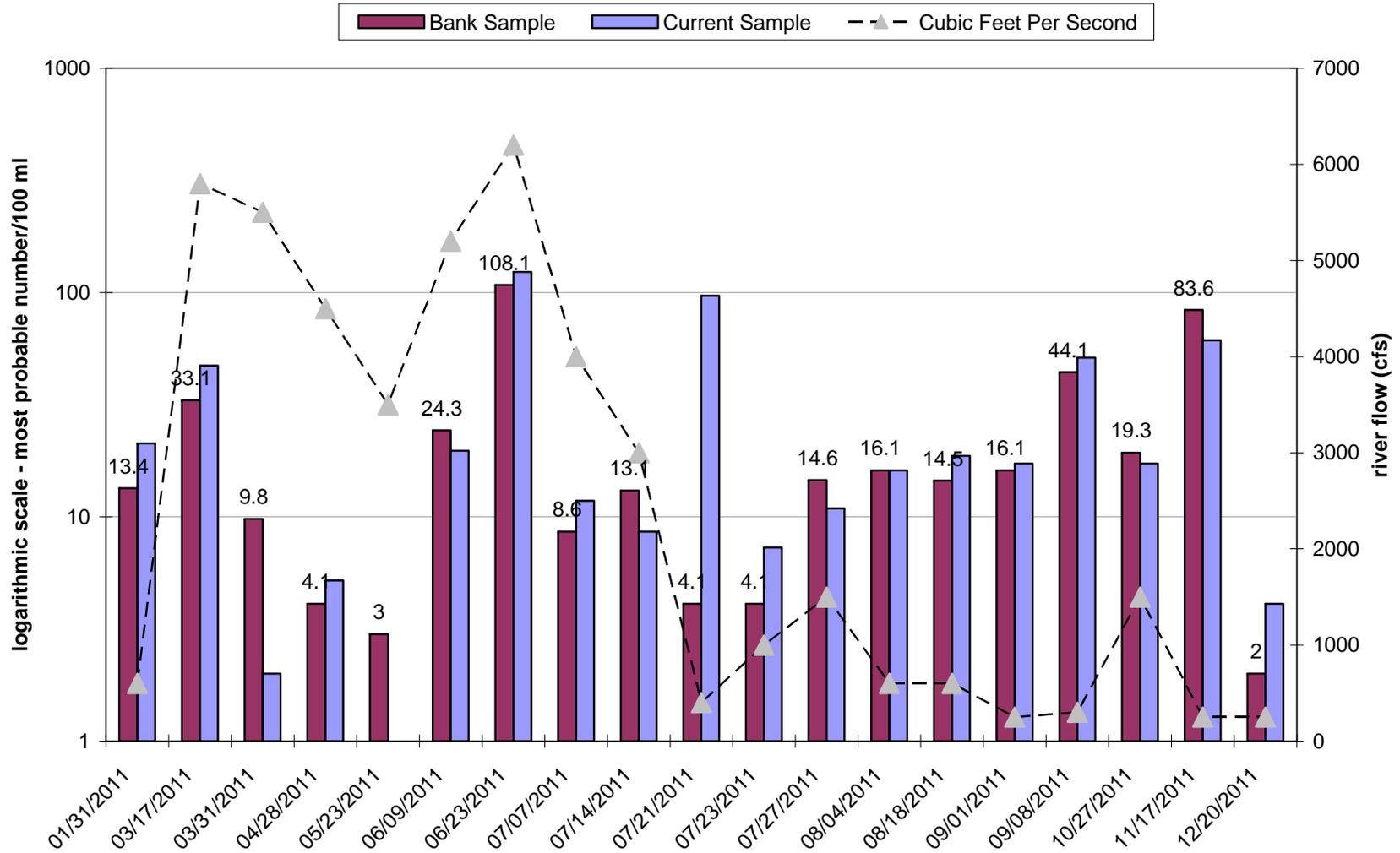
## E. Coli levels at Marshal Gold State Historic Park 2011



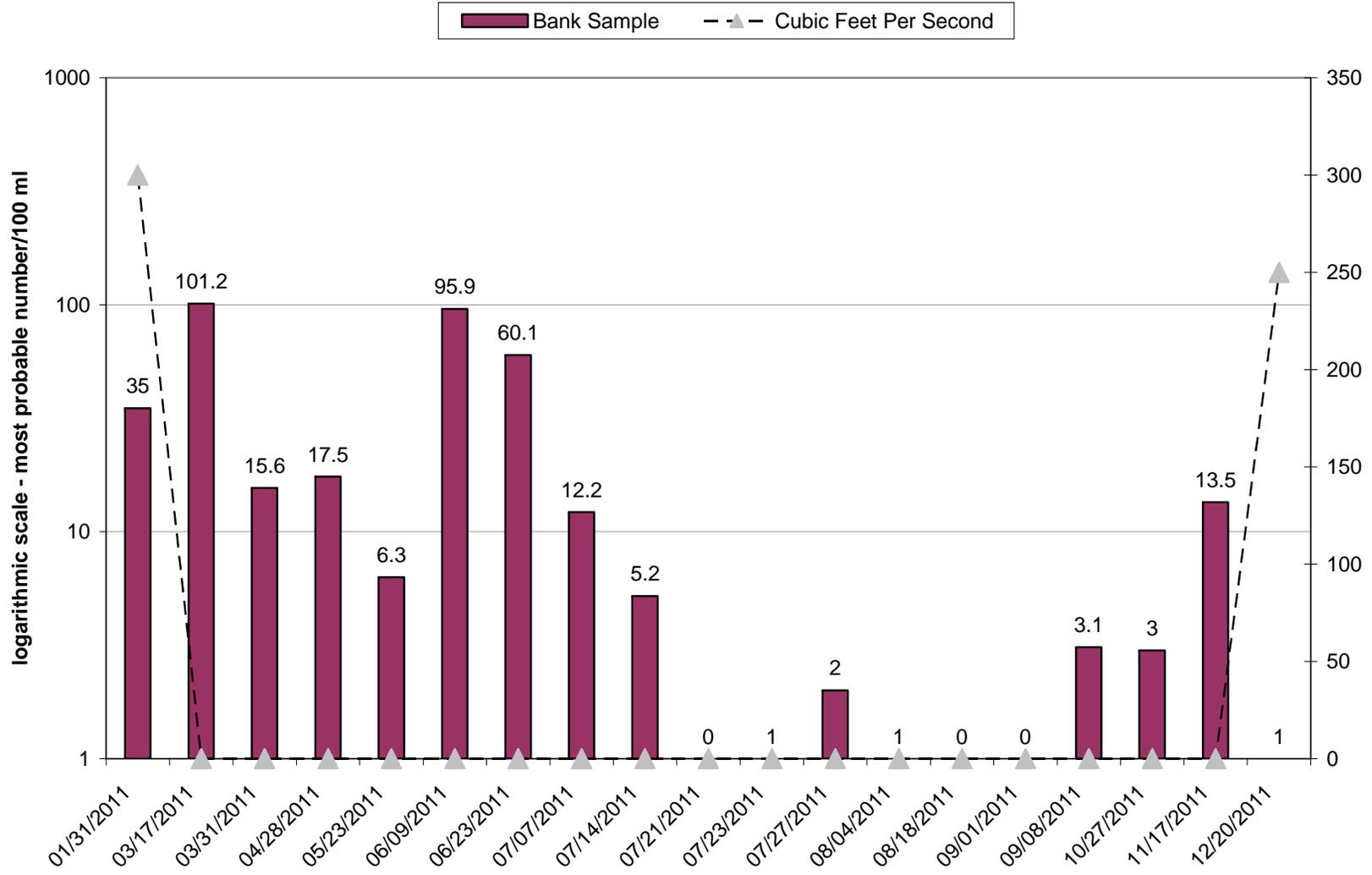
## E. Coli levels at Henningsen Lotus Park 2011



## E. Coli levels at Turtle Pond Area 2011



## E. Coli levels at Salmon Falls 2011



**APPENDIX D**

**2011 EL DORADO COUNTY SHERIFF'S DEPARTMENT  
BOATING SAFETY UNIT SUMMARY FOR THE SOUTH FORK OF  
THE AMERICAN RIVER**

## **EL DORADO COUNTY SHERIFF'S OFFICE BOATING SAFETY UNIT 2011 SUMMARY SOUTH FORK OF THE AMERICAN RIVER**

The El Dorado County Sheriff's Office boating unit has jurisdiction of the South Fork of the American River as well as other public waterways / lakes within El Dorado County.

The South Fork of the American River from Chili Bar to Folsom Lake is unique in that it offers whitewater rafting, kayaking, river boarding, and other related activities. The South Fork of the American River is rated as a Class III stretch of river which requires skill and proper equipment to navigate safely. During summer months, the river is extremely active with commercial and private rafting / boater trips.

As it pertains to the river, the boating unit is responsible for law enforcement, rescue, recovery, and boater education. The Sheriff's Office works in conjunction with El Dorado County Parks River Patrol, California State Parks, BLM, and Fish & Game. The Sheriff's Office has maintained good working relationships with the above agencies and has worked closely with County Parks River Patrol. The County Parks River Patrol has very knowledgeable patrol staff that often assist the Sheriff's Office with rescue work and keep our boating unit aware of any issues (enforcement and safety) that occur on the river.

The 2011 river patrol season was consistent for the most part with the 2010 Season. Common issues from Commercial Rafting Companies, river users, and land owners were the following:

- 1) Non-permitted persons running commercial rafting trips.
- 2) "Tubers" (subjects floating on the river in inner tubes, air mattresses, and other inflatables not intended for whitewater use).
- 3) Complaints of illegal activities (underage alcohol consumption, marijuana use, bridge jumping, and litter) along the river shoreline from the Lotus Hwy 49 Bridge to Henningsen-Lotus County Park.
- 4) Complaints of trespass and litter by river users onto private property along the river.

In 2011, the boating unit focused on reducing and/or eliminating non-permitted persons from running commercial rafting trips on the South Fork of the American River. One group, known as the "NorCal Rafters" was suspected by the boating unit of running for-profit commercial rafting trips without the proper permits, as required by the El Dorado County River Management Plan. It was brought to the attention of the boating unit by El Dorado County Parks personnel and several legitimate commercial rafting companies that the "NorCal Rafters" had been illegally operating a commercial rafting company for at least two river seasons.

The boating unit conducted an investigation and found that the "NorCal Rafters" were offering whitewater river rafting trips to friends via a large, online social network. The "NorCal Rafters" had created a website ([www.norcalrafters.com](http://www.norcalrafters.com)), where they sold

themselves as a “cost-sharing” river-rafting trip organizer, likely in an attempt to circumvent the El Dorado County Ordinances pertaining to commercial rafting companies. As the boating unit’s investigation continued, deputies noted that the El Dorado County Ordinances that defined “commercial outfitter” and “cost-sharing” were written too vaguely and did not match the El Dorado County River Management Plan’s definition of the same two terms. Due to this, deputies determined it would be nearly impossible to successfully prove that the “NorCal Rafters” were operating for profit. However, as the boating unit made contact with El Dorado County Parks employees and employees of various commercial rafting companies during their investigation of “NorCal Rafters,” word of the boating unit’s investigation spread and the “NorCal Rafters” discontinued their rafting trips.

It is my recommendation that the Sheriff’s Office petition the El Dorado County Council to revise the El Dorado County Ordinance’s definition of a “commercial outfitter” to assist the Sheriff’s Office in reducing the number of persons running commercial rafting trips without the proper permits.

Additionally in 2011, the boating unit noticed a decline in “tubers” and people recreating on the South Fork of the American River without wearing PFDs. The boating unit attributed this to a late snowfall and record setting snow pack, which led to above average water levels and cold temperatures for the entirety of the 2011 season.

Most individuals contacted by the boating unit indicated that they were aware of the County Ordinance requiring the use of a PFD, which I believe is related to the education and enforcement by the Sheriff’s Office as well as the other agencies listed above. The El Dorado County Parks Staff have given particular attention to this issue. El Dorado County Parks Staff have placed and continue to maintain signage along the river corridor advising of the ordinance and constant education on their part at common recreational river put-ins.

The boating unit continued foot patrols on weekends from the Lotus Hwy 49 Bridge into and including Henningsen Lotus Park, dealing with the above issues. Subjects that frequented the area became increasingly aware of the law enforcement presence and began to “police themselves”. During the foot patrols, deputies contacted several individuals and issued warnings for various violations. The boating unit will continue its directed law enforcement in that area for the 2012 river season.

River conditions and flows were considered above average with significant high water flows and cold temperatures from April to late July. High water flows typically produce more river related injuries due to the additional skill and equipment necessary for boat operators to safely navigate the river.

The 2011 River Season had three reported river related accidents and injuries, however, many river-related accidents and injuries go unreported.

There was one boating related fatality for the 2011 river season. By comparison, 2010 had none, 2009 had one fatality, 2008 had none, and 2007 had two fatalities.

Included below, is the statistical information as it pertains to the South Fork of the American River:

	VERBAL WARNINGS	CITATIONS	PHYSICAL ARRESTS
PFD Violations	23	0	0
Bridge Jumping	15	34	0

Vessels Assisted	9
Persons Assisted	28
Searches	2
Accident Investigations	2
Organized Water Events	1

Note:

Persons and vessels assisted only include vessels and persons who were in distress or in need of assistance on the South Fork of the American River.

PFD Verbal Warning Violations included those subjects who were entering the river without PFD's. They were educated on the safety of PFD's as well that it was a legal requirement.

Submitted by Deputy Blake Braafladt / El Dorado County Sheriff's Office  
10/7/11

**APPENDIX E**

**RIVER PROGRAM FUND BUDGET FISCAL YEAR 2010/2011**

## River Program Fiscal Year 2010-2011 Budget Summary

### River Trust Fund

Fiscal Year 2010/2011	
Fund Balance as of July 1, 2010	\$158,732
Revenue (July 1, 2010 through June 30, 2011)	\$162,014
Expenditures (FY 2010/2011 approved budget was \$161,843)	
River management program →	\$143,422
Total →	\$143,422
<b>River Trust Fund balance as of June 30, 2011</b>	<b>\$177,324</b>

### River Program Revenue by Category July 1, 2010 – June 30, 2011

Private kayak put in/out	\$ 739.00	0.45%
Private raft put in/out	\$ 3,723.00	2.30%
Commercial guest use	\$ 136,332.00	84.16%
Commercial raft put in/out	\$ 1,468.00	0.90%
Commercial kayak put in/out	\$ 1,024.00	0.63%
Chili Bar River	\$ 5,219.00	3.23%
River Use Permit	\$ 11,250.00	6.94%
Interest	\$ 842.00	0.52%
Commercial River Permit Violations	\$ 1,417.00	0.87%
	\$ 162,014.00	100.00%

## Approved River Trust Fund Budget Fiscal Year 2011/2012

1. Projections based on 70,000 user days annually
  - 2011 commercial use was 79,935 user days
2. Environmental Management Department's final request (and CAO approved budget):
  - \$156,559 for river management program

**APPENDIX F**

**RIVER MANAGEMENT ADVISORY COMMITTEE  
COMMENTS ON THE 2011 RIVER SEASON**

## **El Dorado County River Management Advisory Committee Comments on the 2011 River Season**

The River Management Advisory Committee (RMAC) discussed the 2011 river season at the November 10, 2011 RMAC meeting. The following is a summary of their comments and suggestions. The minutes from the November RMAC meeting can be found on the Co. Rivers web site. These comments were made by individual members and do not necessarily reflect the committee as a whole.

- Concern over increased incidents associated with inner-tubers (trespassing, alcohol, littering, Quite Zone violations)
- Noise and Trespassing in Quite Zone by river users
- High water year 2011 went well
- River Patrol appreciation, river management program
- Thanked the public for participation over the last year and attendance to meetings
- Alcohol & Glass container ban on river needed
- Would like more on shore Patrol by Sheriffs Dept.

**APPENDIX G**  
**PUBLIC COMMENTS ON THE 2011 RIVER SEASON**

## Public Comments on the 2011 River Season

These comments were made at the November 10, 2011 RMAC meeting.

Mike Ranalli spoke on the following subjects:

- High Water went OK but see people missing take out at Greenwood Creek and losing gear
- Quiet Zone violations
- Trespassing from BLM lands onto neighboring lands
- Instances with inner-tubers have increased
- Appreciation of the River Patrol

Melody Lane spoke on the following subjects:

- Concern over use of County roads for parking to access public lands
- Trespassing & Shooting concerns
- Trails and Property Rights
- Law Enforcement
- RMAC Meeting Minutes
- RMAC Member qualifications

Karen Mulvaney spoke on the following subjects:

- Concerns about the parking & pedestrians walking across Salmon Falls Rd from parking lots
- Public use of private property by Barking Dog rapid
- Thanked RMAC