



COUNTY OF EL DORADO

CAO, Parks Division

River Management Program

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Placerville, Ca 95667

El Dorado County River Management Plan 2014 Annual Report



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**El Dorado County River Management Plan
2014 Annual Report**

Table of Contents

	Page
Executive Summary.....	3
Introduction and River Use.....	8
Implementation of Plan Elements.....	18
Element 1 – Educational Programs.....	18
Element 2 – Safety Programs.....	20
Element 3 – Transportation Programs.....	22
Element 4 – Monitoring and Reporting Programs.....	26
Element 5 – Agency and Community Coordination Programs.....	35
Element 6 – Permits and Requirements.....	37
Element 7 – Carrying Capacity Exceedance Actions and Implementation.....	40
Element 8 – Regulations and Ordinances.....	40
Element 9 – Facilities and Lands Management.....	40
Element 10 – Funding	42
Element 11 – Data Availability.....	43

List of Tables

Table 1.	Boater Totals By Day.....	4
Table 2.	Class II Inner Tube, Alcohol, PFD Use Counts	5
Table 3.	2014 Daily traffic volumes on County roads in project area.....	24
Table 4.	Caltrans 2013 traffic data for state highways.....	26
Table 5.	SMUD UARP Flow Schedule Below Chili Bar Dam by Water Year Type.....	29
Table 6.	Middle Section Counts from 2014 (July 4, 2014 and August 31, 2013).....	31
Table 7.	Summary of commercial river use permit violations in 2014.....	32
Table 8.	River Trust Fund balance and fiscal year 2013-2014 budget summary.....	41

El Dorado County River Management Plan 2014 Annual Report

Table of Contents continued

List of Figures

Figure 1.	River Use Totals 2004-2014.....	4
Figure 2.	Annual River Use 1992-2014	9
Figure 3.	Type of water craft used on the South Fork in 2014.....	9
Figure 4.	Noncommercial and Commercial choice of runs on Saturdays.....	10
Figure 5.	Noncommercial and Commercial choice of runs on Sundays.....	11
Figure 6.	Noncommercial and Commercial combined use choice of runs on weekends..	12
Figure 7.	2014 Daily Boater Totals – Chili Bar run	13
Figure 8.	2014 Daily Boater Totals – Gorge run.....	13
Figure 9.	Boat Density Gorge run in 2014	15
Figure 10.	Gorge Run on Saturdays – trends in daily boater totals	16
Figure 11.	Chili Bar Run on Sundays – trends in daily boater totals	17
Figure 12.	Summer weekday DOT average traffic volumes.....	25
Figure 13.	Summer weekend DOT average traffic volumes.....	25
Figure 14.	Institutional Use 2002-2014.....	39

Appendix A	Mitigation Monitoring Plan.....	44
Appendix B	Water Quality Monitoring Program and Testing Results.....	70
Appendix C	Sheriff’s Department Boating and Safety Unit Summary.....	89
Appendix D	El Dorado County River Management Advisory Committee Comments....	91
Appendix E	Public Comments on 2014 River Season.....	93

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El Dorado County River Management Plan 2014 Annual Report

Executive Summary

The El Dorado County River Management Plan 2014 Annual Report is to provide information on the 2014 river season. This report also provides information on how the elements of the River Management Plan (RMP) were implemented to identify areas of concern regarding the RMP implementation and to recommend modifications to plan elements or implementation procedures. Details on each elements implementation can be found in the report document and a summary can be found at the end of this executive summary.

This report goes before the River Management Advisory Committee (RMAC) and the public, then to the Planning Commission for approval to continue the implement the RMP as prescribed.

The County has contracted with Environmental Stewardship and Planning to provide a comprehensive update to the River Management Plan. Changes identified in this annual report and changes identified in the 2002-2006 and 2007-2011 five year summary reports on the implementation of the RMP will be considered in the RMP update. The update is expected to be completed in 2015.

In the Coloma Lotus Valley there are four popular public campgrounds along the river in addition to Marshall Gold Discovery State Historic Park, Henningsen Lotus County Park, and Bureau of Land Management Parcels that have trails to and along the river at either end of the Coloma valley. The State Highway 49 Bridge also provides public access to the river. Additionally there are nine private properties with Special Use Permits used by rafting outfitters along the river in the Coloma Lotus Valley. The number and diversity of these recreational facilities on the river combined with the annually scheduled recreational water releases flows make the South Fork of the American River a regional destination for class II-III boating and river recreation.

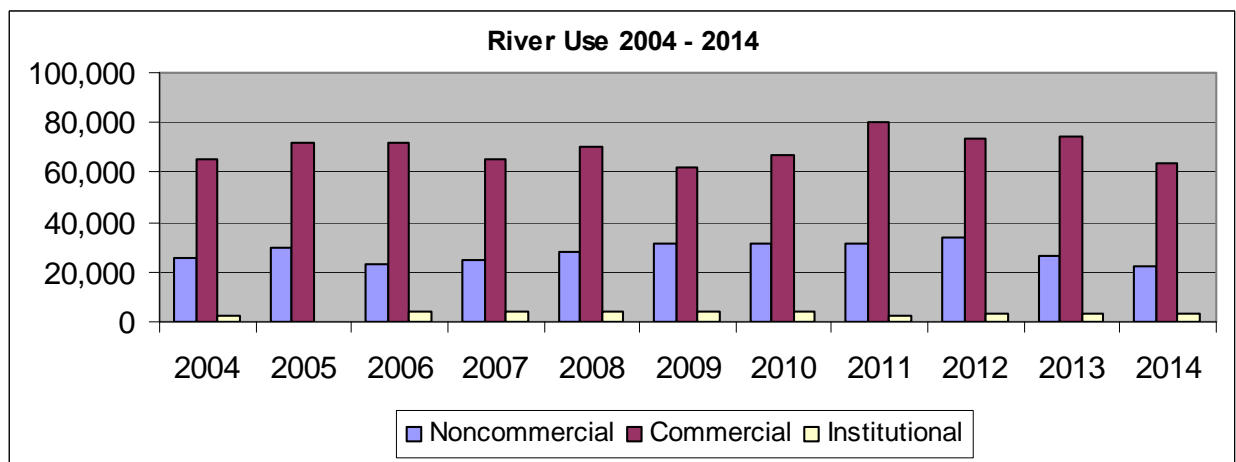
The 21 mile section of South Fork of the American River from Chili Bar Dam to Folsom Reservoir continues to be one of the most rafted and kayaked river in the State of California typically averaging well over 100,000* people annually.

2014 was the lowest use year in the last 10 years having just under 90,000* boaters being counted. Much of the reduction of use in 2014 can be attributed to the reduction in the number of days of recreational releases in a “Super Dry” water year that release flows were scheduled compared to 2013 which was designated as a “Dry Year” water year. The release schedule by water year type table can be found on *table 5* on page 29. In 2014, summer flows were reduced to 5 days a week (with no flow on Tuesdays and Wednesday), compared to 2013 which provided flows 6 days a week (with no flow on Wednesday). Table 1 on the next page shows a comparison of the use in 2014 which had the elimination of release days in the spring and fall and on Tuesdays compared to daily use in 2013. Figure 1 on the next page shows the last 10 years totals for commercial, private and institutional use. The total reduction of boating use in 2014 from 2013 was 15%.

	2013 Commercial	2013 Private	2013 Institutional	2014 Commercial	2014 Private	2014 Institutional	% Change 2013 to 2014
Monday	7,385	1,476	85	7,958	1,811	37	10%
Tuesday	7,703	1,312	83	79	0	10	-99%
Wednesday	217	309	8	101	0	0	-81%
Thursday	8,604	1,376	172	9,304	1,434	176	8%
Friday	12,007	2,762	524	9,983	2,023	350	-19%
Saturday	22,356	10,984	1,575	21,756	9,563	1,558	-6%
Sunday	16,373	8,131	1,070	14,128	7,891	916	-10%
Total People	74,645	26,350	3,517	63,309	22,722	3,047	-15%

*Commercial Use Number do not include commercial guides, commercial non-paying guests and guide trainees

Table 1. Boater Totals by Day, 2013 Dry Year Water Compared to 2014 Super Dry Water Year



*Commercial Use Number do not include commercial guides, commercial non-paying guests and guide trainees

Figure 1. River Use Totals 2004-2014

The 5 mile middle section of river from Coloma to Greenwood Creek in the Coloma/Lotus valley is a popular class II section of river. Boaters, campground visitors, residents and tourists like to float in inner tubes or small rafts on this section. There is a concern that the alcohol bans on other regional rivers on holiday weekends would attract the drinking inner tube users to the South Fork of the American River. The last two years counts have been done in the section below the State Park (below Coloma) on the 4th of July and on Memorial Day weekend. Those counts have shown an increase in the number of inner tubers but not an increase in the number of open containers (see *table 2* on the next page). In 2014 the County River Management Advisory Committee (RMAC) recommended a year round complete ban on alcohol on the South Fork of the American River which was not adopted by County. RMAC also recommended a glass container ban on the river and within 100' of the river on County property which was adopted by the County in July 2014.

County Ordinance 12.64.070 that requires that anyone who is navigating the South Fork of the American River on an inner tube or air mattress and not in a vessel as defined by the California Harbors and Navigation Code must be wearing a Coast Guard approved personal flotation device (PFD). Those who were observed not wearing a PFD and considered in violation by Parks River Patrol are also reflected in *table 2* on the next page. A County Park's River Patrol counted a PFD

violation when someone did not have a PFD with them or they did not put on their PFD when asked by Parks River Patrol staff to do so. The table does not reflect those who put on their PFD when asked. The majority of people put on their PFD when asked by Parks River Patrol.

The County Sheriff has the authority to issue citations for both State and County PFD violations. In 2014, the Sheriffs boating unit ran the whole river on most Saturdays and Sundays in July and August. The Parks River Patrol staff spent considerable hours training a new member of the Sheriffs Boating unit to raft in 2014. A summary of the Sheriffs Boating Unit activities can be found in Appendix C, beginning on page 91.

Further information on boater use, trends and preferences can be found in this report beginning on page 9.

Thursday July 4, 201' 11:10 AM - 4:22 PM	Inner Tubes	Alcohol (open containers)	Observed Not wearing a PFD
Total	110	30	16
Friday July 4, 2014 11:48 AM - 4:28 PM	Inner Tubes	Alcohol (open containers)	Observed Not wearing a PFD
Total	285	26	27
Sunday September 1, 2013 10:53 AM - 4:54 PM	Inner Tubes	Alcohol (open containers)	Observed Not wearing a PFD
Total	242	49	30
Sunday August 31, 2014 10:30 AM - 4:38 PM	Inner Tubes	Alcohol (open containers)	Observed Not wearing a PFD
Total	284	22	18

Table 2. Class II Boat Counts below Marshall Gold Discovery State Historic Park comparing 2013 to 2014 Inner Tube, Alcohol (open containers observed) and persons not wearing a PFD observed.

There were thirty one permitted outfitters and 7 Institutional Groups registered in 2014. Currently there is not a daily limitation for private boaters or Institutional Groups. The peak day of use with the total number of people on the river was July 26, 2014 with a total of 2,609 people which was slightly higher than last year's 2,524 people on July 20, 2013. If there were exceedances on the river from use on the lower or upper section of river or an exceedance to the boat density threshold on the South Fork mitigation measures would need to be implemented.

No mitigation measures restricting boating use will be required in 2015 by the County.

There was one boating death in August of 2014 on the South Fork of the American River. The person was not wearing a PFD and additionally did not have a PFD available in the raft. The drowning occurred in a Class II wilderness section of whitewater and above the Gorge. The raft was not a multi-chambered raft designed for whitewater. The Parks River Patrol provides education to people on whitewater safety and recommends wearing your PFD at all times while on the river. When there is an accident, it is easy to become separated from your boat and equipment (PFD) in moving water. California State law requires that you only need to have a PFD readily available while boating unless you are under the age of 13 in which case you must be wearing the PFD while boating. Because the person who drowned was over age 13 and in a vessel as defined by the CA

Harbors and Navigation Code the State Law was applicable in which a PFD be only available and not the County Ordinance requiring that the PFD be worn on South Fork.

Vehicle traffic monitoring results were all below their respective acceptable limits as prescribed in the RMP EIR and therefore no changes will need to be made in 2015. There was a private boater shuttle which operated on 2014 with help from an Air Quality Management District Grant. Traffic counts from 2014 can be found starting on page 22 of this report.

The water quality monitoring bacterial test results in 2014 did have some higher readings than prior years which may be due the lower minimum flows allowed in a Super Dry Years as compared to prior Dry Years which required 50 to 100 more cfs per month. This program theorizes that the resident Canada Geese population which appears to continue to increase is a significant contributor of bacterial pollution to the river. There were two days which had test results above 400/100 ml which would represent an exceedence of the Basin Plans benchmark of 10% for samples taken on those individual days (1 out of 9 samples) but would not be considered an exceedence when a 30 day period is applied (1 out of 18 or more samples). Upon subsequent testing following these high samples, results showed levels below the benchmarks set in the Basin Plan. In 2015 testing protocol will be to post and retest the following day any location which has a sample result over 400 ml. Bacteria testing will be done starting in 2015 by Sacramento Municipal Utility District (SMUD) and PG&E as prescribed in their new FERC licenses. The County may want to consider eliminating or reducing the number of bacteria tests due to SMUD's and PG&E's a testing plans

The 2014 sampling date was the earliest sampling date on record and produced enough precipitation to create runoff. The results did show stormwater runoff exceeding the Basin Plan standards for oil and grease in the samples collected from the parking lots; prior to the runoff discharging into the South Fork. Previous analytical results from the selected parking areas have not shown any significant detection of oil and grease since the implementation of the 2001 RMP. Additionally, no stains or visual indications of spills or leaks were observed within the selected lots at the time of sample collection. The higher results from the 2014 samples may be influenced by the overall lack of rain fall between 2013 and 2014, the limited amount of runoff produced during the rain event for sample collection, and run-on from adjacent properties. The selected parking lots include vegetative buffers and/or coble pervious surfaces located between the parking lots and the river or nearest waterway which allows for infiltration and/or treatment opportunities of stormwater runoff prior to the runoff, if any, reaching the South Fork through sheetflow. These design measures are consistent with the current best management practices (BMPs) for post-construction stormwater mitigation.

The selected parking locations are open to the public and used by a variety of recreationists throughout the year. Additionally, these parking areas receive run-on from adjacent highways, roads and private properties. Inferring that vehicle parking solely by boaters contributes significant oil and grease pollution into the South Fork of the American River is not conclusive or defensible. Continued stormwater monitoring from parking lots should be considered to be removed from the RMP. If stormwater monitoring is removed, the consideration for adding language to the RMP that states annual and as-needed consultation with the County Stormwater Program will occur to ensure up-to-date BMP mitigations and good housekeeping practices for parking areas are being implemented to the maximum extent practicable (MEP) is recommended. If the stormwater

monitoring is going to continue as part of the RMP, then considerations of the water entering the parking locations and the water leaving the parking locations after buffer zones should be included in the sampling protocols to provide comparison opportunities and considerations for sampling design updates should occur. Additionally, designating parking zones for boater only vehicles may need to be implemented and enforced. This program does not have authority to regulate parking on private, State or Federal lands.

Water testing results and minimum streamflows designated by Water Year Type can be found in Appendix B starting on page 70.

There is a need to update and provide boating information kiosks, provide at least one more River Patrol person and provide educational opportunities for the public. The budget for the River Program is a non-general fund program and struggles to accomplish RMP element objectives with the current funding. The County should consider raising outfitter fees, instituting a private boater fee, using SMUD Upper American River Project (UARP) mitigation funds or coming up with an alternative funding source in order to continue to implement the RMP as prescribed and further meet RMP element implementation needs.

Overall, the County's River Program in coordination with the BLM, State Parks and El Dorado County Sheriffs Boating Unit was successful in managing the South Fork American River's recreation from Chili Bar Dam to Folsom Reservoir and the implementation of the County's River Management Plan.

2014 Annual Report 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 River Program. This is the 14th Annual Report since the adoption of the updated River Management Plan in November 2001.

River Use

This section summarizes the amount of whitewater recreation on the South Fork of the American River and provides information on river use trends in several categories:

- A. Annual river use since 1992;
- 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 2 on the next page displays information on the annual number of commercial and non-commercial boaters from 1992 through 2014 along with the types of crafts used in 2014 in *figure 3*.

- Commercial use numbers do not include paid guides, non-paying guests and guide trainees. There were 31 River Use Permits issued in 2014 (33 issued in 2013).
- 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. There is private use almost every day that there are flows (see page 29 of this report, *Table 5*) during this time period.
- 87.33% of the commercial use occurred between Memorial Day and Labor Day weekends in 2014.
- 85.47% of the private use occurred between Memorial Day and Labor Day weekends in 2014.
- 86.87% of the institutional use occurred between Memorial Day and Labor Day weekends in 2014.
- Use numbers do not reflect use by private boaters, inner tubers and other river users who only run the Coloma to Greenwood class II middle section.
- Since the implementation of the 2001 (2002) RMP, the average number of Commercial Guests has been 68,008, along with an average of 26,838 Private Boaters.
- Since the SMUD UARP relicensing agreement (dam release schedule implementation starting in 2006) the average number of Commercial Guests has been 69,711 and an average number of Private Boaters has been 28,159.

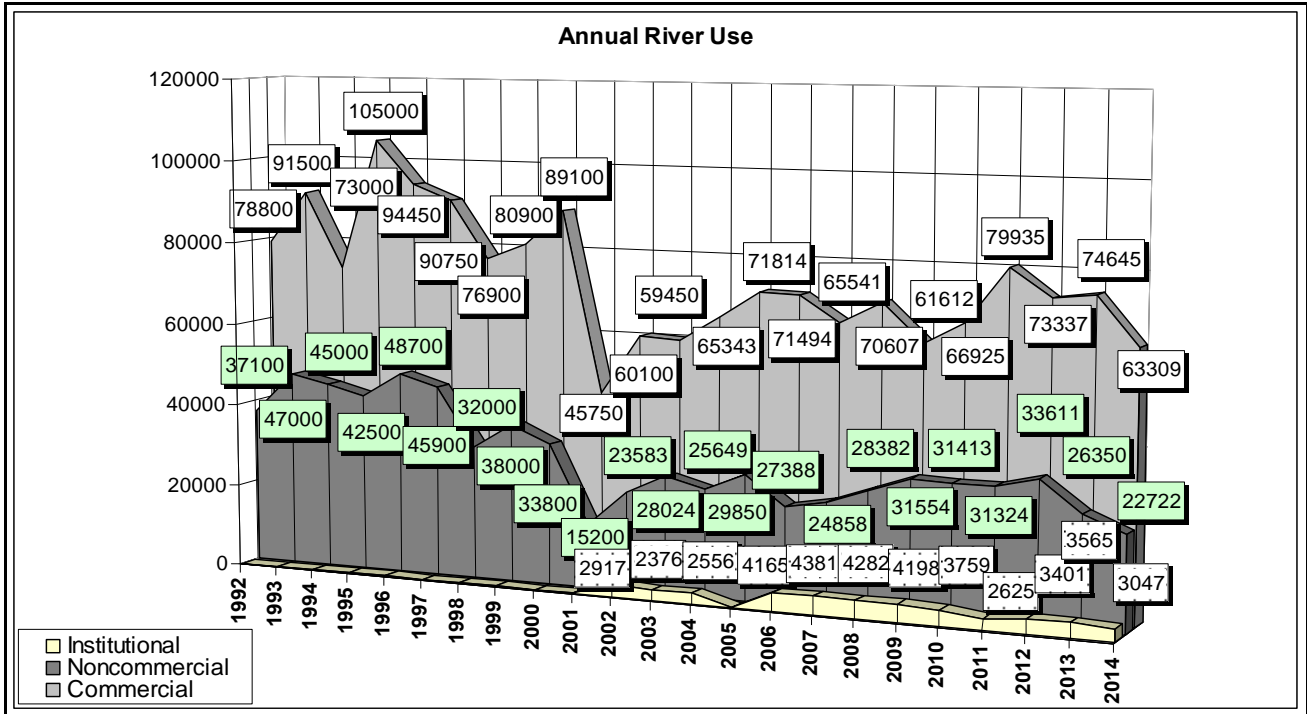


Figure 2. Annual River Use 1992 - 2014

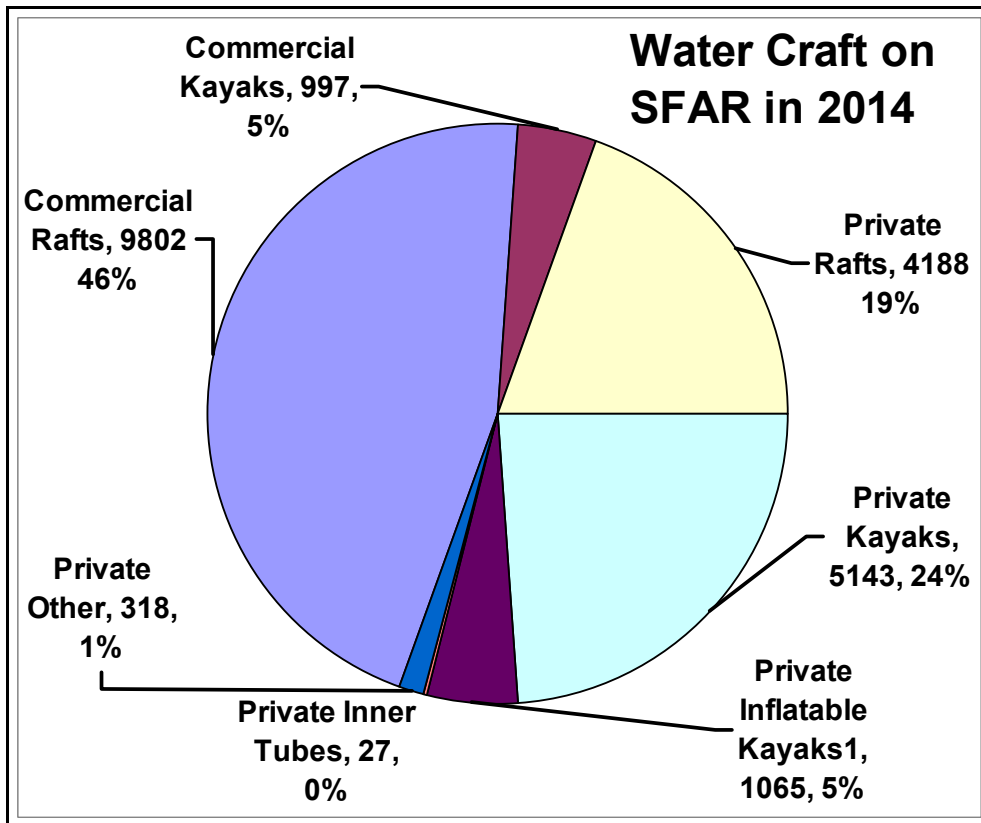


Figure 3. Type of Water Craft on Class III Sections in 2014

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. 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. The scheduled flow on Saturdays and Sundays was 1,300cfs compared to 1,500cfs in years prior. This decrease in flows may have contributed to the reduction in commercial whole river trips in 2014.

Saturdays: Between 1996 and 2002, noncommercial boaters exhibited a pronounced shift away from running the Chili Bar Run and increasingly chose the Gorge Run on Saturdays (see *Figure 3*). This pattern continued in 2014. The total private use on Saturdays was 4,929 people on the Gorge Run and 2,790 people on the Chili Bar Run.

Strong preference is exhibited by commercial clients and outfitters for Saturday Gorge trips. *Figure 3* 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-river trips which may have been a reflection of the higher flows and continuous releases generated by the snow pack. Years with better snow pack and a longer runoff seem to reflect this trend. In 2014 there was slight drop in whole-river trips from prior years. There has been an increase in Chili Bar only trips over the last few years which continued in 2014, which may be a reflection of social media marketing, people not wanting to spend as much time on the water or the higher costs associated with running the Gorge. The total Commercial Use on Saturdays was 11,420 guests on the Gorge Run, 3,899 guests on the Chili Bar Run and 1,286 guests on whole river trips.

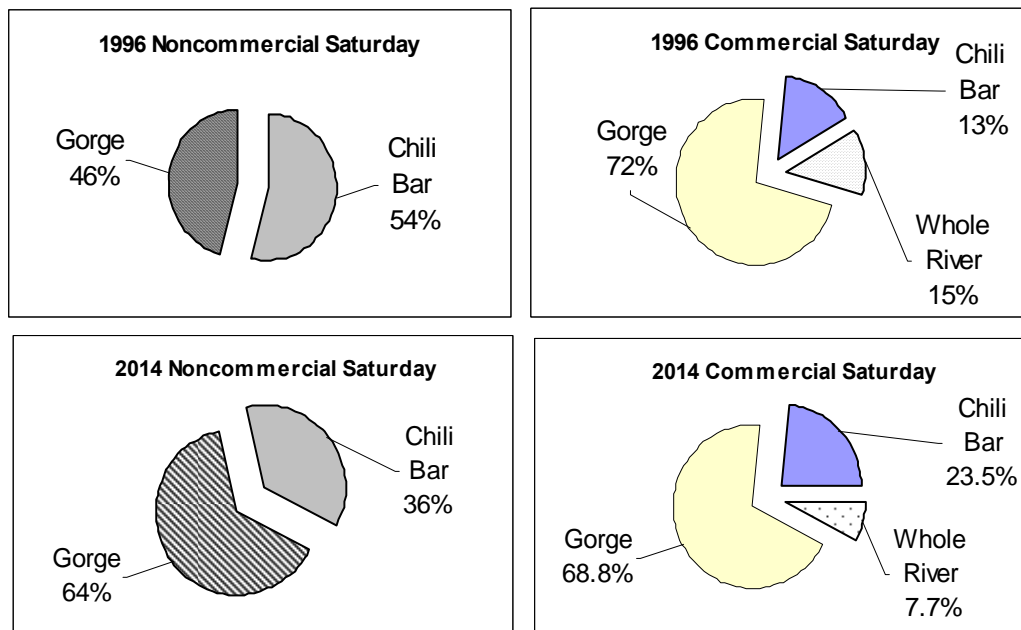


Figure 4. Noncommercial and Commercial choice of runs on Saturdays

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 2006-2014 the pattern has shown a preference for the Gorge Run as reflected in *Figure 4*. The total private use on Sundays was 3,504 people on the Gorge Run and 2,988 people on the Chili Bar Run.

Figure 4 displays the increasing percentage of commercial customers choosing the Gorge Run over the Chili Bar Run for Sunday trips from 1996 as compared to 2014. This trend started in 2006. In 2007 and 2011 there was a significant increase in the number of commercial whole river trips which was attributed to the higher flows and longer (continuous) releases which resulted in fewer commercial Gorge only trips. Whole river trips since 2012 have been under 8% which historically has been normal. The total Commercial Use on Sundays was 6,119 guests on the Gorge Run, 5,069 guests on the Chili Bar Run and 664 guests on whole river trips.

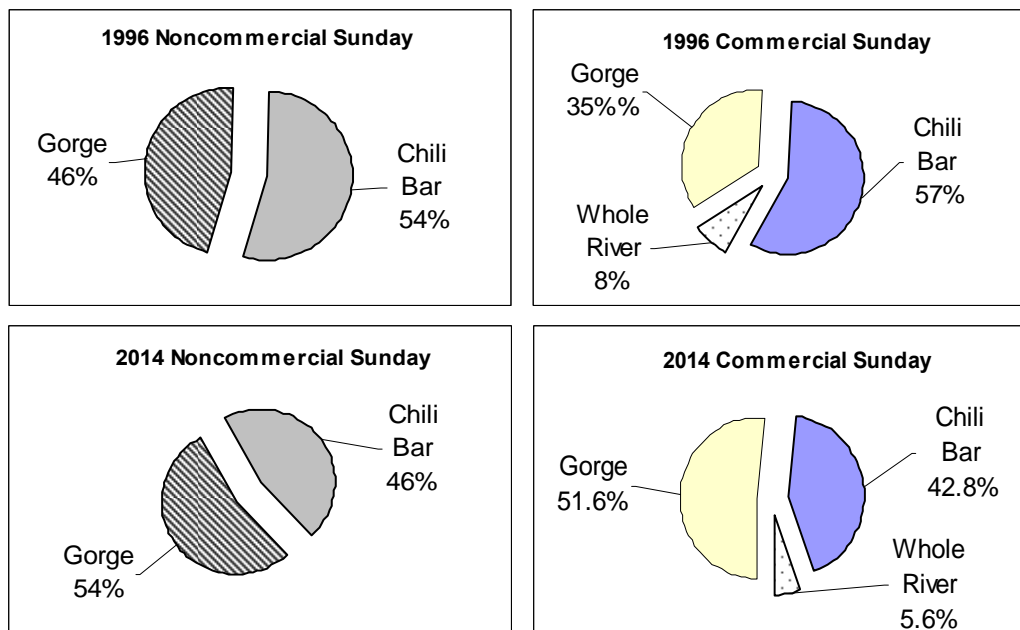


Figure 5. Noncommercial and Commercial choice of runs on Sundays

B. 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 2014 can be found in the RMP's Element 4 Monitoring and Reporting Programs on page 26. 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).

Sources of data and methods for estimating river use:

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

1. Outfitter monthly operating reports;
2. River Patrol on-river observations - Weekend days from June through August, 2014;
3. Hotshot Imaging Photo data of noncommercial river use on the Chili Bar and Gorge Runs from April 19, 2014 through September 28, 2014.

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. The number of boaters is expressed in "user days" (more commonly referred to as "recreation visits"). 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. One user day or recreation visit is one person on a section of the river during one day. This measure includes the outfitters guides, trainees, paying and non-paying guests in the commercial river use data. There is a weekend limit to commercial use that is set at 2,750. There is no limit to the institutional and private use. There were a total of 26,119 boaters on the Gorge Run and 11,597 boaters on the Chili Bar Run on Saturdays in 2014. There were a total of 14,071 boaters on the Gorge Run and 11,907 boaters on the Chili Bar Run on Sundays in 2014. These numbers include commercial whole river trips.

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 3 and 4* above 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. *Figure 5* below shows the combined percentage of user days on Saturdays and Sundays Memorial Day through Labor Day. This does not figure in paid guides, non-paying guests and guide trainees

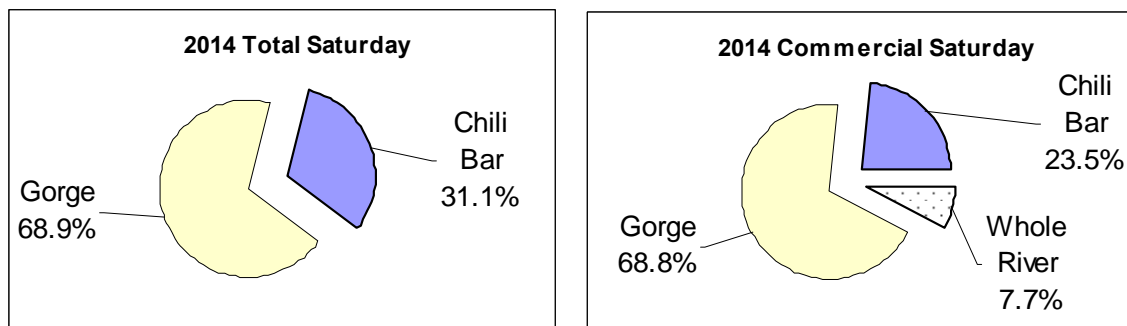


Figure 6. Noncommercial and Commercial Combined use choice of runs on Weekends

Figure 7 displays the total daily boaters for the Chili Bar Run on weekend days from Memorial Day to Labor Day in 2014. 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.

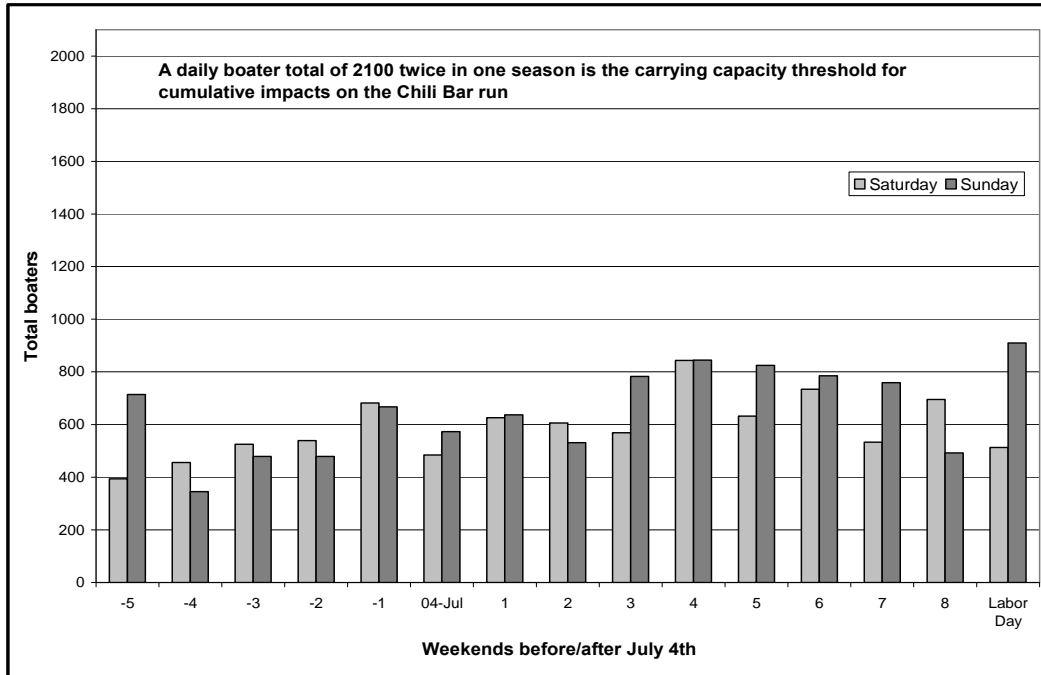


Figure 7. 2014 Daily Boater Totals - Chili Bar Run

Figure 8 displays the total daily boaters on the Gorge Run during weekend days from Memorial Day to Labor Day in 2014. 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.

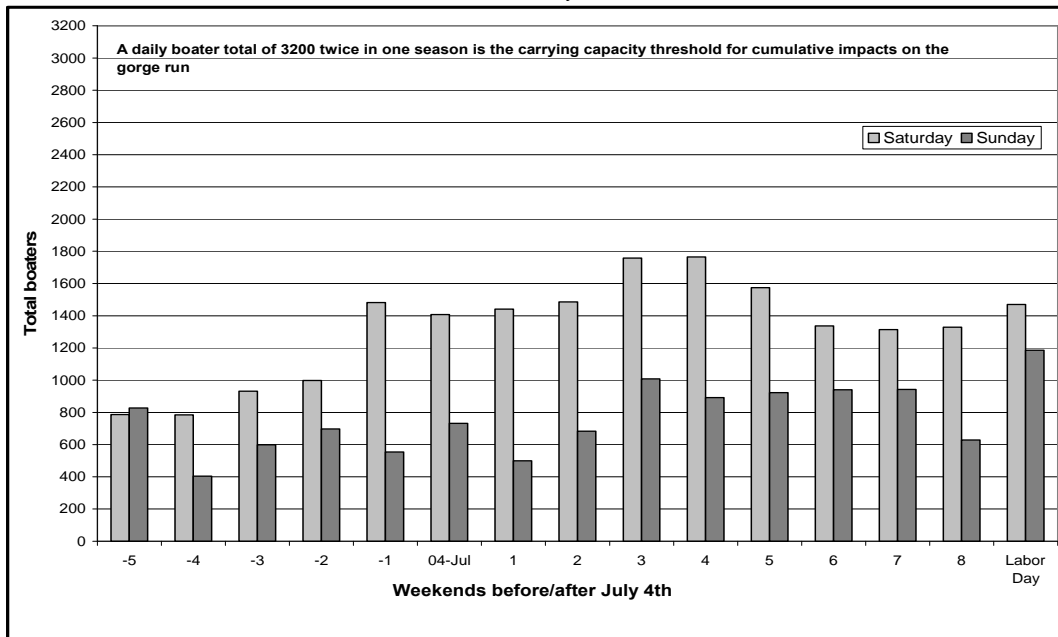


Figure 8. 2014 Daily Boater Totals - Gorge Run

Synopsis of 2014 monitoring for total daily boaters

- River use in 2014 on 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 2014 because the thresholds on both runs were not exceeded.

Chili Bar and Gorge Run data compilation methods:

- Commercial use numbers are complete data compiled from outfitter monthly operating reports.
- Noncommercial use numbers data (week days and weekends) was compiled from Hot Shot Imaging photos.

Boat Density

The second indicator, boat density, is a safety measure designed to prevent boating safety hazards from occurring 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.

Rafts are counted as one boat, while kayaks, inflatable kayaks and inner tubes are counted as ½ a boat.

The former County Parks Department had previously gathered data on boat density levels during the years 1995 through 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 through 2011 formed the basis for the decision to focus boat density monitoring on the Gorge Run in 2014. *Figure 9* displays the results of the monitoring on the Gorge Run which began on the first weekend after Labor Day. In some years, the counts began when scheduled releases started which has been as late as after July 4.

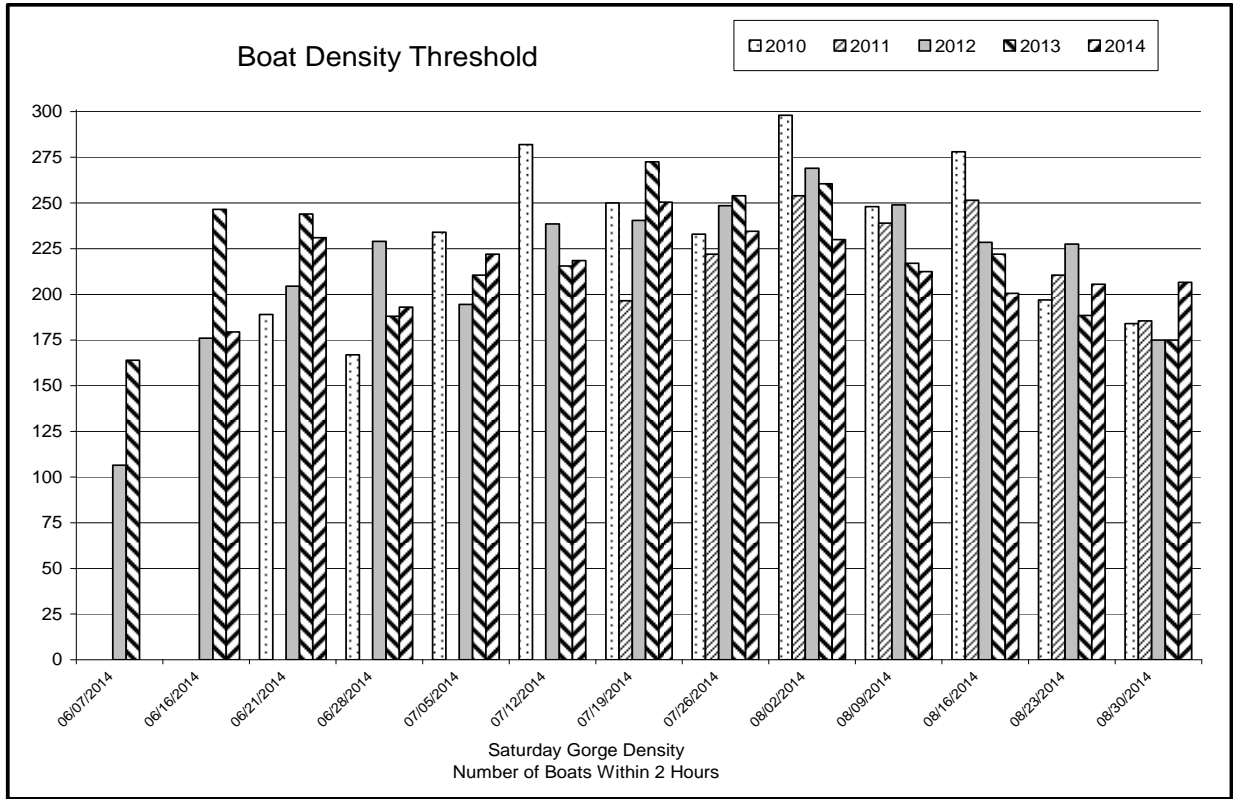


Figure 9. Boat Density Gorge Run 2010, 2011, 2012, 2013 and 2014

Boat counting was not done on the Chili Bar section in 2014. Previous years’ counts and general observations have shown boat densities to be well below the plan’s carrying capacity. There was an increase in use on the upper section in 2014 from 2013 so a count on the upper section to confirm that the use is still well below the 300 boats within two hours will be done in 2015.

Boat counting below Marshall Gold Discovery State Historical Park on the Coloma to Greenwood Creek section, were conducted on July 4, 2014, July 5, 2014 and Sunday, August 31, 2014. The results of those counts are found in *Table 6* on page 31. Prior year counts have shown boat density levels well below the plan’s carrying capacity on this section of river.

The peak density between the three days counts was 188 boats on August 31, 2014.

Use in the middle section has increased in part due to the BLM parking lot at Greenwood Creek, it being classified as a Class II beginner section and the appeal to inner-tubers (river floaters).

There is concern that use on the middle section will increase on Holiday weekends when alcohol is banned on the lower American River and Truckee River. This concern has been voiced by land owners and the County River Management Advisory Committee (RMAC) Members and is reflected in this year’s and prior years, comments collected at RMAC meetings.

- Boat densities on the Gorge Run did not exceed the carrying capacity indicator of 300 boats per two hours in 2014.
- Peak boat density in 2014, 250.5 boats in two hours, was significantly lower than the peak density in 2013 on the Gorge (approximately 272).

C. Trends in River Use on Weekend Days

Figures 10 and 11 compare the recent number 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 Run, 3,200 boaters, and Chili Bar Run, 2,100 boaters.

Saturdays - Gorge Run:

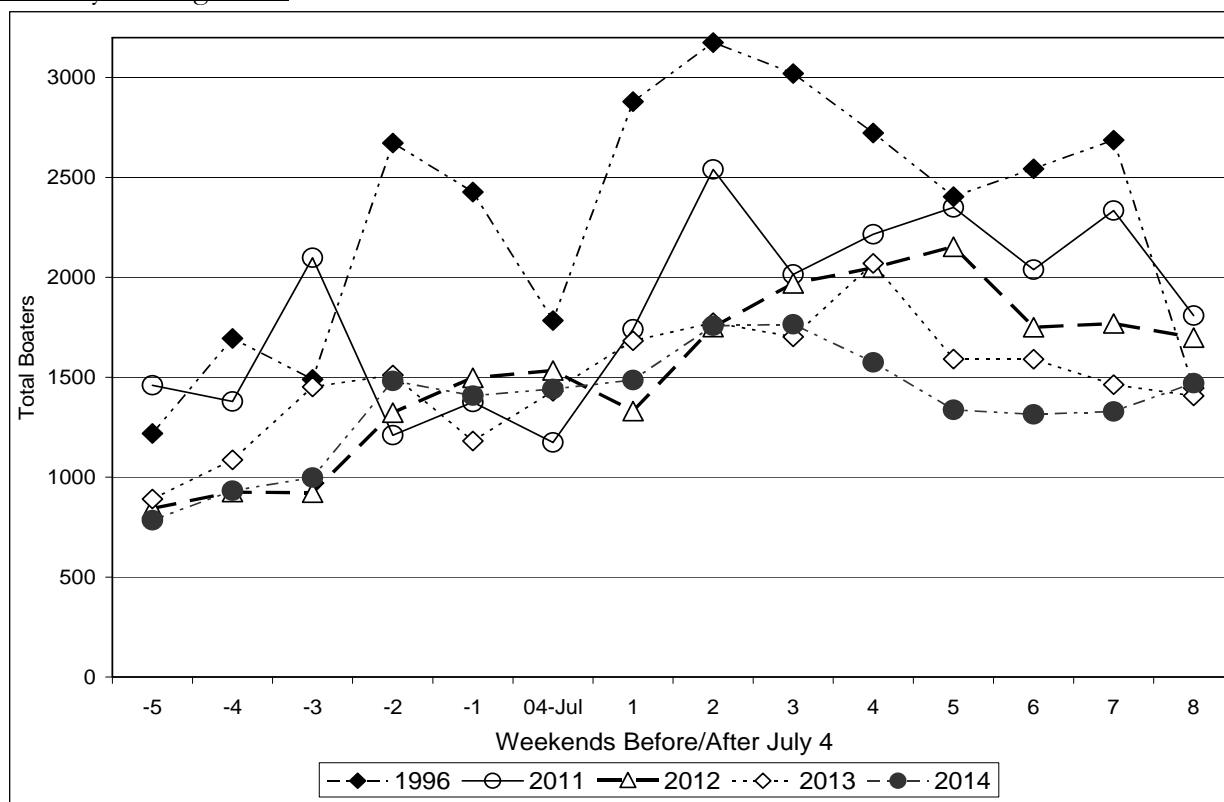


Figure 10. Gorge Run on Saturdays - Trends in Total Daily Boaters

- In 2014, the average number of boaters on the Gorge Run was 41% lower than in 1996.
- In 2013, the average number of boaters on the Gorge Run was 35% lower than in 1996.
- In 2012, the average number of boaters on the Gorge Run was 33% 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:

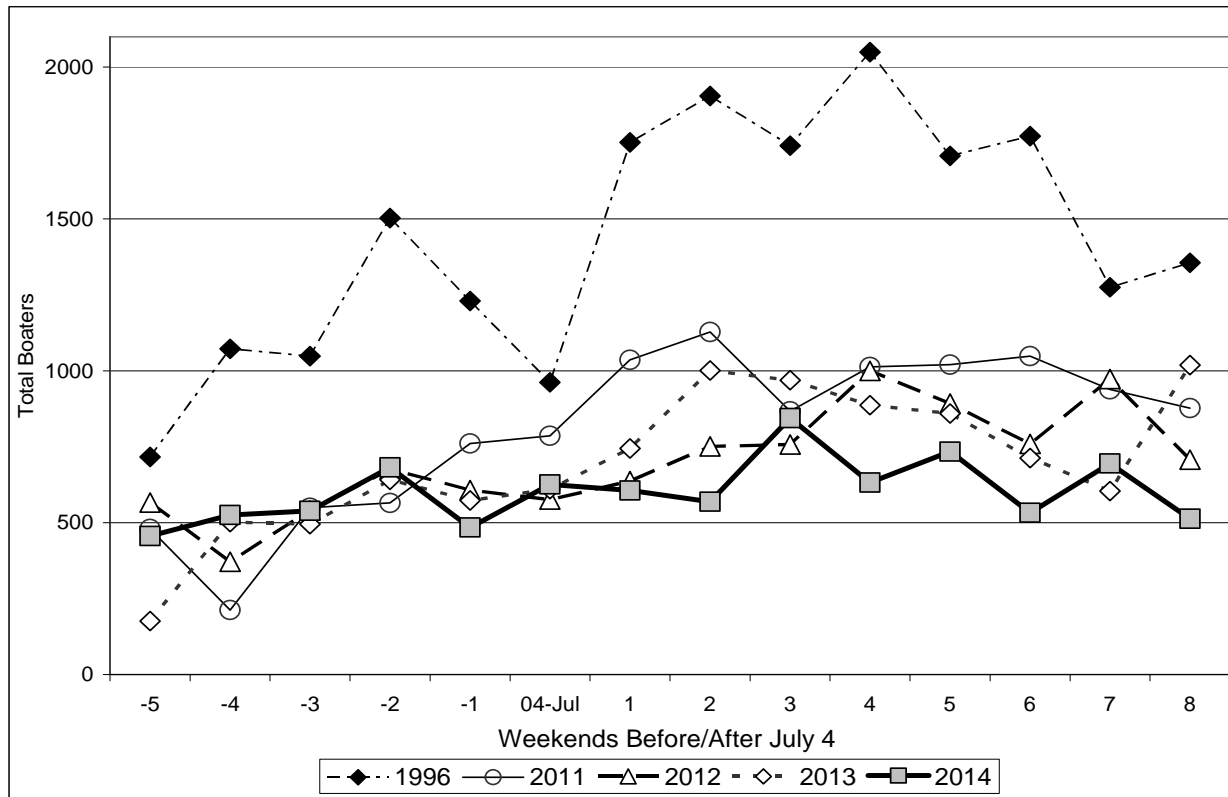


Figure 11. Chili Bar Run on Sundays - Trends in Total Daily Boaters

- In 2014, the average number of boaters on the Chili Bar Run was 58% lower than in 1996
- In 2013, the average number of boaters on the Chili Bar Run was 51% lower than in 1996
- In 2012, the average number of boaters on the Chili Bar Run was 51% lower than in 1996.
- The daily boater total of 2,049 in 1996 is the historic peak number of boaters for the Chili Bar Run.

I. 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 2014 towards full implementation of each element.

The numbered bullets that follow correspond with the numbered bullets in the 2001 River Management Plan.

The descriptions fall into four categories:

1. Elements that have been implemented in 2014;
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 2014;
3. Elements that will require further coordination with the Bureau of Land Management (BLM), California State Parks, private land owner or another County department.
4. Elements that staff believes were not adequately implemented in 2014 and which should be more closely addressed in 2015.

Element 1 – Educational Programs

1.1 Newsletter

- A bi-annual newsletter was printed in the summer of 2014 and winter of 2013/2014. These publications can be found on the County River Program website: (<http://edcgov.us/Rivers>).

1.2 Signage

- In 2014, signage at river access points was consistent with signage during 2013.
- A sign at Chili Bar is needed to inform the public of that location. The California Transportation Department installed signs on Highway 193 ¼ mile before Chili Bar in either direction identifying public river access at Chili Bar in 2013.

1.2.3 Middle-run signage

- A new sign was installed by BLM identifying public lands at Greenwood Creek and informing boaters of the take-out and downstream Class III whitewater. Signs informing the public of the quiet zone, public land beginnings and endings were installed and removed for the season by river patrol staff.

1.3 Kiosks

- No additional kiosks or changes were made in 2014
- All kiosks have river maps, private boater tags, comment cards and large group registration forms available.

1.4 Flow Phone

In 2014, County River Program staff continued to manually update the flow phone system with 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/ provides current river information through links to the American River web page and other links: www.theamericanriver.com, www.DreamFlows.com and www.Coloma.com. Information concerning the River Management Advisory Committee, approved outfitter services, and shuttle services are updated as needed.

1.6 Resource/Habitat Education

- In 2014 there was no Annual Headwaters Institute Guide Workshop, which includes segments with resource and habitat focus in 2014. Individual educational opportunities were utilized by staff during river patrols, at put-in's, campgrounds and at River Clean Ups.
- "Leave No Trace" river practices are taught by patrol staff during visitor contacts.

1.7 Quiet Zone Education: see Element 2.4

1.8 Toilet Location Education

See Element 1.9, public access education below.

1.9 Public Access Education

- Public Access Education continues to rely on the boater self registration system, river maps, brochures, kiosks, and boater education efforts at river access sites continue to provide maps with the locations for restrooms, put-ins and take-out locations, quiet zone locations and required private boater tags, which identify the requirements for sanitation and safety for boating on the South Fork.

1.10 Commercial Guide Education

- The annual South Fork guide meeting was held in May 2014 at Marshall Gold Discovery State Historic Park. In addition to the presentations by the State Parks, the BLM and the County on rules and regulations other presentations included CHP Helicopter hoist training and safety when working around helicopter, State Park interpretive tour of Marshall Gold State Park, a slide show presentation on a new American River guide book by the author, County River Patrol discussion on rapids on the South Fork American River with possible hazards and rafting situational scenarios.
- County Parks River Patrol held additional meetings with individual outfitters guides to provide information on: river 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.

1.11 Cultural and Nature Workshops.

- There were no workshops held at Hennigsen Lotus Park in coordination with the American River Conservancy and Marshall Gold Discovery State Historic Park.
- The American River Conservancy has a Nature Center in the State Park open the public.
- Marshall Gold State Park holds Living History Programs once a month occurring on the 2nd Saturday of each month. This hands on history day features many historical interpreters who come out to demonstrate the different aspects of pioneer life during the Gold Rush. Marshall Gold State Park also holds two other cultural events with Coloma Gold Rush Live! in October which is one of Marshall Gold's biggest special events which is a reenactment of an 1850's gold mining encampment. The other is opening thirteen of the parks buildings that are normally closed and decorated for the holiday's which is in held in November.

Element 2 – Safety Programs

2.1 River Safety Committee (RSC)

- There was no activity by the RSC committee in 2014. This is the Sheriffs Departments responsibility. During high water years the County has had volunteers help with patrols and education at put-ins.

2.2 Agency Safety and Rescue Training

- Sheriff's Boat Patrol
 - During the summer season of 2014, County Parks River Patrol coordinated and trained the Sheriff's new Boating Deputy.

- County Parks River Patrol
 - River Patrol staff attended a swiftwater rescue recertification class in 2014.

2.3 Boating Safety

- County River Patrol 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 2014, 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 Run section. They also helped maintain the three BLM composting toilets during patrols. Having at least one more seasonal river patroller on weekends is desired in order to provide more patrolling opportunities on the middle section (Coloma and Greenwood Cr.), to work in partnerships on the class III sections and allow for patrolling on a more consistent basis.

The components of the river patrol activities are outlined below:

Provide boater education for non-commercial boaters:

- Provides boating safety, boater responsibilities, river etiquette and river flow information provided to boaters at river accesses and on river patrols.
- Implements private boater registration system.
- Implements large group and institutional group registration system.
- The County River Program interprets the California State Law that requires a life vest on every boat be readily accessible for each person that the life vests (PFD) must be worn in class II whitewater. It is the River Programs opinion that in whitewater you do not have time to put on your life vest when there is an accident in the making and it is easy to become separated from your boat and equipment (life vest) in moving water. The County may want to request the State change the PFD law to require wearing a PFD on Class II whitewater or on specific water bodies.

River safety patrol:

- Aided boaters (i.e. wrapped boats and swimmers) on at key rapids while monitoring river use.
- Provided a safety/sweep function by running the Class III sections late in the day.
- Placed a backboard, c-collar and head stabilizers below Meat Grinder, Satan's Cesspool and Fowlers Rock rapids for the regular (May-September) boating season.
- Removed hazard trees that created obvious hard to avoid strainers.
- Assist in body recovery and missing persons searches

Quiet Zone patrol:

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

River use monitoring:

- Conducted monitoring on weekends for the carrying capacity system.
- Conducted monitoring on 4th of July and Memorial Day weekends in the Coloma to Greenwood section for alcohol use.
- Audited commercial river use.
- Tracked non-commercial river use levels.

2.5 Element 2.5 through 2.7 direct Sheriff's Department and Fire District Protection response and coordination responsibilities

Element 3 – Transportation programs

3.1 River Shuttle Service

- The Coloma River Shuttle received a grant from AQMD to operate a shuttle on the South Fork American River. One van and one trailer provided shuttles to the public through October 2014. There are two privately-owned businesses that offer shuttle services on the river. River Transportation offers passenger shuttles for larger groups and many of the permitted outfitters guests. North Fork Shuttle's services are primarily aimed at kayakers. These businesses are linked on the County Rivers website (<http://edcgov.us/Rivers>).

3.2 Off-River Parking and Staging Area

This element was not required in 2014. It will 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 Henningsen Lotus County Park increases to a level that creates conflicts with other park uses that cannot be effectively managed through other measures.

3.3 Illegal Parking

This element specifies action that will be taken by the County in response to illegal parking:

- An ordinance establishing double-fine zones has not yet been developed for Board of Supervisors action.

3.4 Mt. Murphy Bridge Policy

This element specifies that the Mt. Murphy Bridge is off limits for commercial boating activities. The County of El Dorado Transportation Division is planning to retrofit or replace this bridge within the next 6-8 years. More information on this project can be found at <http://www.edcgov.us/MtMurphyBridge/>.

3.5 Traffic Studies

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

- Applications for new Special Use Permits or revised Special Use Permits in 2014 that include public river access in the proposed project area;
- The “interim shuttle” parking area is developed (this was not developed in 2014);
- Applications for additional public access to the middle run through river access facilities near Highway Rapid.

None of these three RMP elements were implemented in 2014.

2014 Traffic Counts

In 2014, the County Transportation Division performed its annual monitoring of traffic volumes on RMP area roads during the summer in contrast to 2013 which was done in the fall. The Bassi Rd. count was conducted on Thursday and Friday which were the two of the three days of scheduled water for the week which could have attributed to the increased average for the week as compared to prior years. Daily traffic volumes were monitored at the same locations that were analyzed in the RMP’s Environmental Impact Report (see *Table 2*). *Figures 11* and *12* show traffic trends on these road segments as well.

- Note that traffic counts at each location occur over a one-week period and, as such, can be influenced by unpredictable events (special events/construction/etc.). Also, bicycles are counted as vehicles and included in the counts.
- Traffic volumes at the monitored locations remain within the Level of Service standards described in the EIR.
- The 2014 traffic counts support the 2013 traffic counts: both counts indicate an increase in midweek traffic levels on all road segments in the project area since the 1997 EIR analysis.
- Lower traffic Counts in 2014 can most likely be attributed to the reduction of river use in 2014 and arising from the incremental loss of water on Tuesday.

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 especially given there are more businesses (Bed and Breakfast’s etc.) in the area with more going on in general (wedding venues, wineries, special events, increase in trails, etc.) that generate weekend traffic. 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.

Segment	1997* Summer weekday average	2013 Summer weekday average	2014 Summer weekday average	1997 Summer weekend traffic volumes	2013 Summer weekend traffic volumes (avg. Sat + Sun)	2014 Summer weekend traffic volumes (avg. Sat + Sun)	Traffic count dates
Bassi Road	800	1025	1236	1800	1378	No Count	July 31 - August 6, 2013 July 31 – August 1, 2014
Cold Springs S of Gold Hill Rd	3000	3327	3096	2500	2280	2626	September 20 – 29, 2013 July 31 – August 6, 2014
Lotus Rd, S of Thompson Hill	4800	5214	5195	4800	5429	5359	July 26 – August 1 2013 July 31 – August 6, 2014
Marshall Rd near Hwy 49	3100	No Count	3431	2900	No Count	2966	No Count in 2013 August 22 – August 28, 2014
Salmon Falls Rd North of river	1300	1500	1104	1700	1688	1200	July 26 – August 1 2013 August 22 – August 28, 2014
Salmon Falls Rd South of river	1800	2231	2563	1900	2202	2192	July 26 – August 1 2013 August 22 – August 28, 2014

Table 3. Daily traffic volumes on county roads in the project area

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

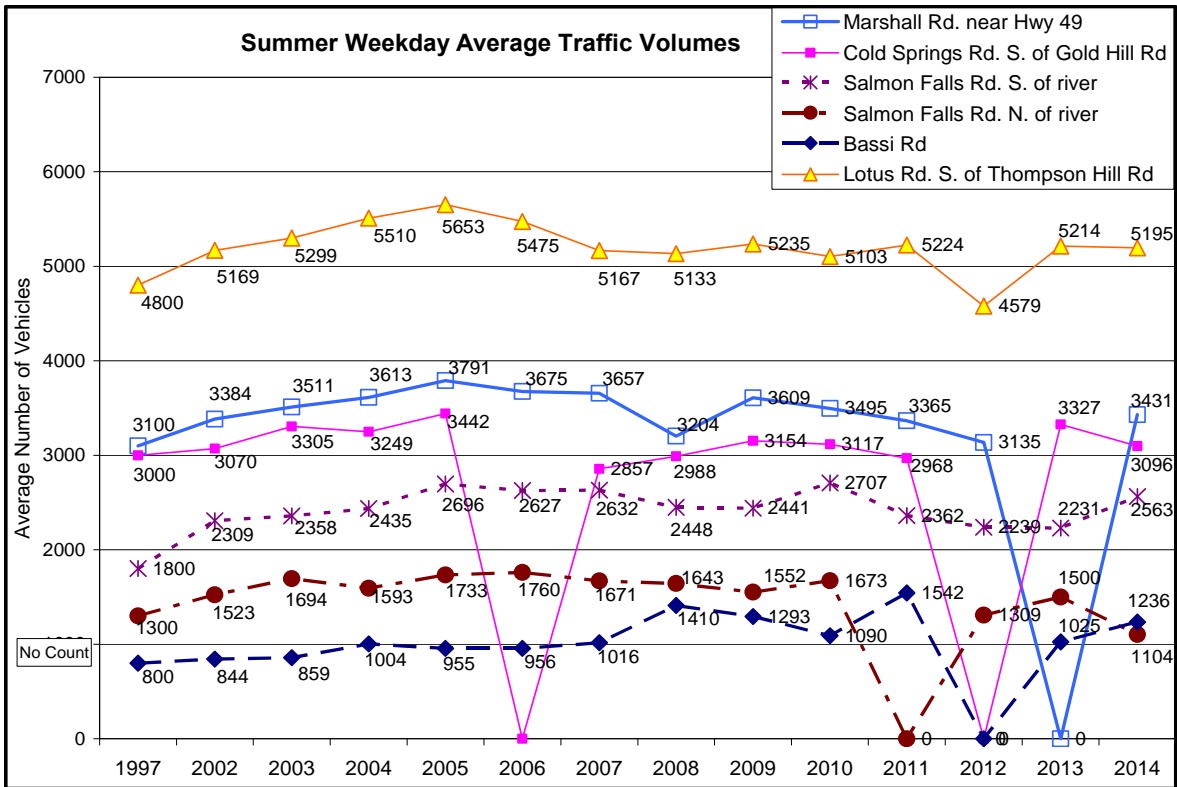


Figure 12. County DOT Weekday Traffic Counts on Road Segments within the Project Area

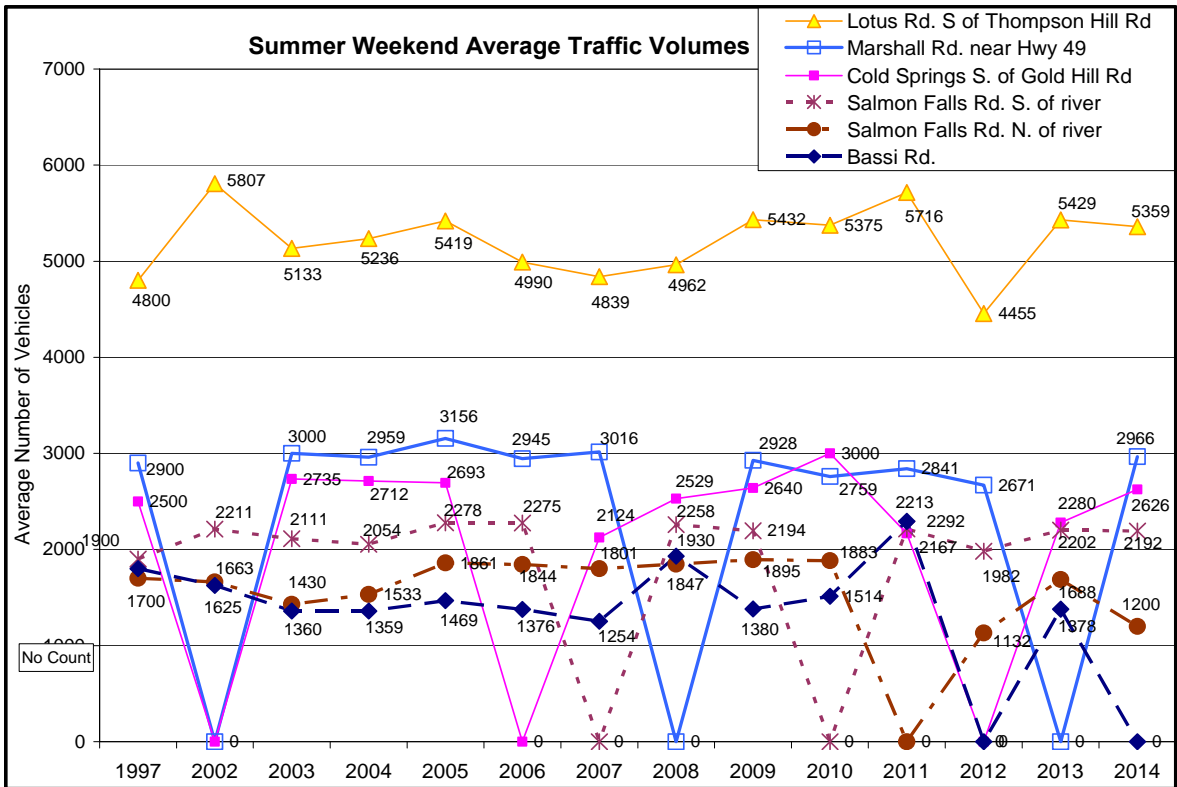


Figure 13. County DOT weekend traffic counts on road segments within the project area.

Traffic volumes on California State Highways in the project area were obtained from the Caltrans Traffic and Vehicle Data Systems Unit website (see *Table 4*). CalTrans data for 2014 is not available until later in 2015 and therefore these annual reports include the prior years CalTrans data in them. According to the Caltrans data, traffic did not change in 2013 from 2012. 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 4* 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 (Cold Springs Road)
- 5600 on Route 49 south of the junction with Lotus Road
- 2500 on Route 193 north of the junction with RTE 49

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.

Table 4. Caltrans 2013 Traffic Data for State Highways

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 7. Carrying Capacity Monitoring was conducted during the 2014 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.

Monitoring System

- During the RMP planning process, data were collected that established the boat density on the Gorge Run on Saturdays in 1996 through 1999. Boat density on the Gorge Run occasionally exceeded 300 boats in a two-hour period. Because of this history, River Patrol staff monitored river use and boat density levels on the Gorge Run every Saturday from the middle of June through August of 2014.
 - On the Gorge Run, staff most often recorded river use at Fowler’s Rock Rapid on Saturdays. Fowler’s Rock has had more incidents of boat wraps and rescues than Satan’s Cesspool Rapid and is the first class III rapid on the Gorge Run section;

Therefore Fowler's Rock is a higher priority location for river safety activities on Saturdays when boat density and use are highest.

2014 Flows and Carrying Capacity –

CA Department of Water Resources Bulletin 120, May 1, 2014, data is reflected in this section.

The May 1, 2014 snow water content average of 15% tied 2014 with 1990 for the 2nd lowest snow water content exceeded only by that of 1977. Runoff during April was about half of average. Reservoir storage gain was nearly average ending up at around 70 percent overall as of May 1 but was down about 25 percent from last year. Runoff forecasts for April through July and for the water year would be the 4th lowest on the record, exceeded only by 1977, 1924, and 1931. The 2014 drought was worse on the San Joaquin River system.

In 2014, snowpack water content was very poor, at about 15 percent of average for the date (May 1, 2014).

Precipitation from October through April stood at about 50 percent of average compared to 75 percent in 2013. Seasonal rainfall amounts were slightly better in the northern part of the State. April rainfall was about 65 percent of average overall, but amounts were a bit better in the Bay Area and the central and southern Sierra.

Runoff was 35 percent of average as of May 1, 2014, which was half of that reported last year at this time. April runoff was 50 percent of normal. Estimated runoff of the eight major rivers of the Sacramento-San Joaquin River region in April was 1.71 million acre-feet.

Reservoir storage was about 70 percent of average in 2014, down from 95 percent reported in 2013. The lowest reports were across the central portion of the State in the Central Coast and San Joaquin-Tulare regions. Statewide storage increased nearly 1.2 million acre-feet in April, about 90 percent of the normal increase for the month.

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 no high water period (5,000-6,000 cfs) in 2014. Summer flows were guaranteed in 2014 by Pacific Gas and Electric and the Sacramento Municipal Utility District five days a week with no water guaranteed on Tuesdays and Wednesdays Memorial Day to Labor Day. In 2013 releases were guaranteed every day but Wednesdays. In summer, Saturday flows began ramping up early in the morning and typically reached a peak of 1,300 cfs by 8:00 a.m. Peak flow was maintained until approximately 1:00 p.m., 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 three to five hours. Weekday flows were 1,300 cfs for a three-hour period, with peak flow typically being reached at 9:00 a.m. and lasting for three hours.

The volume of 1,300 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 did not come close to exceeding the threshold provided in the RMP of 300 boats in a 2-hour period on Saturdays on the lower (Gorge Run section). It is theorized that the longer release schedule provided more opportunity to spread out boating use.

In 2014, Sacramento Municipal Utility District and Pacific Gas and Electric provided reliable and predictable post-Labor Day flows on the weekends through September and on Saturdays through the winter, which resulted in flows that mirrored the weekend summer release pattern. Commercial and private use continues to mirror 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 when a release was scheduled).

The Sacramento Municipal Utility District (SMUD) and Pacific Gas and Electric (PG&E) re-licensing agreements were completed in 2007 and were approved by the Federal Energy Regulatory Commission (FERC) for the Upper American River Project and Chili Bar Project in July of 2014. This 50-year license will guarantee recreational flows on the South Fork and continued operation of the hydroelectric facilities located upstream of Chili Bar on the South Fork American River watershed. The flow schedule in 2014 was similar to a Super Dry Year flow schedule as designated in the license which is reflected in *table 5* on the next page. The water year type in 2013 was “Dry” which resulted in flows on Tuesdays Memorial Day through Labor Day, flows on Fridays in September and flows on Sundays in the winter. The loss of these days contributed to the reduction of overall river use on the South Fork in 2014 as reflected in the *table 5* on the next page.

South Fork American River Below Chili Bar Reservoir Dam Minimum Recreational Flow by Water Year (cfs)								
WATER YEAR								
TYPE	PERIOD	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
Super Dry	April - Memorial Day	3 Hrs @ 1300					3 Hrs @ 1300	3 Hrs @ 1300
	Memorial Day - Labor Day	3 Hrs @ 1300			3 Hrs @ 1300	3 Hrs @ 1300	5 Hrs @ 1300	5 Hrs @ 1300
	Labor Day - September						3 Hrs @ 1300	3 Hrs @ 1300
	October - March						3 Hrs @ 1300	
Critically Dry	March - Memorial Day	3 Hrs @ 1300					3 Hrs @ 1300	3 Hrs @ 1300
	Memorial Day - Labor Day	3 Hrs @ 1300			3 Hrs @ 1300	3 Hrs @ 1300	5 Hrs @ 1500	5 Hrs @ 1500
	Labor Day - September					3 Hrs @ 1300	3 Hrs @ 1300	3 Hrs @ 1300
	October - February						3 Hrs @ 1300	
Dry	March - Memorial Day	3 Hrs @ 1300	3 Hrs @ 1300			3 Hrs @ 1300	3 Hrs @ 1500	3 Hrs @ 1500
	Memorial Day - Labor Day	3 Hrs @ 1300	3 Hrs @ 1300		3 Hrs @ 1300	3 Hrs @ 1300	5 Hrs @ 1500	5 Hrs @ 1500
	Labor Day - September					3 Hrs @ 1300	3 Hrs @ 1300	3 Hrs @ 1300
	October - February						3 Hrs @ 1300	3 Hrs @ 1300
Below Normal	March - Memorial Day	3 Hrs @ 1300	3 Hrs @ 1300		3 Hrs @ 1300	3 Hrs @ 1300	3 Hrs @ 1500	3 Hrs @ 1500
	Memorial Day - Labor Day	3 Hrs @ 1300	3 Hrs @ 1300		3 Hrs @ 1300	3 Hrs @ 1300	6 Hrs @ 1500	6 Hrs @ 1500
	Labor Day - September				3 Hrs @ 1300	3 Hrs @ 1300	3 Hrs @ 1500	3 Hrs @ 1500
	October	3 Hrs @ 1300				3 Hrs @ 1300	3 Hrs @ 1500	3 Hrs @ 1500
	November - February						3 Hrs @ 1300	3 Hrs @ 1300
Above Normal	March - Memorial Day	3 Hrs @ 1300	3 Hrs @ 1300	3 Hrs @ 1300	3 Hrs @ 1300	3 Hrs @ 1300	4 Hrs @ 1750	4 Hrs @ 1750
	Memorial Day - Labor Day	3 Hrs @ 1500	3 Hrs @ 1500	3 Hrs @ 1500	3 Hrs @ 1500	3 Hrs @ 1500	6 Hrs @ 1750	6 Hrs @ 1750
	Labor Day - September				3 Hrs @ 1500	3 Hrs @ 1500	3 Hrs @ 1500	3 Hrs @ 1500
	October	3 Hrs @ 1300				3 Hrs @ 1300	3 Hrs @ 1500	3 Hrs @ 1500
	November - February						3 Hrs @ 1500	3 Hrs @ 1500
Wet	March - Memorial Day	3 Hrs @ 1500	3 Hrs @ 1500	3 Hrs @ 1500	3 Hrs @ 1500	3 Hrs @ 1500	6 Hrs @ 1750	6 Hrs @ 1750
	Memorial Day - Labor Day	4 Hrs @ 1500	4 Hrs @ 1500	4 Hrs @ 1500	4 Hrs @ 1500	4 Hrs @ 1500	6 Hrs @ 1750	6 Hrs @ 1750
	Labor Day - September				3 Hrs @ 1500	3 Hrs @ 1500	3 Hrs @ 1500	3 Hrs @ 1500
	October	3 Hrs @ 1300				3 Hrs @ 1300	3 Hrs @ 1500	3 Hrs @ 1500
	November - February						3 Hrs @ 1500	3 Hrs @ 1500

Table 5. Flow Schedule Below Chili Bar Dam by Water Year Type.

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 at Greenwood Creek changed in 2005 from previous years, when the BLM constructed a parking lot and restroom. The construction created a formal access to the river through the public lands downstream of Greenwood Creek and reduced dangerous parking on the shoulder of Hwy 49, except for peak weekend-use days when parking still occurs along Hwy 49.
- A second parking area, built by BLM in 2009, is located one quarter mile North of Greenwood Creek on Hwy 49 and has reduced the shoulder parking on Hwy 49. It is still legal to park on the highway shoulder in this area and the BLM is planning a connector trail between the two parking lots. Boating counts in 2014 on the section of river between Coloma and Greenwood Creek did not show boat density issues, however compliance with personal flotation device (PFD) laws is an issue. The use of alcohol by

inner-tubers on this middle section is also quite common and is reflected in the numerous cans collected from the low water river clean ups on this section.

- No campground owners near Highway Rapid applied to the County for a revision to their Special Use Permit to allow public river access to their property in this stretch. With the opening of the BLM Greenwood Creek river access this element has been met and is recommended for removal from the RMP.
- The counts on the middle section in 2014 are reflected in the tables on the following page. Comments have been received from the RMAC, private boaters and private land owners voicing concerns over alcohol use, littering and trespassing on this section of river by inner tubers.

11:48 AM - 4:28 PM Friday July 4, 2014	People	Rafts	Kayaks	Inflatable Kayaks	Tubes	Other	Alcohol (open containers)	% Alcohol (open containers)	PFD Violations	% PFD Violations
Total	1005	118	33	22	224	16	24	2.4%	27	2.7%
Private	504	42	33	22	224	16	24	4.8%	27	5.4%
Commercial	455	69	0	0	0	0	0	0.0%	0	0.0%
Institutional	46	7	0	0	0	0	0	0.0%	0	0.0%

10:58 AM - 4:15 PM Saturday July 5, 2014	People	Rafts	Kayaks	Inflatable Kayaks	Tubes	Other	Alcohol (open containers)	% Alcohol (open containers)	PFD Violations	% PFD Violations
Total	1060	109	75	46	280	24	38	3.6%	29	2.7%
Private	644	42	75	46	280	24	38	5.9%	29	4.5%
Commercial	396	63	0	0	0	0	0	0.0%	0	0.0%
Institutional	20	4	0	0	0	0	0	0.0%	0	0.0%

10:30 AM - 4:38 PM Sunday August 31, 2014	People	Rafts	Kayaks	Inflatable Kayaks	Tubes	Other	Alcohol (open containers)	% Alcohol (open containers)	PFD Violations	% PFD Violations
Total	1280	165	49	45	247	9	20	1.6%	18	1.4%
Private	671	54	49	45	245	9	20	3.0%	18	2.7%
Commercial	609	111	0	0	0	0	0	0.0%	0	0.0%
Institutional	0	0	0	0	2	0	0	0.0%	0	0.0%

Table 6. Middle Section Counts from 2014 All Observations. Observed PFD violations were either people who did not have a PFD or did not comply with a request from Parks River Patrol to put their vest on. The majority of people asked to put their PFD on did so when asked.

4.2 Incident Reporting/Cooperating Agency Reports

The BLM and California State Parks provided information but no data for several sections of this report.

Sheriff’s Department Report – See Appendix D

County River Program

River Use Permit compliance issues are summarized in *Table 6*. County River Program staff 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. Most observed violations do not result in final violations due to a reasonable explanation.

Class I River Use Permit violation category	# violations/warnings issued	# final violations
Boat markings inadequate	5	2
Group size limits exceeded	4	1
Land use without authorization	0	0
Operating after sunset	0	0
Operating reports filed late	4	4
Permit/group allocations exceeded	0	0
Quiet Zone	5	0
Class II River Use Permit violations:		0

Table 7. Summary of Commercial River Use Permit Violations in 2014

4.3 Public Comments/Complaints

Complaints in six river issue areas were received by the County River Program in 2014:

1. Thefts from vehicles at river access points: Greenwood Creek parking area.
2. Trash accumulated under the Highway 49 bridge and graffiti.
3. On river drinking, littering, glass bottles, thefts and trespassing associated with Coloma to Greenwood Creek river users.
4. Non-permitted commercial river use activity.
5. River channel modification to Barking Dog Rapid by Kayakers, surfers, boogie boarders, and channel modification at 5175 Peterson Lane.
6. Quiet Zone violations by private boaters.
7. See also written submitted public comments in Appendix D.

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 requirement that the County will compile a summary of river use information.

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 storm water runoff. The third indicator, erosion and turbidity, are controlled through the County's grading permit and Special Use Permit inspection programs.

The water quality monitoring bacterial test results in 2014 did have some higher readings than prior years which may be due the lower minimum flows allowed in a Super Dry Years as compared to prior Dry Years which required 50 to 100 more cfs per month. This program theorizes that the resident Canada Geese population which appears to continue to increase is a significant contributor of bacterial pollution to the river. There were two days which had test results above 400/100 ml which would represent an exceedence of the Basin Plans benchmark of 10% for samples taken on those individual days (1 out of 9 samples) but would not be considered an exceedence when a 30 day period is applied (1 out of 18 or more samples). Upon subsequent testing following these high samples, results showed levels below the benchmarks set in the Basin Plan. In 2015 testing protocol will be to post and retest the following day any location which has a sample result over 400 ml. Bacteria testing will be done starting in 2015 by Sacramento Municipal Utility District (SMUD) and PG&E as prescribed in their new FERC licenses. The County may want to consider eliminating or reducing the number of bacteria tests due to SMUD's and PG&E's a testing plans

The 2014 sampling date was the earliest sampling date on record and produced enough precipitation to create runoff. The results did show stormwater runoff exceeding the Basin Plan standards for oil and grease in the samples collected from the parking lots; prior to the runoff discharging into the South Fork. Previous analytical results from the selected parking areas have not shown any significant detection of oil and grease since the implementation of the 2001 RMP. Additionally, no stains or visual indications of spills or leaks were observed within the selected lots at the time of sample collection. The higher results from the 2014 samples may be influenced by the overall lack of rain fall between 2013 and 2014, the limited amount of runoff produced during the rain event for sample collection, and run-on from adjacent properties. The selected parking lots include vegetative buffers and/or coble pervious surfaces located between the parking lots and the river or nearest waterway which allows for infiltration and/or treatment opportunities of stormwater runoff prior to the runoff, if any, reaching the South Fork through sheetflow. These design measures are

consistent with the current best management practices (BMPs) for post-construction stormwater mitigation.

The selected parking locations are open to the public and used by a variety of recreationists throughout the year. Additionally, these parking areas receive run-on from adjacent highways, roads and private properties. Inferring that vehicle parking solely by boaters contributes significant oil and grease pollution into the South Fork of the American River is not conclusive or defensible. Continued stormwater monitoring from parking lots should be considered to be removed from the RMP. If stormwater monitoring is removed, the consideration for adding language to the RMP that states annual and as-needed consultation with the County Stormwater Program will occur to ensure up-to-date BMP mitigations and good housekeeping practices for parking areas are being implemented to the maximum extent practicable (MEP) is recommended. If the stormwater monitoring is going to continue as part of the RMP, then considerations of the water entering the parking locations and the water leaving the parking locations after buffer zones should be included in the sampling protocols to provide comparison opportunities and considerations for sampling design updates should occur. Additionally, designating parking zones for boater only vehicles may need to be implemented and enforced. This program does not have authority to regulate parking on private, State or Federal lands.

Water testing results and minimum streamflows designated by Water Year Type can be found in Appendix B starting on page 70.

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

4.8 Noise Monitoring

- The County Quiet Zone is an effort to limit the noise impacts from people navigating the river to the residential properties along the river. County River Patrol currently monitors the Quiet Zone for violations by river users. When quiet zone violations are observed Parks River Patrol asks for compliance. The numbers of private boaters asked to observe the quiet zone are not included in this report.
- The County Parks River Patrol has the ability to fine only commercially- permitted outfitters.
- The County Sheriff's Department and County Code Enforcement have the ability to fine and enforce County Code 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 2014 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. The middle bathroom below Greenwood Creek is heavily used, popular for camping and lunch stops, and there has been discussion about putting in another composting toilet at that site and further downstream. The BLM lands are becoming more popular with non-boating river recreationist.

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 ban on glass within 100 feet of the river at Marshall Gold Discovery State Historic Park 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 2014.

Henningsen Lotus Park (HLP): The County did not survey park users regarding conflicts between non-whitewater recreation uses and whitewater recreation users in 2014. A survey was conducted of users of HLP to collect data regarding general input on park needs, park deficiencies and opinions about a whitewater park. This input is reflected in a HLP conceptual master plan, which was released in 2014. No visitor conflicts were reflected from this survey.

4.10 River Program Staffing

- In 2014 the River Patrol was staffed by two seasonal employees plus the River Recreation Supervisor, which was unchanged from 2013. The fiscal year 2014/2015 budget allows for the hiring of two seasonal personnel and the River Recreation Supervisor. A third seasonal river patroller is desired for better implementation of the River Management Plan.

4.11 Geographic Information System: Data was not entered into a County GIS database.

Element 5 – Agency and Community Coordination Programs

5.1 Pre- and Post-Season RMAC meetings

The 2014 post-season RMAC meeting was held November 18, 2014 in Coloma. Pre-season meetings occurred monthly, January through March 2014.

5.2 Flow information

Through the coordination of PG&E and SMUD a summer and fall flow regime was developed (described on page 28) and timely forecasts of releases from Chili Bar Dam were available. South Fork flow forecasts are posted on the County website and the websites www.theamericanriver.com, www.dreamflows.com, www.americanwhitewater.org. Forecast information can also be obtained on the County Flow Phone, (530) 621-6616.

5.3 Volunteers

- Volunteers assisted County River Patrol staff on river patrols, work projects, bathroom maintenance.

5.4 River Festival

The 2014 American River Festival charitable event was not held in 2014. There was a boating gear swap held at Henningsen Lotus Park in September.

5.5 CEQA Compliance Statement; no comments.

5.6 Litter Control

In coordination with the American River Conservancy, County River Program staff organized three river cleanups in 2014. A cleanup on the Chili Bar section was held in July. A low water cleanup was held on the middle section in August which was a low water cleanup. A cleanup on the lower section was also held in August. Volunteers from a number of commercial companies, local residents, private boaters, State Parks staff participated. Approximately 80 participants volunteered for the events. River Patrol staff conducted several other cleanup trips on all three sections of the river during the summer to remove various pieces of debris or 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 is not practical or necessary. River clean ups average about 2 – 3 yards of trash per clean up.

5.7 Agency Coordination

Weekend river patrols and vehicle shuttles were coordinated between County Parks River Patrol staff, BLM River Patrol staff and State Parks River Patrol staff. BLM and State Parks does not patrol the river as frequent as the County.

5.7.1 Recreation Conflicts: see Element 4.9.

5.7.2 Habitat/Environmental Impacts

Bureau of Land Management: Folsom BLM staff 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 from pedestrian day use. In 2014, this appeared to continue, according to observations by County River Patrol staff. 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 2014. With the completion of the South Fork American River Management Plan in 2005, BLM has indicated it was interested in entering into an MOU with the County. In 2014, the River Program continued its coordination and cooperation with both the BLM Mother Lode Field Office staff, California State Parks staff from Marshall Gold SHP and the Auburn Whitewater Recreation Office. The BLM River Patroller coordinated with County Parks River Patrol on work projects, restroom maintenance, river patrols and river monitoring activities. With the issuance of the FERC licenses to SMUD and PG&E along with the pending update of the County River Management Plan there should be an opportunity for a MOU with the State Parks and the BLM.

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 has limited the level of service in recent years yet RMP requirement minimums are still being met.

6.2.1 Commercial Guide Requirements

There were no revisions to these requirements in 2014.

6.2.9 Insurance, Business License and Water Flow Notice Requirements

There were no revisions to these requirements in 2014. 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. For the last several years, RMAC has been working on a proposal for an update to the RMP for Institutional Group requirements. In 2014, RMAC recommended changes to the River Management Plan Institutional Group Requirements. The County currently has contracted out a review of the RMP for an update which will consider these recommended changes.

The Board of Supervisors adopted the registration requirements through Ordinance Chapter 5.50 on March 19, 2002, with the ordinance becoming effective on April 19, 2002. The following organizations registered with the County in 2014:

- 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
- Project Great Outdoors, an organization offering experiential education programs to disadvantaged youth
- Travis Air Force Base, a outdoor recreation program
- Beale Air Force Base, a outdoor recreation program
- UC Santa Cruz, an educational guide school lasting one week

The Institutional Use Reflected *figure 14* on the next page includes guides and guests.

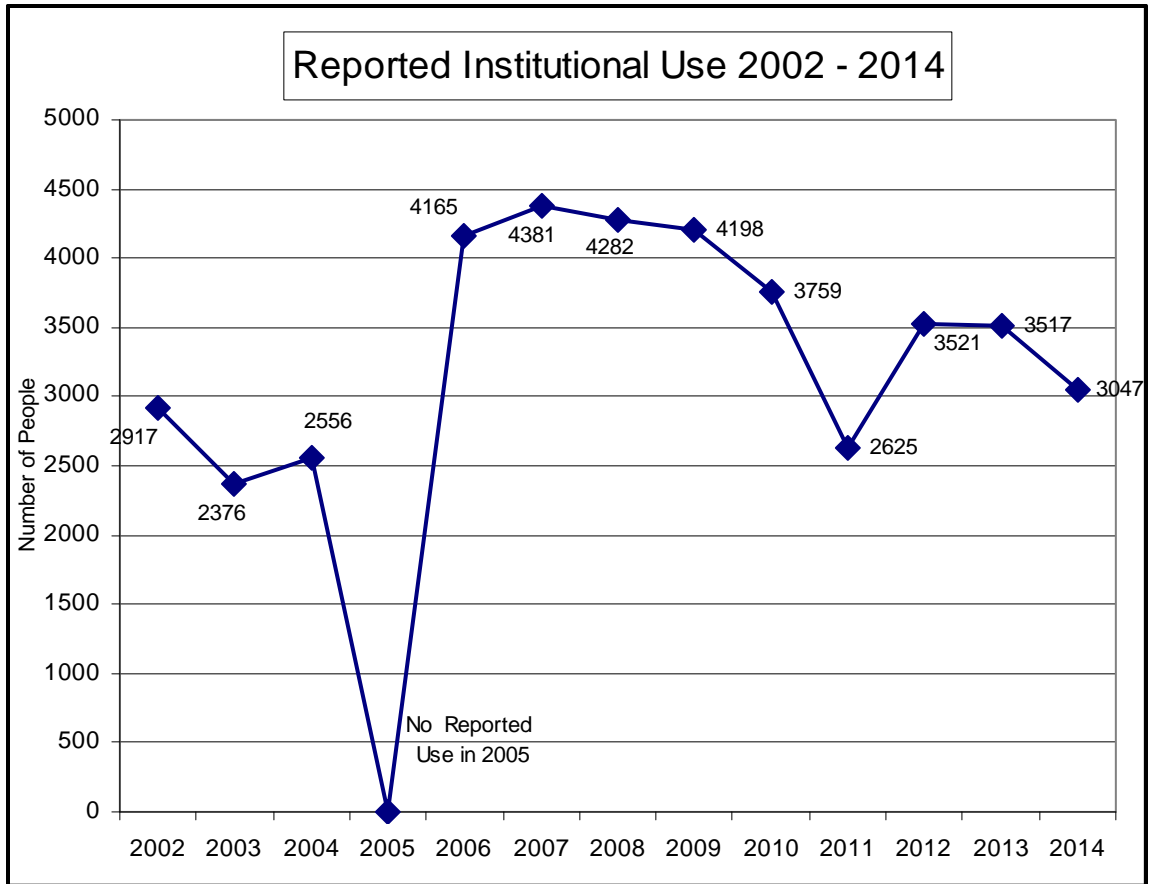


Figure 14. Institutional Use since adoption of the 2001 RMP

6.3.7 Large Group Requirements

El Dorado County requires all non-commercial boaters running the South Fork in a group of four or more boats having three 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 were also available on the County Parks website. One of the River Patrol staff's regular functions was to register large groups at Chili Bar and the Henningsen Lotus County Park. County River Patrol staff was able to monitor Camp Lotus for large groups only on a sporadic basis and was unable to monitor American River Resort, Coloma Resort and Ponderosa Resort for Large Groups. Large group registration forms available at Camp Lotus. The other three private campgrounds do not have registration forms available to the public at this time.

6.4 Temporary Use Permit (TUP)

There was one Temporary Use Permit issued in 2014 for an event near or adjacent to the S. Fork of the American River.

6.5 Special Use Permits

RMAC review of Special Use Permit applications:

- No modifications or new SUP's were applied for in 2014.

Code Enforcement and Planning respond to individual Special Use Permit complaints or inspections on a case-by-case basis.

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 2014.

Element 8 – Regulations and Ordinances

8.1 Pirate Boater Ordinance Enforcement

The noncommercial boater registration system and large group registration process allow County Park staff the opportunity to both inform and question people about their non-commercial status. Those suspected of pirate boating (defined as a person or outfitter that conducts Commercial River trips without a permit) were identified for further investigation by the El Dorado County Sheriff's Department. County River Program River Patrol does not have law enforcement and citation authority to cite pirate boaters.

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 at Appendix D for more information.

8.3 Trespass: see Sheriff's Annual Report, Appendix D.

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 2014.

Element 9 – Facilities and Lands Management

9.1 Memorandum of Understanding with the American River Conservancy

Because the County purchased the Chili Bar property in 2007, an MOU is no longer needed and the Element can be deleted.

9.2 Salmon Falls Parking

State Parks has been requiring large Institutional Groups to take out at Salmon Falls. This has helped relieve some of the congestion at Skunk Hollow. The American River Conservancy applied for a Special Use Permit for an additional parking lot near Skunk Hollow for trail access in 2014.

9.3 Public River Access in Coloma

State Parks began allowing boating take-outs at Marshall Gold Discovery State Historical Park in 2012. This appears to be popular with a segment of the boaters.

No reduction in river access occurred in 2014.

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.

Use of the BLM Phoenix Composting toilet below Greenwood Creek has noticed an increase use by outfitters, private boaters and trail users over the last 10 years. The opening of Greenwood Creek and Magnolia parking areas and the Cronan Ranch acquisition have most likely contributed to the increased use. Discussions have occurred with BLM on adding another toilet at this location or at another BLM location further down stream to help spread out the use at this location.

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 2014

9.7 Trails

- Marshall Gold Discovery State Park has been planning for a connector trail from the State Park Monroe Ridge Trail to the HLP ballfields.
- The HLP conceptual master plan identifies that a connector trail from HLP to the Hwy 49 Bridge is desirable.

9.8 No 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 2014/2015 has been adopted by the Board of Supervisors

- Projections were based on 70,000 user days annually (2014 commercial use was 63,309 user days).
- The CAO Parks Division River Management Program budget for fiscal year 2014-2015 is \$207,586.

10.3 Adequate funds for RMP implementation

A River Trust Fund (RTF) 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 continuing concern about the health of the RTF. Costs of implementing the County River Program have increased since 2001 (RMP adoption) which will likely result in a reduced level of service unless there is an increase in revenue in the future. For the fiscal year 2013/2014 the cost to operate the program stayed within the revenue collected for the year which was a positive change from 2012/2013 which required an \$11,065 contribution from the River Trust Fund to balance the budget. *Table 8* on the next page presents actual income and expenditure amounts for fiscal year 2013/2014 along with the 2014/2015 budget total. In the 2014/2015 budget there is \$65,000 budgeted for the update to the RMP which will most likely require a contribution from the RTF to balance this years budget. The fiscal year is from July 1 to June 30.

Fiscal Year 2013/2014	
Fund Balance as of July 1, 2013	\$187,356
Revenue (July 1, 2013 through June 30, 2014)	\$156,437
Expenditures (FY 2013/2014 approved budget was \$155,090)	
County Parks River Management Program →	
Total →	\$124,513
River Trust Fund balance as of June 30, 2014	\$219,280
2014/2015 Approved Budget	\$207,586

Table 8. River Trust Fund Balance and Budget Summary

Element 11 – River Data Availability

- The County website (<http://edcgov.us/Rivers/>) 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 and Human Services Agency, Public Health Division, El Dorado County Environmental Management Division and to the El Dorado County Storm Water Division.

This concludes the 2014 Annual River Program Report.

APPENDIX A
2014 MITIGATION MONITORING PLAN

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
Land Use					
<p>Impact 4-1. The River Management Plan (RMP) would be inconsistent with Program 10.2.2.2.1 of the El Dorado County General Plan.</p>	<p>Mitigation Measure 4-1. 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.</p>	<p>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.</p>	<p>Document projected cost neutrality to the General Plan of the RMP over the 3-year projection period.</p>	<p>County Department of General Services</p>	<p>Within 6 months of RMP adoption and each 3 years thereafter</p>
<p>Action: A projection of RMP implementation expenditures for FY 2013/2014 was incorporated into the river management program budget prepared in March, 2013. This fiscal year 2014/2015 budget was adopted by the Board of Supervisors in November 2014.</p>					
<p>Impact 4-2. Increased river use could result in an increased occurrence of trespass on private lands within the river corridor.</p>	<p>Mitigation Measure 4-2. To reduce the occurrence of trespass the County shall:</p> <p>(a) Increase prosecution of trespass violations;</p> <p>(b) Increase on-river and roadway signage to indicate private property boundaries and to warn trespassers of prosecution;</p> <p>(c) Increase towing of vehicles parked in unauthorized areas; and</p> <p>(d) Provide prompt response, towing and substantial fines and/or prosecution when property owners report vehicles blocking access to driveways.</p>	<p>(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).</p> <p>(b) Post private property signage at prominent locations.</p> <p>(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.</p> <p>(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.</p>	<p>(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).</p> <p>(b) Post private property signage at prominent locations.</p> <p>(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.</p> <p>(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.</p>	<p>(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.</p>	<p>(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</p>
<p>Action:</p> <p>a) County River Program maintained signage that notifies boaters when one is entering and leaving public lands through the Quiet Zone. Signage includes a notice of the penalty for violating the Quiet Zone noise ordinance that now applies to non-commercial boaters.</p> <p>b) The Sheriff's Dept. is responsible for reports on towed vehicles.</p>					

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p>Impact 4-3. Conducting Special Use Permit (SUP) inspections on a complaint-driven basis only could result in repeated violations of unreported SUP violations.</p>	<p>Mitigation Measure 4-3. 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>Action: 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. SUP violations are investigated by County Code Enforcement and Planning on a case by case basis.</p> <p>The responsible agency for Special Use Permit inspections in this Mitigation Monitoring Plan is the County Planning Department.</p>					
<p>Geology and Soils</p>					

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p>Impact 5-1. 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>Action: No changes in 2014</p>					

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p>Impact 5-2. Ground disturbance on private lands within the river corridor could result in temporary or long-term increases in wind or water erosion.</p>	<p>Mitigation Measure 5-2. 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>Action: The Planning Department campground inspection report provided information on any unpermitted grading identified through the 2002 SUP inspection process.</p>					
<p>Hydrology and Water Quality</p>					
<p>Impact 6-1. Potential short-term impacts to surface water quality could result from construction and operation of new facilities.</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"> Native vegetation will be retained where possible. Grading and excavation activities will be limited to the immediate area required for construction. <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"> 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 	<p>Water quality control practices will include the following:</p> <p><i>Construction Measures</i></p> <ul style="list-style-type: none"> Native vegetation will be retained where possible. Grading and excavation activities will be limited to the immediate area required for construction. 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. 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. If construction activities are conducted during winter or spring, temporary on-site detention basins will regulate storm 	<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>Impact 6-1 continued</p>	<p>plans.</p> <ul style="list-style-type: none"> • If construction activities are conducted during winter or spring, temporary on-site detention basins will regulate storm runoff. • 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. • No disturbed surfaces will be left without erosion control measures during winter and spring, including topsoil stockpiles. • Sediment will be retained onsite by a system of sediment basins, traps, or other appropriate measures. • 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. • 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. • 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. <p><i>Operation Measures</i></p> <ul style="list-style-type: none"> • 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." 	<p>runoff.</p> <ul style="list-style-type: none"> • 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. • No disturbed surfaces will be left without erosion control measures during winter and spring, including topsoil stockpiles. • Sediment will be retained onsite by a system of sediment basins, traps, or other appropriate measures. • 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. • 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. • 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. <p><i>Operation Measures</i></p> <ul style="list-style-type: none"> • 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." • 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. • Permanent energy dissipaters will be included for permanent outlets. 			

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p>Impact 6-1 continued</p>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • The detention/retention basin system on the site will be designed to provide effective water quality control measures. Design and operation features of detention/retention basins will include: <ul style="list-style-type: none"> – Constructing basins with a total storage volume that permits adequate detention time for settling of fine particles even during high flow conditions. – Maximizing the distance between basin inlets and outlets to reduce velocities, perhaps by using an elongated basin shape. 			
<p>Action: There were no site development/construction activities in 2014 that required a County grading permit.</p>					
<p>Impact 6-2. 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>Mitigation Measure 6-2. The County shall:</p> <ul style="list-style-type: none"> (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. (b) Sample human fecal coliform (as a key indicator of water quality impacts and management action needs) during peak-season weekend days. (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. <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"> (1) Report exceedance(s) of standards to County Departments of Planning, Environmental Management, and Environmental Health and the California RWQCB for possible enforcement action. 	<ul style="list-style-type: none"> (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. (b) Sample human fecal coliform (as a key indicator of water quality impacts and management action needs) during peak-season weekend days. (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. (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"> (1) Report exceedance(s) of standards to County Departments of Planning, Environmental Management, and Environmental Health and the California RWQCB for possible enforcement action. (2) Investigate and report relationship between exceedance of standards and river-related SUP permitted activities. 	<ul style="list-style-type: none"> (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. (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. (d) Document exceedance of standards and river-related SUP permitted activities and transmittal of these observations to the County Environmental Management and Planning Departments. 	<p>County Parks Division</p>	<ul style="list-style-type: none"> (a) and (b) Biweekly on Saturdays or Sundays, between May 1 and September 30 or by request (c) Ongoing, in response to facility development (d) Ongoing, in response to observations and requests

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
Impact 6-2 continued	(2) Investigate and report relationship between exceedance of standards and river-related SUP permitted activities.				
<p>Action:</p> <p>a) Stormwater Monitoring Program consistent with Basin Plan objectives was conducted in 2014. Testing results have shown that parking at unpaved and paved parking areas does not contribute significant vehicle contamination to the river.</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 2014 that proceeded to the design phase.</p>					
RECREATION					
<p>Impact 7-1. Increased whitewater recreation use levels could create conflicts with other river corridor recreational activities.</p>	<p>Mitigation Measure 7-1. 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</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</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>	County Parks Division	Annually

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
	<p>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>standard RMP monitoring and canvassing will continue following the implementation of mitigating actions, until such monitoring indicates that the impact is mitigated.</p>			
<p>Action: 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 2014 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>Biological Resources</p>					
<p>Impact 8-1. 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>Mitigation Measure 8-1. The County shall minimize the potential for the construction of parking areas, restrooms, and trails to impact biological resources. The County Shall: (a) Ensure that biological surveys are conducted on lands which may be disturbed during construction of facilities; (b) Avoid to the extent practicable, through design or site selection, special-status species, important habitats, and wetlands areas; (c) Avoid construction of facilities in areas containing gabbro soils and endemic plant species; (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 (e) Appropriately mitigate for any impacts not avoided according to agreements with the appropriate</p>	<p>The County will: (a) Ensure that biological surveys are conducted on lands which may be disturbed during construction of facilities; (b) Avoid to the extent practicable, through design or site selection, special-status species, important habitats, and wetlands areas; (c) Avoid construction of facilities in areas containing gabbro soils and endemic plant species; (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 (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. (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>

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
Impact 8-1 continued	local, federal, or state agency(ies).				
Action: No changes in 2014. See Impact 5-1.					
Impact 8-2. Increased whitewater boating use and associated public access could degrade riparian habitats.	The County shall: 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. (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	The County will: (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. (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.	(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. (b) Document development, implementation, and maintenance of an educational program focused on plant, fish, and wildlife habitats. (c) Completed with the	County Parks Division	(a) Annually (b) One year after the adoption of the RMP; updated each third year thereafter (c) Not applicable (d) Periodically, in response to observation results and incidents (e) Periodically, in response to the proposals of willing program participants

**River Management Plan
Mitigation Monitoring Plan**

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p>Impact 8-2 continued</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"> (1) Report potential impact to California Department of Fish and Game. (2) Coordinate biological monitoring program protocol development with California State Parks and Recreation Department and BLM recreation staff. (3) Conduct focused monitoring of impact site in conjunction with the following season's monitoring. (4) Identify ownership of subject property and report impact to County Planning Department if the impact occurs in Special Use Permit area. 	<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"> (1) Report potential impact to California Department of Fish and Game. (2) Coordinate biological monitoring program protocol development with California State Parks and Recreation Department and BLM recreation staff. (3) Conduct focused monitoring of impact site in conjunction with the following season's monitoring. (4) Identify ownership of subject property and report impact to County Planning Department if the impact occurs in Special Use Permit area. (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. <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"> (1) Reporting potential impact to California Department of Fish and Game. (2) Coordination of a biological monitoring program protocol development with California State Parks and Recreation Department and BLM recreation staff. (3) Focused monitoring of impact site in conjunction with the following season's monitoring. (4) Identification of ownership of subject property and reporting the impact to County Planning Department (if the impact occurred in an SUP area). (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. <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
	<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"> • Modification of intersection traffic control devices such as installation of a traffic signal; • Addition of paved shoulders to roadway segments • Modification of horizontal or vertical curves; • Addition of new travel lanes to roadway segments; <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"> • 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. <p>Typical actions associated with maintaining a desired LOS or desired maximum traffic volume include the following:</p> <ul style="list-style-type: none"> • Construction of new intersection turn lanes; • Modification of intersection traffic control devices such as installation of a traffic signal; • Addition of paved shoulders to roadway segments; • Modification of horizontal or vertical curves; • Addition of new travel lanes to roadway segments; <p>Alterations in local circulation patterns through traffic calming devices to maintain traffic volumes under established maximum thresholds.</p>			
<p>Action:</p> <p>a) No additional RMP-related programs or actions were implemented in 2014 that would have required detailed transportation impact studies:</p> <ul style="list-style-type: none"> ▪ The “interim shuttle” parking area was not developed in 2014 ▪ There were no applications for additional public access to the middle run through river access facilities near Highway Rapid in 2014; <p>b) The County Department of Transportation monitored traffic volumes on the County roadway segments listed above on various dates in 2014. The traffic counts on Level of Service (LOS) information are summarized in the comments on RMP Element 3.5 in the 2014 Annual Report. Bassi Road is the only collector street with fronting residences regularly used by boating shuttle traffic.</p>					

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p>Impact 9-3. 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>Mitigation Measure 9-3. 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>Action: None required. There were no modifications to Special Use Permits near Highway Rapid in 2014.</p>					
<p>Impact 9-4. 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>Mitigation Measure 9-4. 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: c) 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>Action: None required. There were no modifications to Special Use Permits near Highway Rapid in 2014.</p>					
<p>Impact 9-5. 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>Mitigation Measure 9-5. 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>Action: None required. There were no new trails constructed in the RMP area in 2014.</p>					

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p>Impact 9-6. 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>Mitigation Measure 9-6. 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>Action: None required. There were no new trails constructed in the RMP area in 2014. The trail completed in 2010 ending at Skunk Hollow (Salmon Falls bridge) parking is monitored for exceedence problems by State Parks of which none have been reported.</p>					
<p>Impact 9-7. 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>Mitigation Measure 9-7. 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>Action: The County Department of Transportation monitored weekday and weekend traffic volumes on RMP area roadways in 2014. No Level of Service thresholds was exceeded. See comments in RMP Elements 3.5 of the 2014 Annual Report.</p>					
<p>Impact 9-8. 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>Mitigation Measure 9-8. Implement Mitigation Measure 9-4.</p>	<p>See Mitigation Measure 9-4.</p>	<p>Meet the requirements of Mitigation Measure 9-4.</p>		
<p>Action: None required in 2014. River use levels in 2014 were lower than use levels analyzed in the RMP EIR.</p>					

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
Noise:					
<p>Impact 10-1. 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>Mitigation Measure 10-1.</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>Action: None required. There was no new construction or improvements to existing facilities in the RMP area in 2014.</p>					
<p>Impact 10-2. Increased use could result in noise level increases at and near existing and new facilities and at shoreline locations along the river.</p>	<p>Mitigation Measure 10-2.</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>Action: None required. River use levels in 2014 were below those use levels analyzed for the RMP EIR.</p>					
<p>Impact 10-3. 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>Mitigation Measure 10-3.</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>Impact 10-3 Action:</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 on occasion in 2014. See discussion in River Patrol Summary.</p> <p>b) Quiet Zone signage was consistent with 2013.</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 2014 Annual Report Element 2.4 which summarize the Quiet Zone monitoring conducted in 2014.</p>					
<p>Impact 10-5. Campground noise levels could exceed County noise standards as a result of river-related visitation.</p>	<p>Mitigation Measure 10-5.</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>

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
			revoke the subject SUP to County Code Enforcement Officer and Planning Director.		
<p>Action: a) Noise monitoring of campgrounds was not conducted in 2014 by County Parks. 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.</p>					
<p>Aesthetics:</p>					
<p>Impact 11-1. 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>Mitigation Measure 11-1. 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"> (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; (2) Design parking areas in a visually unobtrusive manner; (3) Retain natural features and vegetation (especially trees) whenever possible; (4) Provide refuse receptacles for parking area users to reduce litter and the scattering of debris; and (5) Use native plant species for landscaping. <p>(b) To reduce the potential impacts of restroom facility construction the County will:</p> <ol style="list-style-type: none"> (1) Select locations that are setback from the shoreline and allow vegetation to screen structures as viewed from the river, and (2) Design facilities with a simple unobtrusive architectural appearance and with exterior colors that blend with the surrounding areas. 	<p>To reduce potential impacts of parking area development the County will:</p> <ol style="list-style-type: none"> (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; (2) Design parking areas in a visually unobtrusive manner; (3) Retain natural features and vegetation (especially trees) whenever possible; (4) Provide refuse receptacles for parking area users to reduce litter and the scattering of debris; and (5) Use native plant species for landscaping. <p>To reduce the potential impacts of restroom facility construction the County will also:</p> <ol style="list-style-type: none"> (1) Select locations that are setback from the shoreline and allow vegetation to screen structures as viewed from the river, and (2) Design facilities with a simple unobtrusive architectural appearance and with exterior colors that blend with the surrounding areas. 	<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>

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p>Action: None required. BLM's 2004 Greenwood Creek restroom project was consistent with (a)(1) through (a)(5) above.</p>					
<p>Cultural Resources:</p>					
<p>Impact 12-1. Construction of the new facilities could affect cultural or paleontological resources.</p>	<p>Mitigation Measure 12-1.</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 and any associated artifacts. No additional work will take place within the immediate vicinity of the find until</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 identified appropriate actions have been completed</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>

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
	the identified appropriate actions have been completed				
Impact 11-1 (continued) Action: None required.					
Public Safety:					
Impact 13-1. Extension of the middle run could increase the number of less experienced river users creating the potential for increased whitewater-related injury.	Mitigation Measure 13-1. In addition to the educational and safety programs identified in the RMP, the County would: <ul style="list-style-type: none"> (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; (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 (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. 	To reduce potential safety impacts potentially influenced by the extension of the middle run of the RMP area, the County will: <ul style="list-style-type: none"> (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; (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 (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. 	(a) and (b) Document provision of signage (or coordination of signage in the middle-run area. (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.	County Parks Division	Within the first year after the adoption of the RMP
Action: <ul style="list-style-type: none"> a) Revised river flow/safety signs were installed at Henningsen Lotus Park, Camp Lotus and Marshall Gold SHP in 2003. b) Signage specific to the middle run was installed at Marshall Gold SHP in 2003 and renewed in 2013. River Program Division staff revised signage after the Bureau of Land Management plan was adopted and the Greenwood Creek access was improved. c) The River Program maintained similar levels of staff time patrolling the quiet zone. <ul style="list-style-type: none"> ▪ County River Patrol coordinated with BLM to provide occasional monitoring at Greenwood Creek. ▪ 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. River Program patrols have continued to emphasize the upper half of the Coloma-Greenwood section. <p>See comments on use levels on the Coloma-Greenwood section in Element 4 of 2014 Annual Report.</p>					

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
<p>Impact 13-2. Increased boat densities due to the absence of use restriction mechanisms in the RMP could increase the number of on river incidents.</p>	<p>Mitigation Measure 13-2. County Parks shall:</p> <ul style="list-style-type: none"> (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) Compile incident and accident report summary and respondent recommendations as part of annual report, and present findings to the RMAC. (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"> 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"> ➤ Pre-season annual registration with County Parks; ➤ Proof of liability insurance; ➤ Designation of trip leader having proof of guide certification on rescue training, first aid, and knowledge of County regulations; and ➤ Post-season annual reporting of river use, by date. 2. Large Group – Defined as non-institutional group meeting the size criteria discussed above. Large groups will be subject to the following requirement: 	<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"> (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) Compile incident and accident report summary and respondent recommendations as part of annual report, and present findings to the RMAC. (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"> 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"> ➤ Pre-season annual registration with County Parks; ➤ Proof of liability insurance; ➤ Designation of trip leader having proof of guide certification on rescue training, first aid, and knowledge of County regulations; and ➤ Post-season annual reporting of river use, by date. 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"> ➤ Pre-trip registration with County Parks. <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.				
<p>Action: a) See River Patrol Summary and Carrying Capacity Monitoring tables in RMP Element 7.3 of the 2014 Annual Report. b) Large group and Institutional group registration requirements were implemented through Ordinance Chapter 5.50.</p> <p>The Carrying Capacity boat density thresholds were not reached in 2014. See discussion in 2014 Annual Report.</p>					
<p>Public Services</p>					
Impact 14-1. 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.	Mitigation Measure 14-1. Mitigation Measure 4-1 will serve to reduce this impact.	See Mitigation Measure 4-1.	Meet the requirements of Mitigation Measure 4-1.		
<p>Action: None taken. Overall River Program budget outlook has prevented the hiring of additional staff.</p>					
<p>Air Quality</p>					
Impact 15-1. 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.	Mitigation Measure 15-1. 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.
<p>Action: See Impact 5-1</p>					
Impact 15-2. Construction of restroom facilities could create a new concentrated objectionable odor source that may result in nuisance complaints from area residents and facility users.	Mitigation Measure 15-2. (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
<p>Action: Mitigation Measures 15-2, a-b were followed in the construction of BLM's restroom facilities at Greenwood Creek in 2004.</p>					

River Management Plan Mitigation Monitoring Plan

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
Impact 15-3. Increased traffic in the RMP area would increase vehicle emissions, which could exacerbate AAQS non-attainment.	Mitigation Measure 15-3. Mitigation Measure 9-1 will serve to reduce this impact.	See Mitigation Measure 9-1.	Meet the requirements of Mitigation Measure 9-1.	See Mitigation Measure 9-1.	See Mitigation Measure 9-1.
Action: See Impact 9-1.					
Cumulative Impacts note: no mitigation has been proposed for impacts 16-1 and 16-2 in the RMP EIR.					
Impact 16-3. Increased short-term emissions related to construction activities could be significant when combined with emissions from concurrent construction activities within the RMP area.	Mitigation Measure 16-3. 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
Action: None required.					
Impact 16-5. General impacts identified in this Revised Draft EIR resulting from increased river use associated with elements of the RMP and potential future growth.	Mitigation Measure 16-5. (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"> • Pre-season annual registration with County Parks; • Proof of liability insurance; 	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"> • Pre-season annual registration with County Parks; • Proof of liability insurance; • Designation of trip leader having proof 	(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
	<ul style="list-style-type: none"> • Designation of trip leader having proof of guide certification on rescue training, first aid, and knowledge of County regulations; and • Post-season annual reporting of river use, by date. <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"> • Pre-trip registration with County Parks. <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"> • 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 	<p>of guide certification on rescue training, first aid, and knowledge of County regulations; and</p> <ul style="list-style-type: none"> • Post-season annual reporting of river use, by date. <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"> • Pre-trip registration with County Parks. <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"> • 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 • Eliminate commercial outfitter guest allocations. <p><i>Level Two (to be implemented in year following observed exceedance of threshold with Level One management actions in place):</i></p>			

**River Management Plan
Mitigation Monitoring Plan**

IMPACT	MITIGATION MEASURE	MONITORING/REPORTING ACTION	EFFECTIVENESS CRITERIA	RESPONSIBLE AGENCY	TIMING
	<p>commercial and institutional group use; and</p> <ul style="list-style-type: none"> • Eliminate commercial outfitter guest allocations. <p><i>Level Two (to be implemented in year following observed exceedance of threshold with Level One management actions in place):</i></p> <p>Adjust commercial allocations by river segment and develop institutional group allocations.</p>	<ul style="list-style-type: none"> • Adjust commercial allocations by river segment and develop institutional group allocations. <p><i>Level Three (to be implemented in year following observed exceedance of threshold with Level Two management actions in place):</i></p>			
<p>Action: See action in Impact 13-2, above. See Daily Boater Total table in Element 7.4.</p>					

APPENDIX B
2014
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). The Parks Division is required by the River Management Plan Element 4.6 and the 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, stormwater 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 State Water Quality Control Board (SWQCB) or Regional Water Quality Control Board (RWQCB) permit requirements for the County's RMP.

Responsible agencies and roles

The RMP places joint-responsibility for the water quality monitoring program with the Division of Parks and Trails River Program and the Public Health Department. Both have contributed to the preparation of this monitoring program. To make optimal use of budget and time resources, County River Program 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 River Program to provide a source of long-term funding for the implementation of the RMP. Fiscal Year 2013-2014 River Trust Fund appropriations include \$4000 for Public Health lab analysis of e. coli samples and approximately \$1,000 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 in 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.

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 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. Thresholds in the past have been well below the thresholds of concern so second runoff monitoring has not been necessary.

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. Although the current Basin Plan standard for bacteria is based on the constituent fecal coliform, the bacterium 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.

Minimum Flows may want to also be considered when evaluating results. Table 1 below shows the minimum flows allowed below Chili Bar Dam by Water Year Type.

Table 1 - Minimum Streamflow by Water Year Type (cfs)* Below Chili Bar Dam

Month	SD	CD	DRY	BN	AN	WET
October	150	185	200	250	250	250
November	150	185	200	200	200	250
December	150	185	200	200	200	250
January	150	185	200	200	200	250
February	150	185	200	200	200	250
March	150	185	200	200	200	250
April	150	200	250	250	300	350
May	150	200	250	250	350	500
June	200	200	250	250	350	500
July	150	185	200	250	300	350
August	150	185	200	250	300	300
September	150	185	200	250	250	250

*As measured at USGS gauge 11444500 (PG&E gauge A49)

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 Division 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 (at 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' staffs 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. Test results have not indicated a need to sample on weekends which has been concurred by the Environmental Health Division. The Health Lab is closed Friday-Sunday therefore water testing on Mondays and Tuesdays is preferred so that if a resample is needed it can be taken within 48 hours.

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). No peak season tests were preformed in 2014 due to no rain events during the peak season. The peak season for boating is June, July and August. The River Program 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.

Table 1 shows the location of all properties with parking lots utilized for whitewater recreation. The table lists each parking lot from Chili Bar dam to Folsom Reservoir is listed along with a rationale for inclusion or exclusion from the monitoring plan. The parking lots include the properties with Special Use Permits, 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 runoff has the potential to discharge into the South Fork. Refer to Table 2 for parking lot descriptions.

Table 2 - Stormwater Runoff Site Selection

Property name	Monitoring site	Rationale for inclusion/exclusion
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 vegetative buffers and cobble.
Camp Lotus	No	Parking area (decomposed granite) within floodplain with large vegetative 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 drains into vegetative buffer. Any overflow runoff can then discharge through sheetflow into Skunk Creek, which empties into the South Fork within 300 yards.
Salmon Falls (State Park lot)	No	Skunk Hollow will provide adequate data
Greenwood Cr. (BLM lot)	Yes	Paved lot drains into surrounding vegetation. Any overflow runoff can then discharge into vegetative pervious drainage gully that flows into Greenwood Cr. approximately 300 yards above The South. 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 are listed in Table 2

Sample collection methods

Five river transect composite samples are collected, with two near-shore grab samples collected at Marshall Gold Discovery 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. 100ml 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 with an ice pack 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.

Bacteria Basin Plan compliance:

In waters designated for contact recreation (REC-1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml.

STORMWATER SAMPLING PLAN

- Stormwater sampling plan is derived from the two-phased approach.
- First phase outlined in Table 3.
- Second phase sampling plan will be an outcome of results of first phase.

**Table 3
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"> ▪ Nugget bank ▪ Nugget transect ▪ Marshall Gold park bank ▪ Marshall Gold park transect ▪ County Park bank ▪ County Park transect ▪ Turtle Pond bank ▪ Turtle Pond transect ▪ Salmon Falls bank 	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"> ▪ Daily fluctuating flows from fish flow (200 cfs) to 4000 cfs (event possible throughout the year). ▪ Extended periods of fish flow releases (typically during the fall or periods of hydro facility maintenance). ▪ Extended periods of flow of at least 2000 cfs (spring runoff)
Bacteria Basin Plan Compliance	<ul style="list-style-type: none"> ▪ Nugget bank ▪ Nugget transect ▪ Marshall Gold park bank ▪ Marshall Gold park transect ▪ County Park bank ▪ County Park transect ▪ Turtle Pond bank ▪ Turtle Pond transect ▪ Salmon Falls bank 	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.

Monitoring activity	Monitoring sites	New, revised or ongoing	Constituents analyzed	Sampling frequency
Stormwater runoff from selected parking lots	Chili Bar parking lot - outflow County Park - outflow Greenwood Cr. parking lot - outflow Skunk Hollow - outflow	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. Staff attempts to capture a sample during the first rain event.</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. The analytical parameters for stormwater can be found in Table 4 below.

Table 4
Analytical Parameters for Stormwater Testing

Analytical Parameters	Benchmark Value
pH (pH units)	6.0-9.0
Total Suspended Solids (mg/l)	100
Specific Conductance (umho/cm)	200
Oil & Grease (mg/l)	15
Nitrate + Nitrite (mg/l)	0.68
Total Organic Carbon (mg/l)	110

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

- Circulated to Environmental Management for comments

Data Validation and Reporting

- Circulated to Environmental Management for comments

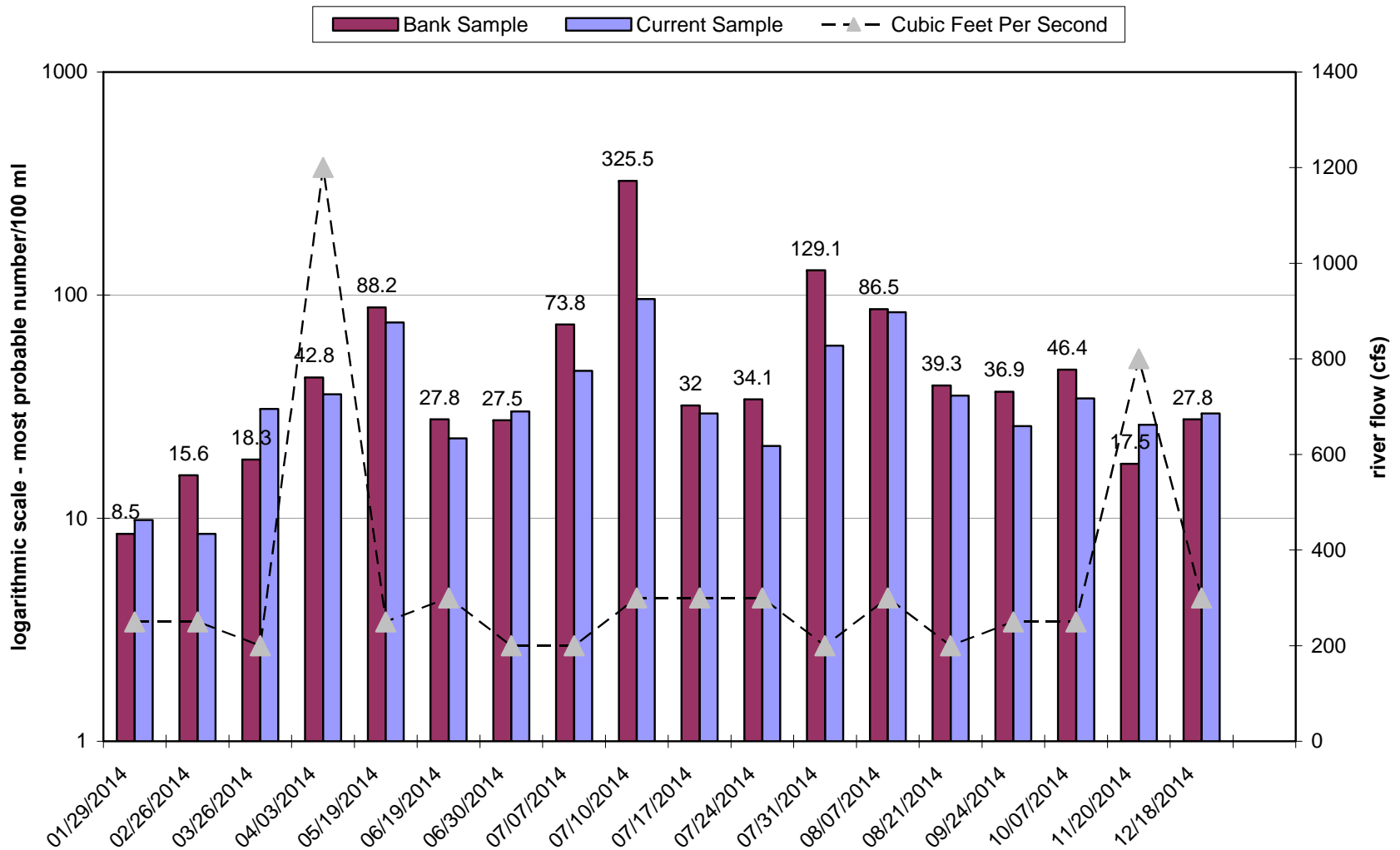
RESULTS

The graphs below show the results of the water quality testing for bacteria during the 2014. The bacteria levels existing on the South Fork of the American River below Chili Bar Dam samples indicated some potential human health threat to boaters and swimmers in 2014. There were two days which had test results above 400/100 ml which would represent an exceedence of the Basin Plans benchmark of 10% for samples taken on those days but would not be considered an exceedence when the 30 day period is applied. Upon subsequent testing following these high samples results showed levels below the benchmarks set in the Basin Plan. In 2015 testing protocol will be to post and retest the following day any location which has a sample result over 400/100 ml.

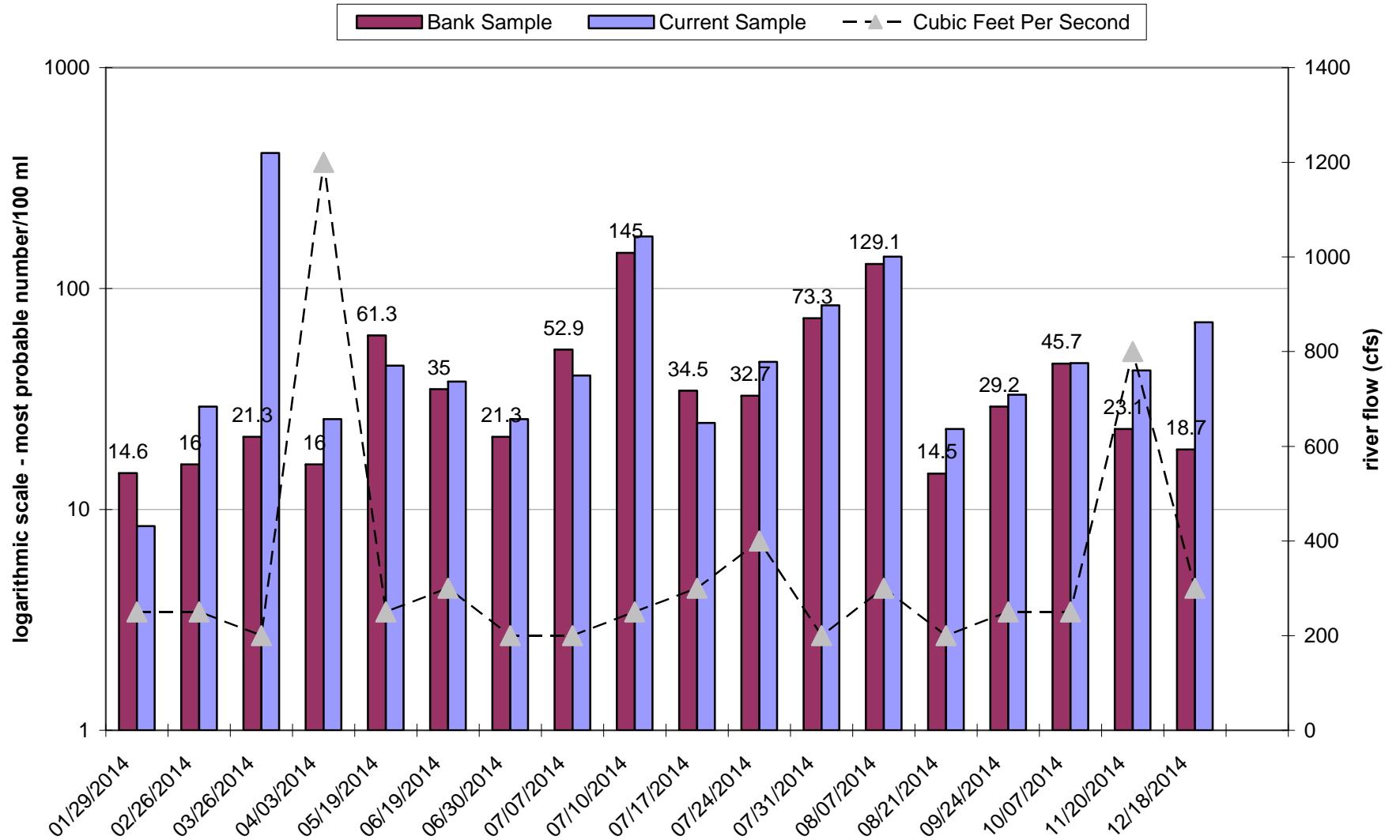
Table 4 on page 87 provides the results of the stormwater runoff testing from the selected parking lots. The 2014 sampling date was the earliest sampling date on record and produced enough precipitation to create runoff. The results did show stormwater runoff exceeding the Basin Plan standards for oil and grease in the samples collected from the parking lots; prior to the runoff discharging into the South Fork. Previous analytical results from the selected parking areas have not shown any significant detection of oil and grease since the implementation of the 2001 RMP. Additionally, no stains or visual indications of spills or leaks were observed within the selected lots at the time of sample collection. The higher results from the 2014 samples may be influenced by the overall lack of rain fall between 2013 and 2014, the limited amount of runoff produced during the rain event for sample collection, and run-on from adjacent properties. The selected parking lots include vegetative buffers and/or coble pervious surfaces located between the parking lots and the river or nearest waterway which allows for infiltration and/or treatment opportunities of stormwater runoff prior to the runoff, if any, reaching the South Fork through sheetflow. These design measures are consistent with the current best management practices (BMPs) for post-construction stormwater mitigation.

The selected parking locations are open to the public and used by a variety of recreationists throughout the year. Additionally, these parking areas receive run-on from adjacent highways, roads and private properties. Inferring that vehicle parking solely by boaters contributes significant oil and grease pollution into the South Fork of the American River is not conclusive or defensible. Continued stormwater monitoring from parking lots should be considered to be removed from the RMP. If stormwater monitoring is removed, the consideration for adding language to the RMP that states annual and as-needed consultation with the County Stormwater Program will occur to ensure up-to-date BMP mitigations and good housekeeping practices for parking areas are being implemented to the maximum extent practicable (MEP) is recommended. If the stormwater monitoring is going to continue as part of the RMP, then considerations of the water entering the parking locations and the water leaving the parking locations after buffer zones should be included in the sampling protocols to provide comparison opportunities and considerations for sampling design updates should occur. Additionally, designating parking zones for boater only vehicles may need to be implemented and enforced. This program does not have authority to regulate parking on private, State or Federal lands.

E. Coli levels at Henningsen Lotus Park 2014

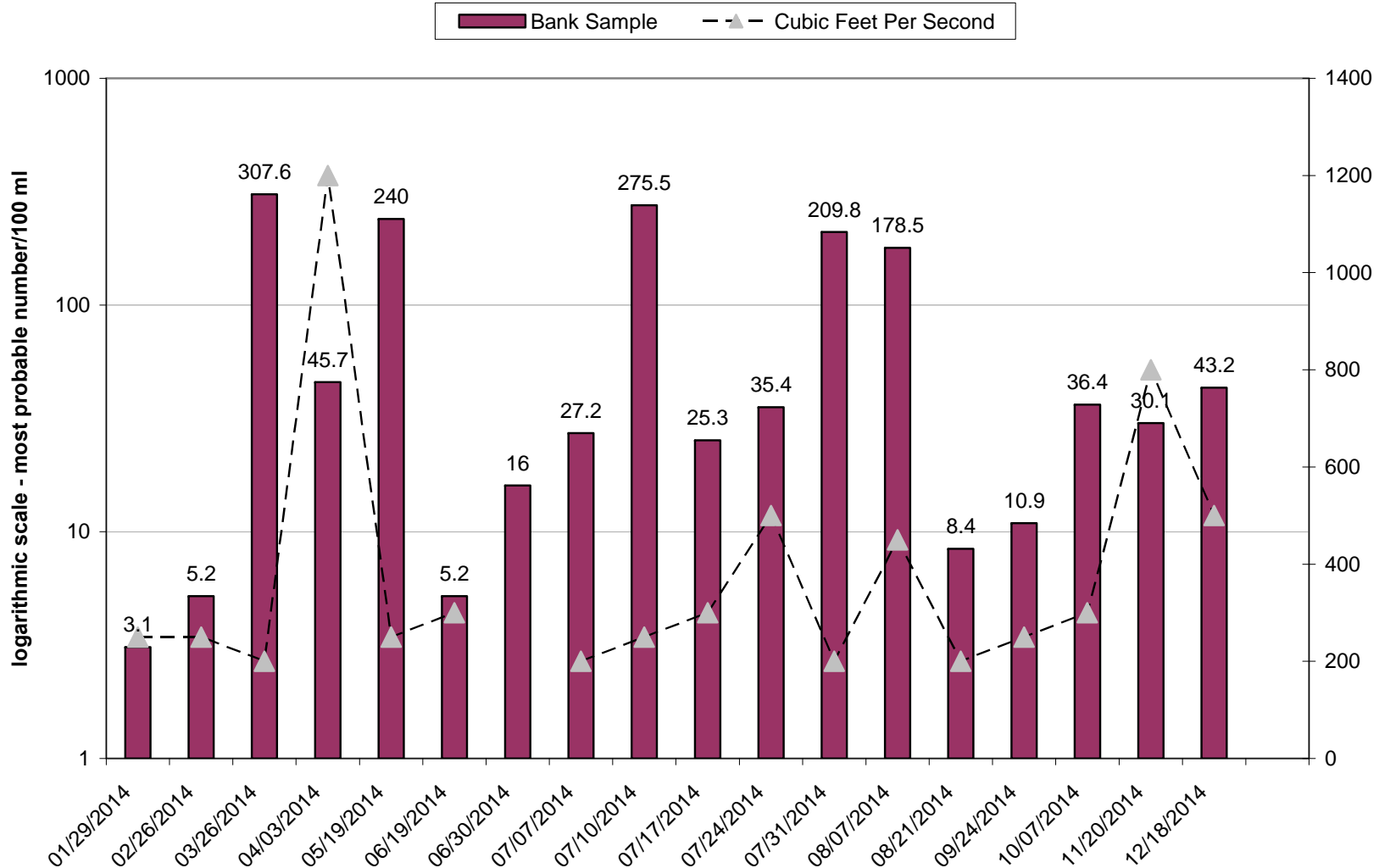


E. Coli levels at Turtle Pond Area 2014



Appendix B. Water Quality Monitoring Program and Test Results

E. Coli levels at Salmon Falls 2014



RIVER PROGRAM STORM WATER RESULTS 2014

SAMPLE NAME	SAMPDATE	METHOD CODE	METHOD NAME	ANALYTE	RESULT	UNITS
Chili Bar	09/25/2014 10:25:00 AM	Conductivity-120.1	EPA 120.1	Specific Conductance (EC)	120	µmhos/cm
Chili Bar	09/25/2014 10:25:00 AM	O&G-1664 CTA	EPA 1664A	Hexane Extractable Material (HEM, Oil & Grease)	54	mg/L
Chili Bar	09/25/2014 10:25:00 AM	Nitrate + Nitrite as N 300.0	EPA 300.0	Nitrate/Nitrite as N	580	µg/L
Chili Bar	09/25/2014 10:25:00 AM	TotSuspSolids-SM2540D CTA	SM2540D	Total Suspended Solids	1200	mg/L
Chili Bar	09/25/2014 10:25:00 AM	pH water SM4500-H B	SM4500-H B	pH	8.29	pH Units
Chili Bar	09/25/2014 10:25:00 AM	TOC SM5310B	SM5310B	Total Organic Carbon	62	mg/L
HLP	09/25/2014 09:45:00 AM	Conductivity-120.1	EPA 120.1	Specific Conductance (EC)	31	µmhos/cm
HLP	09/25/2014 09:45:00 AM	O&G-1664 CTA	EPA 1664A	Hexane Extractable Material (HEM, Oil & Grease)	39	mg/L
HLP	09/25/2014 09:45:00 AM	Nitrate + Nitrite as N 300.0	EPA 300.0	Nitrate/Nitrite as N	ND	µg/L
HLP	09/25/2014 09:45:00 AM	TotSuspSolids-SM2540D CTA	SM2540D	Total Suspended Solids	61	mg/L
HLP	09/25/2014 09:45:00 AM	pH water SM4500-H B	SM4500-H B	pH	6.91	pH Units
HLP	09/25/2014 09:45:00 AM	TOC SM5310B	SM5310B	Total Organic Carbon	13	mg/L
Greenwood Cr.	09/25/2014 09:28:00 AM	Conductivity-120.1	EPA 120.1	Specific Conductance (EC)	52	µmhos/cm
Greenwood Cr.	09/25/2014 09:28:00 AM	O&G-1664 CTA	EPA 1664A	Hexane Extractable Material (HEM, Oil & Grease)	57	mg/L
Greenwood Cr.	09/25/2014 09:28:00 AM	Nitrate + Nitrite as N 300.0	EPA 300.0	Nitrate/Nitrite as N	900	µg/L
Greenwood Cr.	09/25/2014 09:28:00 AM	TotSuspSolids-SM2540D CTA	SM2540D	Total Suspended Solids	76	mg/L
Greenwood Cr.	09/25/2014 09:28:00 AM	pH water SM4500-H B	SM4500-H B	pH	6.29	pH Units
Greenwood Cr.	09/25/2014 09:28:00 AM	TOC SM5310B	SM5310B	Total Organic Carbon	48	mg/L
Skunk Hollow	09/25/2014 08:59:00 AM	Conductivity-120.1	EPA 120.1	Specific Conductance (EC)	56	µmhos/cm
Skunk Hollow	09/25/2014 08:59:00 AM	O&G-1664 CTA	EPA 1664A	Hexane Extractable Material (HEM, Oil & Grease)	59	mg/L
Skunk Hollow	09/25/2014 08:59:00 AM	Nitrate + Nitrite as N 300.0	EPA 300.0	Nitrate/Nitrite as N	450	µg/L
Skunk Hollow	09/25/2014 08:59:00 AM	TotSuspSolids-SM2540D CTA	SM2540D	Total Suspended Solids	320	mg/L
Skunk Hollow	09/25/2014 08:59:00 AM	pH water SM4500-H B	SM4500-H B	pH	6.31	pH Units
Skunk Hollow	09/25/2014 08:59:00 AM	TOC SM5310B	SM5310B	Total Organic Carbon	44	mg/L

Appendix B. Water Quality Monitoring Program and Test Results

APPENDIX C

**2014 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 2014 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 and 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 river related activities. The South Fork of the American River is rated as a Class II-III stretch of river which requires skill and proper equipment to navigate safely. During the summer months, the river is extremely active with commercial and private rafting and boating trips.

As it pertains to the river, the boating unit is responsible for law enforcement, rescue, recovery, and boating education. The Sheriff's Office works in conjunction with the 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 assists the Sheriff's Office with rescue work. Additionally, their patrol staff keeps the Sheriff's Office boating unit aware of any enforcement or safety issues that occur on the river.

The 2014 river season was consistent with previous seasons (low water conditions). Common issues from commercial rafting companies and river users were the following:

1. Non-permitted persons running commercial rafting trips.
2. "Tubers" (subjects floating on the river in inner tubes, small pool rafts, and other inflatable objects not intended for whitewater use).
3. Complaints of illegal activities (underage alcohol consumption, marijuana use, bridge jumping, and littering) along the river shoreline from the Lotus Highway 49 Bridge to Henningson Lotus County Park.

In 2014, the boating unit continued to see multiple groups possibly operating non-permitted commercial rafting trips along the river. In order to properly address this on-going problem, it is the recommendation of the Sheriff's Office that the River Management Plan undergo revision and more appropriate wording added to sections pertaining to permitting and usage.

In 2014, the boating unit continued to see a rise in the number of "tubers" and people recreating on the South Fork of the American River without PFDs of the proper fit or type. Although county ordinance 12.64.070 only requires persons to correctly wear a Coast Guard Approved PFD, the above mentioned PFDs are not intended for whitewater use and do not provide an adequate amount of buoyancy in whitewater. Stepped up enforcement in this area resulted in several citations being issued for improper or no PFDs.

The 2014 river season had one reported river-related fatality which was boating related. By comparison, 2013 had one, 2012 had none, 2011 had one fatality, 2010 had none, 2009 had one fatality, 2008 had none, and 2007 had two fatalities.

Submitted by Sergeant Bryan Brown/ El Dorado County Sheriff's Office

APPENDIX D

**RIVER MANAGEMENT ADVISORY COMMITTEE
COMMENTS ON THE 2014 RIVER SEASON**

El Dorado County River Management Advisory Committee Comments on the 2014 River Season

The River Management Advisory Committee (RMAC) discussed the 2012 river season at the November 13, 2014 RMAC meeting. The following is a summary of their comments and suggestions and implementation of the RMP. The audio and minutes from the November RMAC meeting can be found on the County RMAC Agendas and Minutes web site at <https://eldorado.legistar.com/Calendar.aspx>.

The comments below were made by individual members and do not necessarily reflect the committee as a whole.

- Thanks to River Patrol for work done this last season
- Expand boat counts so that types of crafts be more specific for tracking river use trends.
- Additional funds can be added to the River Program to make it more robust.
- OK with adding a private boater use fee
- Support of a shuttle for a take out at Cronan Ranch
- Concern over a promoting Cronan Ranch with a take out for Class II river users
- Boater Educational information at Cronan Ranch

APPENDIX E
PUBLIC COMMENTS ON THE 2014 RIVER SEASON

Public Comments on the 2014 River Season

These public comments were made at the November 13, 2014 RMAC meeting on the River Management Plan Implementation and the 2014 River Season.

- Karen Mulvany submitted written comments which begin on page 98.
- Hilde Schwietzer submitted written comments which begin on the following page.
- Nate Rangel agreed with much of what Karen Mulvany read. He also pointed out that private boater fees have always been a third rail and he thinks that the update to River Management Plan needs to address Class II river use and the newer crafts (tubes) using the river.

The middle section of the river from Am River Resort to the HW 49 bridge continues to have many issues with trespass, alcohol, drugs, safety violations, noise, and trash and has no regular patrol or provision for management. There needs to be a dedicated patrol person doing laps here educating people about the river and private and public lands and the noise rules. The campgrounds with SUP's on the river sell or loan inner tubes but do nothing to educate their patrons about private land along the river and noise, trash, and other issues. With the potential change of access for Mt Murphy this could make this section even easier to boat and tube and increase in problems could occur.

There is also an increase in commercial use of MGD for put ins of both raft and inner tube trips. They do not all have St Park permission for this but there is no control or enforcement of North Beach even when the offending outfitter is brought to County and Parks attention. This is a violation of several outfitters land use or put in requirements on their permits filed with the county but no one is ever fined.

There is quite a bit of noise occurring in the quiet zone by both commercial and private. Private noise I can understand but there is really no excuse for commercials encouraging passengers to scream and yell in the quiet zone.

There are numerous commercial trips with more than 7 boats traveling together, lunching together, and taking out together on the river. The trading of user days is a large contributor to this occurrence, especially for the companies with small trip allowances. I am adamantly opposed to the trading, buying and selling of user days among outfitters and any change in the RMP to allow this.

There are no longer any SUP code enforcement visits that I know about to check capacity of venues, health and safety requirements for food prep and sanitation, etc.

Funding seems to be a big issue in terms of hiring adequate patrol to take care of managing the river. If EDCo wishes to manage the river they have to provide the funds to implement the elements of the RMP that deal with management. The General Fund should pay it's fair share if EDCo wishes

to continue to manage the river. If they are unable or unwilling to carry out the RMP, other agencies should be approached to see if they would be interested in managing the river.

Through the years RMAC has worked hard to create several good plans and potential ordinances that have been passed on to the Planning Commission and the Board of Supervisors and gotten tabled or lost. The Flood Plain Ordinance, the Alcohol ban and others are examples of things that took years to create that have no resolution.

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Regarding the proposed revocation of the ban on trading user days in the RMP:

While it is true that the commercial use on the river has a limit of 2750 users per day, the origin of these days was a result of grossly overestimated self reporting of use in the early 80's resulting in the original hugely inflated and large number of user days for permits.

I am in favor of bringing river permit numbers in line with actual use for each permit. Most regulated rivers have a "use it or lose it" clause. Underused or unused permits need to get re-allocated. This keeps permits honest IMO.

To allow trading, borrowing, selling, renting of user days, which by definition have no value, has been illegal from day one of the River Management Plan. I am not in favor of altering the RMP to allow this to happen. To have the Outfitters say that this has occurred from day one so it should be made legal just amplifies the need for enforcement and real penalties.

If outfitters have a consistent need for more days there are permits available to buy on a regular basis. To allow borrowing effectively decreases the value of an existing permit, many of which were purchased after the original inflated permit numbers were issued at great expense.

The RMP is being revised and I would like any changes to the Plan to be open for discussion to the general public instead of being decided at the last minute by a few people on a committee who may or may not be cognizant of all the issues (RMAC).

RMAC should allow for an alternate for each seat to better insure that there will be continuity at meetings and to meet a quorum. New members should be vetted more thoroughly in order to insure that whomever they represent will be adequately and honestly represented.

Thank you for the opportunity to comment on the 2014 River Season,
Hilde Schweitzer

Hello Noah,

Here are my public comments for the annual river review, most of which were covered in last night's meeting:

1. As a private boater, riverfront property owner and community member, I'd like to extend my thanks to the following:
 - To State Parks for again keeping the Skunk Hollow lower parking area open in the so-called "off"season. This keeps pedestrians who are carrying boats off the road, which is much safer for both boaters and drivers. The lower Skunk Hollow parking lot was full last Saturday on November 8.
 - To the folks responsible for the River Shuttle, which frequently operated at sold out capacity over the summer, for reducing traffic on shuttle runs, and to AQMD for the grant that funds the shuttle. A special thanks to Howard Penn for getting the reincarnated shuttle off the ground and implementing a much more efficient web based reservation system, and to Liz Carr for the great shuttle updates on CLNews. I hope that next year there will be funding for the acquisition of another shuttle vehicle to expand availability.
 - To SMUD for the 5 day of flows during a very challenging water year. As private boaters and local residents, we appreciated these flows not only for kayaking and rafting, but also for supporting the local ecosystem in which we live. River flows are the foundation of our local economy, and river flows draw commercial rafting passengers, park visitors and private boaters who help keep local businesses afloat that my family depends on and enjoys too.
 - To all the RMAC members for donating their time and expertise to this volunteer effort.
 - And I would like to thank Noah Triplett, who demonstrated notable creative and strategic planning skills as he brought options to the table for RMAC to consider. As a former exec of a public company who was responsible for strategic planning, I have found that kind of initiative and capability is unusual and worthy of special commendation.
2. I would like to see RMAC implement a fee-based season pass and day pass for private boaters for the following purposes:
 - a. Fund a full time position for the River Recreation Supervisor position held by Noah Triplett;
 - b. Fund a seasonal third river patrol person for the middle section;
 - c. Create a unique numerical identifier for each private river user that must be displayed on the river so that noncompliant river users can be identified and cited and/or ticketed by mail. For this purpose I would suggest that RMAC recommend to the BOS that a photo of the noncompliant behavior or condition by an authorized person (TBD) be deemed sufficient for ticketing purposes. This could be a mechanism to address pirate boating too.
3. I am pleased to hear the boat count in all sections of the river includes tubers. The inclusion of all types of watercraft that are used to navigate the river -- i.e. take a river

trip -- could be made clearer in the RMP, along with the ratios for boat counting purposes (Rafts =1 boat; Kayaks, IKs or tubes = 1/2 boat).

4. There was a notable river fatality in class II waters this year, arising from the use of a substandard plastic raft which sank (august 2014 Gorilla Rock drowning). The RMAC may consider whether water craft that is susceptible to punctures should be deemed inappropriate for river navigation through rapids, or if river signage should include warnings about the dangers of substandard watercraft.
5. Streambed modification.
 - a. Unpermitted streambed modification continued regularly at Barking Dog Rapid this year, spanning the entire river channel. This play spot often has 10-15 boaters of varying types waiting in the eddies for a turn at the wave, demonstrating the demand for a legally compliant whitewater park.
 - b. The property owner at 5175 Petersen Lane has built a sizable dam across the river left channel which would trap any boater going down that way, and has diverted flows from the middle channel as well.

Thanks,
Karen Mulvany