

El Dorado County River Management Plan Annual Report 2023



9993

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2023 El Dorado County River Management Plan Annual Report

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El Dorado County River Management Plan

2023 Annual Report

INTRODUCTION

The El Dorado County River Management Plan (RMP) 2023 Annual Report provides information on the 2023 river season and ongoing RMP implementation. The RMP has been written as an adaptive management plan and the Annual River Report is written with adaptive management goals in mind. This report will identify what has been successful and where we can improve. It will also identify suggested goals for 2024.

January 1, 2023 started off with major flooding all over El Dorado County which everyone along the South Fork of the American River experience. This flooding was the result of several atmospheric rivers causing high water and flooding of Chili Bar, Henningsen Lotus Park and everyone along the river corridor. High water remained a factor as the rafting season began resulting in a late start to the season. County river staff met with outfitters to discuss high water safety measures including 2 boat minimum and wet suits for clients. The water found a consistent flow by the end of June. Fortunately, the rafting season ended with close to normal user days with August and September having good user day numbers.

County staff temporarily closed Henningsen Lotus Park due to flood waters in the parking lot at the park. The park experience damage to the well pump, parking lot, boat ramp and safety kiosk. The park was reopened as soon as most of the repairs and clean up was done. FEMA was contacted for repair and mitigation measures to minimize flooding damage in the future.

ADAPTIVE MANAGEMENT

Report on Goals from 2022

The Flooding from the atmospheric rivers affected park activities late 2022 into 2023. Park staff had signs and a banner made to warn the public of high water danger being cold and fast.



Tuber counts continued in 2023 at the highway 49 bridge in Coloma. Conducting counts of tubers helps indicate PFD (Personal Floatation Device) compliance with our education efforts.

The data gathered showed improved PFD (Personal Flotation Device) use by tubers and demonstrates that the education provided by El Dorado County is working. Increased presence of river staff between Marshall Gold State Park and Henningsen Lotus Park has helped reduce trespass complaints from private property owners.

The Boat Ramp signs installed in 2021 were completely washed away and the beach area designated for launching and loading boats was buried in rock debris. Staff worked on clearing some of the larger rocks and replaced the Boat Ramp signs. Additional work will need to be completed. County staff is working with FEMA for assistance with repair and mitigation from the flooding.

Education remains our primary objective. Park Staff continued to inform public about the no-glass containers, life jacket ordinance and monitoring private property for trespassers. We continued to maintain a strong presence in the Coloma to Greenwood (C2G) segment of the river where a lot of private property owners are located. A new deputy, Julian Sandoval, was assigned to river patrols. He has prior river experience and county staff worked together with Julian to get him well versed rowing the Sheriffs cataraft.

The El Dorado County Parks and Trails division collaborated with State Parks to create five high-top tables for outfitter use at North Beach. High-top tables were requested by several outfitters to help with lunch prep and alleviating the use of other picnic tables designated for park guests. These tables were intalled and very positive responses have been received from the outfitters.

Goals for 2024

In 2024 we hope to:

- 1) Once again get a tuber count as this is a great way to measure the use and success of having staff in this section for compliance.
- 2) Increase county presence at the Marshall Gold put-in, addressing the users prior to putting on the water.
- 3) Maintain a presence on the water.
- 4) Continue Life Jacket education campaign as well and increase awareness about trash and glass on the river.
- 5) Rebuild the boat ramp area at Henningsen Lotus Park, damaged by the flooding in December/January. Install new signs and bollards.
- 6) Conduct more boater counts at Barking Dog to get better Middle section (Coloma to Greenwood) use data.
- 7) We are exploring options to assist with getting people of all abilities access to the river.
- 8) Continue River clean up days.
- 9) The River Management Plan, Chapter IV -RMP Review and Revision Process identifies the process for a Five-Year Periodic Review.

RIVER VALLEY

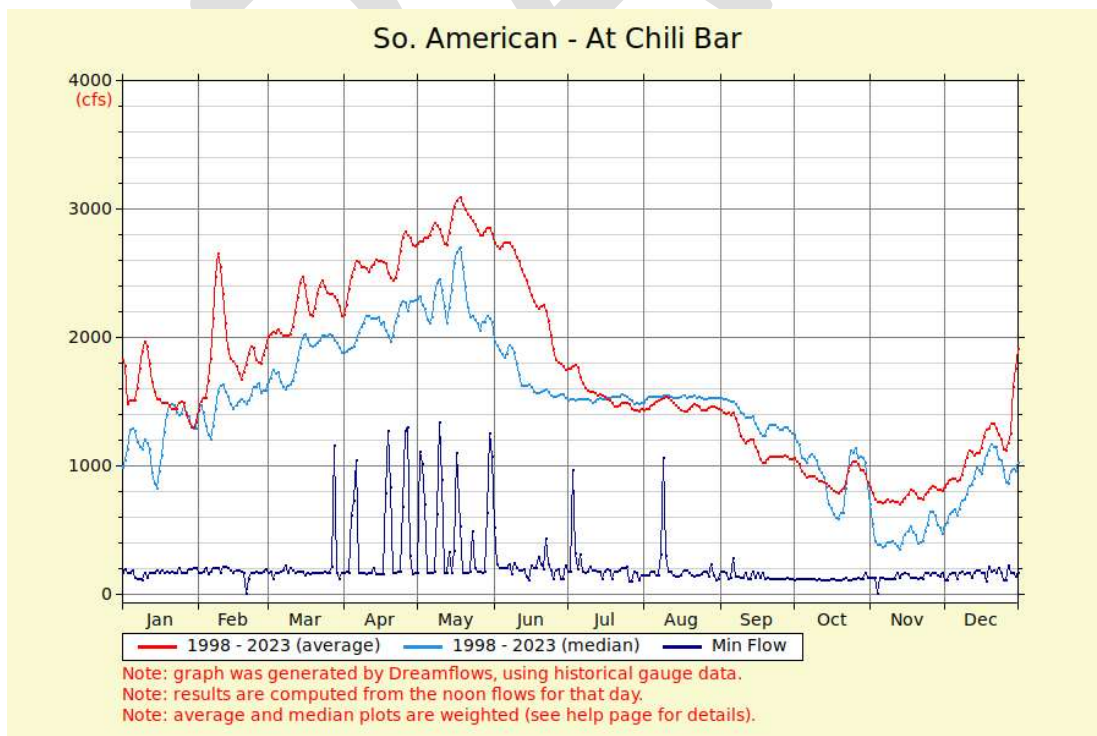
The 21-mile section of the South Fork of the American River from Chili Bar Dam to Folsom Reservoir continues to be one of the most rafted and kayaked rivers in the State of California, with annual use averaging close to 100,000 people.

Seven miles of this river flows through the Coloma Lotus Valley, a well-known historic and national recreational destination. There are four large public campgrounds Camp Lotus, Coloma Resort, American River Resort and Ponderosa Campground in addition to numerous outfitter campgrounds on the river. Marshall Gold Discovery State Historic Park, Henningsen Lotus County Park, and several BLM (Bureau of Land Management) parcels situated along the river are used by thousands of visitors annually, including Dave Moore Park. Public trails provide access to the river and, in some areas, run adjacent to the river at either end of the valley. Public access to the river is also available at the State Highway 49 Bridge. The number and diversity of recreational facilities and privately owned properties along the river, combined with the annually scheduled recreational water release flows, make the South Fork of the American River a globally recognized destination for class II-III boating and other forms of river recreation.

WATER FLOWS

The precipitation for 2022/2023 was an above average year.

The complete California Department of Water Resources Bulletin 120 (May 1, 2023) report is available at <http://cdec.water.ca.gov/snow/bulletin120/>.



Daily average and median South Fork of the American River flow as recorded at Chili Bar 1998-2023

The water year type in 2023 was designated as a “Wet” year. The water year type designation prescribes the minimum release schedule out of Chili Bar Reservoir for river recreation. The Federal Energy Regulatory Commission (FERC) licenses for Sacramento Municipal Utility District’s and Pacific Gas and Electric’s dams on the South Fork of the American River require regular recreational releases. In late summer of 2021, Sacramento Municipal Utility District acquired Chili Bar Dam from Pacific Gas and Electric.

The change in water year type from 2022 to 2023 resulted in higher and more frequent releases. For much of the season the river was spilling over Chili Bar dam resulting in daily flows well above average. It wasn’t until the middle of June that SMUD began controlling releases.

The chart below explains the Water Year Type designations with corresponding minimum flow schedules out of Chili Bar Dam, per the FERC licenses.

Table 1: Chili Bar Dam Release Schedule by Water year Type (Note: 2023 was a “Wet” water year)

| Minimum Recreational Flow for SF American River below Chili Bar Dam by Water Year Type, Duration and Flow in cfs | | | | | | | | |
|--|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Water Year Type | Period | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
| Super Dry | April 1 - Friday before Memorial Day | 3 Hrs @ 1300 | --- | --- | --- | --- | 3 Hrs @ 1300 | 3 Hrs @ 1300 |
| | Memorial Day - Labor Day ¹ | 3 Hrs @ 1300 | --- | --- | 3 Hrs @ 1300 | 3 Hrs @ 1300 | 5 Hrs @ 1300 | 5 Hrs @ 1300 |
| | Tuesday after Labor Day - September 30 | --- | --- | --- | --- | --- | 3 Hrs @ 1300 | 3 Hrs @ 1300 |
| | October 1 - March 31 | --- | --- | --- | --- | --- | 3 Hrs @ 1300 | --- |
| Critically Dry | March 1 - Friday before Memorial Day | 3 Hrs @ 1300 | --- | --- | --- | --- | 3 Hrs @ 1300 | 3 Hrs @ 1300 |
| | Memorial Day - Labor Day ¹ | 3 Hrs @ 1300 | --- | --- | 3 Hrs @ 1300 | 3 Hrs @ 1300 | 5 Hrs @ 1500 | 5 Hrs @ 1500 |
| | Tuesday after Labor Day - September 30 | --- | --- | --- | --- | 3 Hrs @ 1300 | 3 Hrs @ 1300 | 3 Hrs @ 1300 |
| | October 1 - February 28/29 | --- | --- | --- | --- | --- | 3 Hrs @ 1300 | --- |
| Dry | March 1 - Friday before Memorial Day | 3 Hrs @ 1300 | 3 Hrs @ 1300 | --- | --- | 3 Hrs @ 1300 | 3 Hrs @ 1500 | 3 Hrs @ 1500 |
| | Memorial Day - Labor Day ¹ | 3 Hrs @ 1300 | 3 Hrs @ 1300 | --- | 3 Hrs @ 1300 | 3 Hrs @ 1300 | 5 Hrs @ 1500 | 5 Hrs @ 1500 |
| | Tuesday after Labor Day - September 30 | --- | --- | --- | --- | 3 Hrs @ 1300 | 3 Hrs @ 1300 | 3 Hrs @ 1300 |
| | October 1 - February 28/29 | --- | --- | --- | --- | --- | 3 Hrs @ 1300 | 3 Hrs @ 1300 |
| Below Normal | March 1 - Friday before Memorial Day | 3 Hrs @ 1300 | 3 Hrs @ 1300 | --- | 3 Hrs @ 1300 | 3 Hrs @ 1300 | 3 Hrs @ 1500 | 3 Hrs @ 1500 |
| | Memorial Day - Labor Day ¹ | 3 Hrs @ 1300 | 3 Hrs @ 1300 | --- | 3 Hrs @ 1300 | 3 Hrs @ 1300 | 6 Hrs @ 1500 | 6 Hrs @ 1500 |
| | Tuesday after Labor Day - September 30 | --- | --- | --- | 3 Hrs @ 1300 | 3 Hrs @ 1300 | 3 Hrs @ 1500 | 3 Hrs @ 1500 |
| | October 1 - 31 | 3 Hrs @ 1300 | --- | --- | --- | 3 Hrs @ 1300 | 3 Hrs @ 1500 | 3 Hrs @ 1500 |
| | November 1 - February 28/29 | --- | --- | --- | --- | --- | 3 Hrs @ 1300 | 3 Hrs @ 1300 |
| Above Normal | March 1 - Friday before 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 ¹ | 3 Hrs @ 1500 | 3 Hrs @ 1500 | 3 Hrs @ 1500 | 3 Hrs @ 1500 | 3 Hrs @ 1500 | 6 Hrs @ 1750 | 6 Hrs @ 1750 |
| | Tuesday after Labor Day - September 30 | --- | --- | --- | 3 Hrs @ 1500 | 3 Hrs @ 1500 | 3 Hrs @ 1500 | 3 Hrs @ 1500 |
| | October 1 - 31 | 3 Hrs @ 1300 | --- | --- | --- | 3 Hrs @ 1300 | 3 Hrs @ 1500 | 3 Hrs @ 1500 |
| | November 1 - February 28/29 | --- | --- | --- | --- | --- | 3 Hrs @ 1500 | 3 Hrs @ 1500 |
| Wet | March 1 - Friday before 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 ¹ | 4 Hrs @ 1500 | 4 Hrs @ 1500 | 4 Hrs @ 1500 | 4 Hrs @ 1500 | 4 Hrs @ 1500 | 6 Hrs @ 1750 | 6 Hrs @ 1750 |
| | Tuesday after Labor Day - September 30 | --- | --- | --- | 3 Hrs @ 1500 | 3 Hrs @ 1500 | 3 Hrs @ 1500 | 3 Hrs @ 1500 |
| | October 1 - 31 | 3 Hrs @ 1300 | --- | --- | --- | 3 Hrs @ 1300 | 3 Hrs @ 1500 | 3 Hrs @ 1500 |
| | November 1 - February 28/29 | --- | --- | --- | --- | --- | 3 Hrs @ 1500 | 3 Hrs @ 1500 |

¹ The “Memorial Day – Labor Day” period refers to Saturday of Memorial Day weekend through Monday of Labor Day weekend.

RIVER USE

Early in 2023 commercial river use appeared that it would be adversely affected due to flooding. With the very high flows at the beginning of the season, many outfitters had a lot of client cancellations. River use was significantly lower March – July at almost 3300 fewer users than in 2022. Fortunately after July, August and September user counts increased by almost 3000 compared to those months in 2022.

Commercial use in 2022 was 73,097. As of the end of October, reported use for 2023 ended up with about 71403 users.

Spring runoff (snowmelt) behind dams that control the river level on the South Fork usually begins in May. Whitewater flows on the river have only been available consistently from year to year because of the FERC licenses' minimum recreational water flow requirements.

Coloma to Greenwood creek (C2G) is about 5 miles of class II. The C2G reach in the Coloma Lotus Valley continues to be a popular section of the river. Many types of boaters utilize this section of river, including rafters, kayakers, Stand up Paddle boards (SUP's) and inner tubes. Along with downriver floats, many skills classes and trainings are given by permitted outfitters. Usage includes multiple runs, use during minimal flow and non-scheduled release days. Many people also access alternative put-ins and take-outs.

With the diversity of different types of craft and locations for river access, capturing accurate usage numbers is difficult.

There are approximately 30 weekend days annually between Memorial Day weekend and Labor Day weekend. Based on prior year counts, a conservative estimate of use for the C2G run could easily be 9,000 people, based on an estimated average of 300 people per weekend day.

RIVER USE PREFERENCES

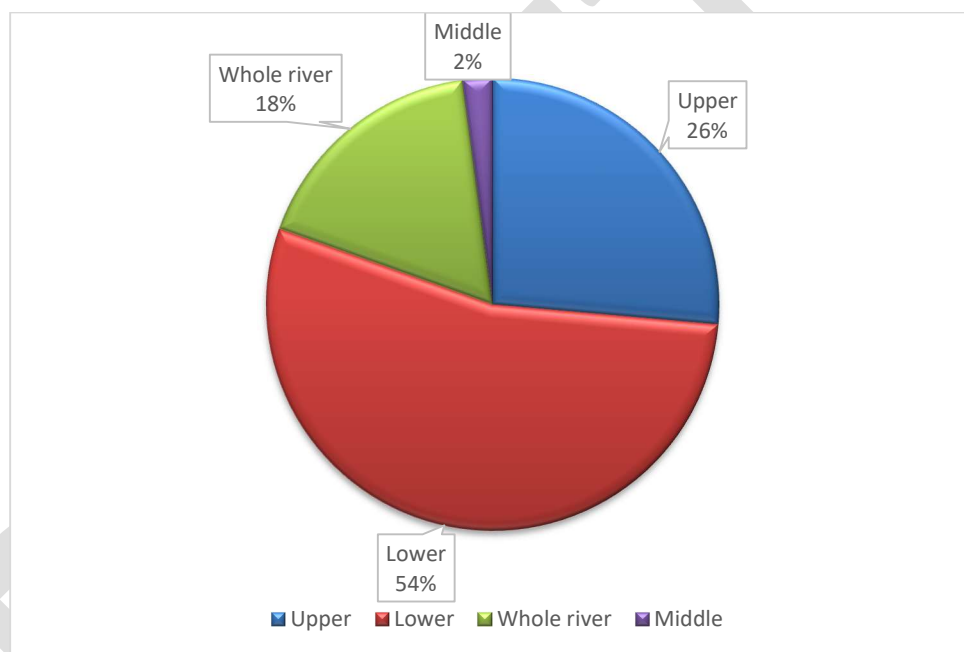
The longstanding trend of both private and commercial river use is increased use of the lower segment of the river. The County can track total use patterns with regards to financial reports and observations; however, as previously mentioned, the private user data does not represent a full accounting of use patterns. Total river use by October in 2023 was 71,403 commercial users. Considering high water concerns, that is only 1694 fewer users than 2022 which was 73097.

Overall river use was diminished due to the high water months. Whole river trips most likely reflect release levels, as higher flow rates increase speed, thus allowing for more trips to cover the entire length of the South Fork in a day. Lower, slower flows likely deter whole-river trips. The middle, C2G section of the river is the most accessible section for floating of inner tubes, paddleboards, and other small inflatable crafts.

There were 305 tubers counted in July and August at the Hwy 49 Bridge. The high water into June likely affected tubing traffic. Out of those counted, 30 were observed with no PFD and 8 individuals jumping off the Hwy 49 bridge.

OUTFITTER USE

Commercial outfitters are the primary source for public rafting excursions down the South Fork. There were 27 permitted outfitters in 2023. The total count for commercial use was 71403. Whole-river trips accounted for an average of 18% (12445) of the total use in 2023. Trips solely on the upper section were 26% (18855) and trips on the lower section were 54% (38582) of total 2023 use. The middle section (C2G) had 2% (1521) of reported use. The lower section is better equipped with put-in and take-out facilities, likely reflecting an efficient business decision with a more extended day trip for commercial passengers. Total activity increased in August and September, significantly adding to overall use numbers.



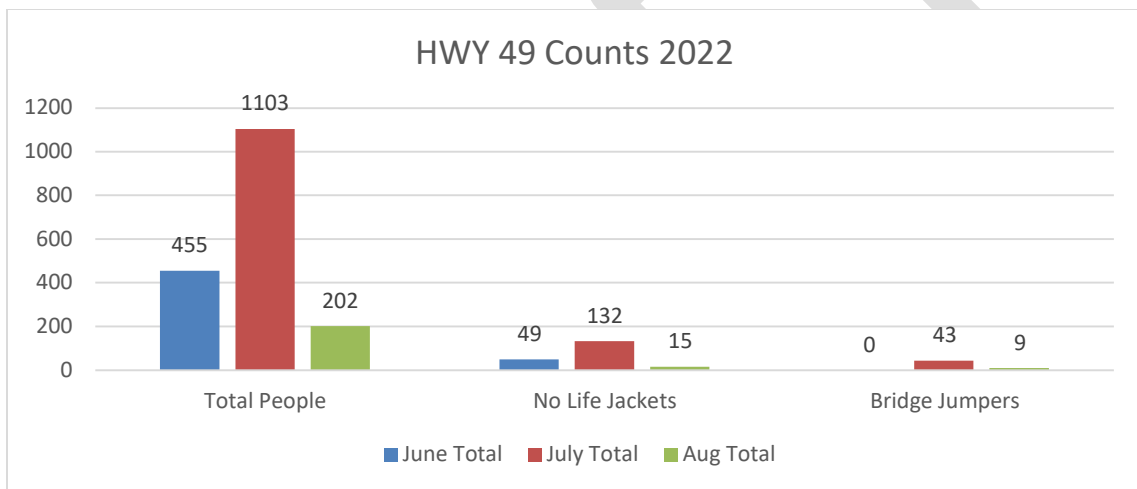
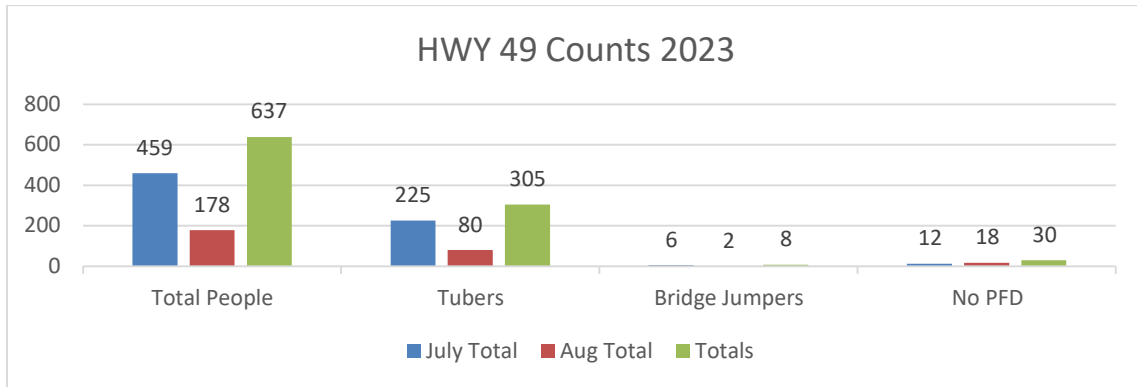
INSTITUTIONAL GROUP USE

Only organizations teaching accredited educational courses are able to continue to register as Institutional Groups per the updated RMP. Staff worked with the nonprofit groups (previously identified as institutional groups) to meet the requirement for commercial use. Four of the six non-profit groups obtained their commercial permit in 2022.

2023 TUBER COUNTS

El Dorado County was fortunate to have another intern for the 2023 river season, Quinn Schnieder. Quinn, along with River Aide Joe McNeilly, was able to conduct several counts of tubers. Counts were taken under the highway 49 bridge in Coloma on busy weekends during

high usage hours. There was a lot fewer tubers compared to 2022 due to the high water conditions. Staff counted all types of craft but the graph focuses on Tubers. In 2022 we didn't separate Tubers from total people. A fair estimate would be at least 75% of all crafts.



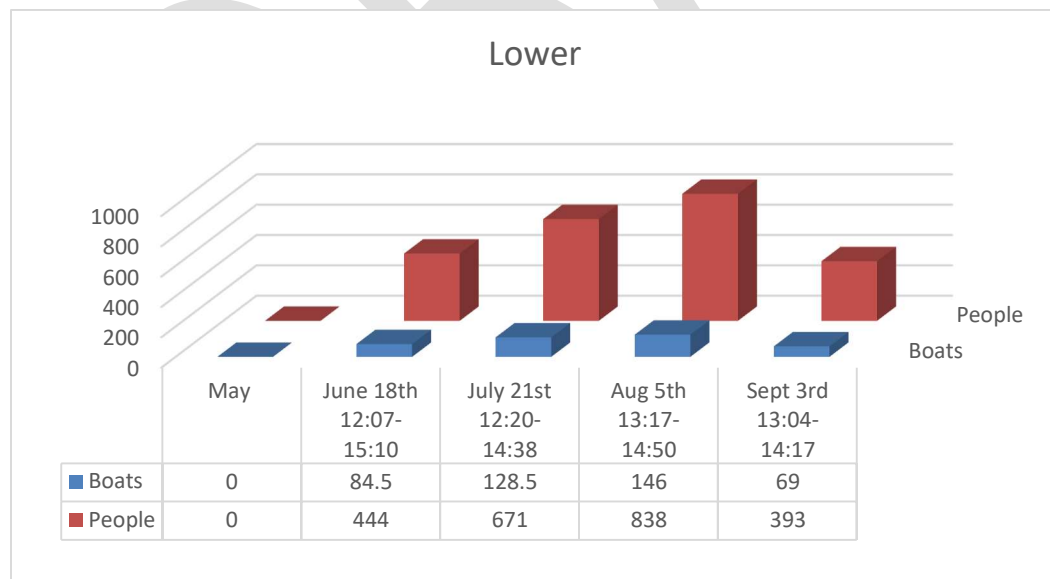
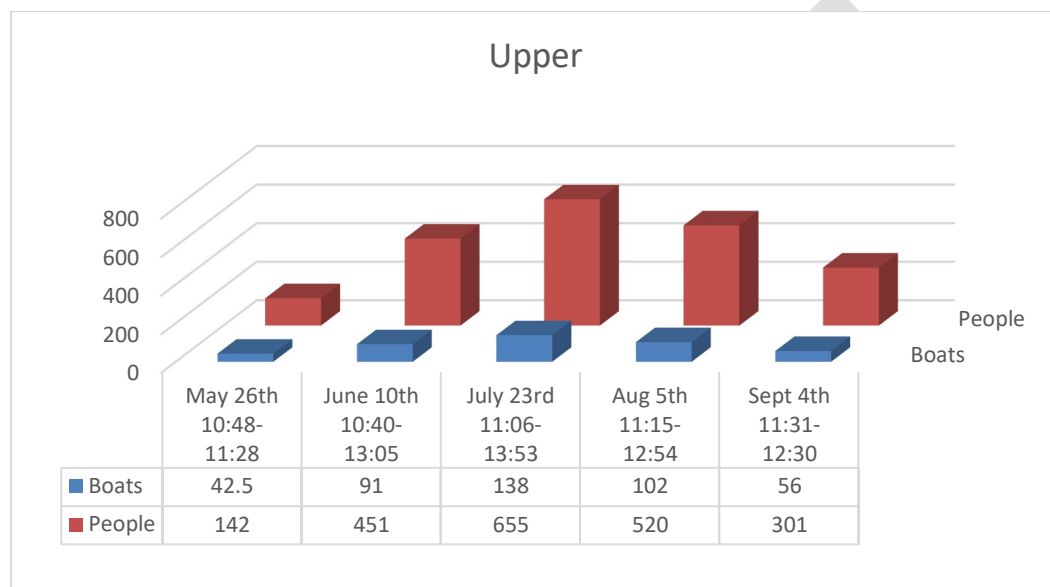
BOAT DENSITY

The boat density safety measures aim to prevent boating safety hazards from occurring due to boat congestion on weekends. In the event boat counts exceed a “density threshold”, the County will implement management actions to address density and associated safety issues on the South Fork as specified in Element 7 of the RMP.

Boat density measurements come from taking an aggregate total of all rafts, kayaks, inflatable kayaks, and inner tubes, paddleboards, or similar flotation devices. The sources of data utilized for estimating river use were boat counts completed as identified in Appendix C of the RMP, page 94. Density Threshold: 300 boats in 2 hours (based on ¼ hour increments and a rolling 2-hour period) at Meatgrinder, Troublemaker, Barking Dog, Fowlers Rock or Satan’s Cesspool rapids on two days during any one season. Two kayaks are equal to one boat for the purposes of determining boat density.

The following graphs reflect the boat densities of “Fowlers” or “Satan’s Cesspool” rapids on the lower section, and “Meatgrinder” or “Troublemaker” on the upper section. Several counts were also taken on the middle section at Camp Lotus near “Barking Dog” rapid. The graph counts kayaks ½ a boat as prescribed in the RMP.

Carry capacity was not exceeded; therefore, no mitigation measures to restrict boating use are necessary for 2024. Each month’s counts are the highest counted day for that month.



2023 COUNTY STAFF ACTIVITIES

In December of 2022 Tim Canavarro was promoted to the position of Parks Program Coordinator. Tristan Otto returned and Nathan O’Conner and Joseph McNeilly also joined El Dorado County as river aides. Quinn Schnieder joined as an intern for the division in 2023 and did an excellent job helping with park maintenance, boat counts and water samples. Quinn was also able to accompany the river aides on river trips on both the upper and lower sections of the South Fork.

Along with monitoring the Coloma to Greenwood (C2G) section of the river and boat counts, staff was able to address people trespassing on private property. A new deputy was assigned to the river program, Julian Sandoval. Deputy Sandoval worked with staff rowing both the upper and lower sections.

River staff working closely with the Sheriff’s Department were able to provide coverage on all sections of the river. The Parks Division believes that this working relationship with the Sheriff’s Department is vital to ensuring safety and education. The Sheriff’s Office was able to educate heavily in the C2G segment. Staff really appreciates the Sheriff’s Office and Deputy Sandoval along with several other deputies, for all their work, support and efforts on the South Fork. They are a pleasure to work with and their presence on the river makes a very big difference.

The safety sign kiosk at Henningsen Lotus Park was completely destroyed by the flood in January. Parks Division staff designed and constructed a new Kiosk and relocated it to a location less likely to be affected by flooding in the future.





Updated Safety Kiosk

Day to day activities for staff included:

- Provided boating safety, boater responsibilities, private property education, river etiquette, leave no trace education, and river flow information at river accesses and on the river.
- Stocked kiosks with waterproof river maps that provide boaters with the locations of restrooms, put-ins and take-outs, quiet zone locations, names of rapids with public and private land designations, agency and campground phone numbers, and a boating safety checklist.
- Assisted law enforcement, upon request.
- Educated tubers on river safety and life jackets in the C2G section.
- Emphasized controlling quiet zone noise, use of public lands, litter education, and use of life jackets by all boaters and inner-tubers; dealt with ongoing concerns of the public.
- Regulate commercial use in the quiet zone for compliance.
- Provided safety information to people floating/boating on the class II section.
- Boat counts as identified in the RMP for carrying capacity.
- Water samples as identified in the RMP.
- Reported permitted outfitter violations to administration for processing as identified in the RMP.

Education and Outreach

There were two river clean up days in 2023. The first was organized with several Outfitters, BLM and County River staff. The second was organized through the American River Conservancy, private boaters and County River staff. In both cases several private volunteers participated and were able to collect several truck loads of trash. Staff did daily river cleanup on the upper and lower sections to manage garbage in the river. Onshore and shoreline cleanup was continuously done in and around Henningsen Lotus Park.

River aides as well as seasonal park staff were regularly on the beach and trails of Henningsen Lotus Park. Staff conducted numerous educational discussions with individuals about the glass container ordinance along the river. This was especially critical along the Wilkinsen Trail.

As mentioned before most of the safety signage developed in 2020 was destroyed in the flood. New signs were printed and placed in various locations as well as the new safety Kiosk at HLP. Additional Boat Ramp signs were also made. Signage is used to inform users of the life jacket ordinance as well as the parking and unloading zones.



Educational Signage

EL DORADO COUNTY LAW ENFORCEMENT

During the 2023 rafting season, EL Dorado County Sheriff Deputy Julian Sandoval, patrolled the South Fork of the American River from Chili Bar to Folsom Lake on a river raft. He spent more than 330 hours on the river. This total does not include the time spent on equipment maintenance, reporting, training, etc.

The below is a summary of quantifiable activity on River Patrol:

Contact with approximately 2,660 boats (kayaks, rafts, SUPS, etc.) and an estimated 11,228 people.

Approximately 430 contacts with the public, some of which were educational or enforcement in nature. These included advisements on PFDs, navigation, safety, ordinance (glass bottles, bridge jumping, trespassing), reckless behavior, intoxication, and inappropriate behavior.

59 citizen assists.

110 Public Relations Events

15 Vessel assists.

2 citations.

One rescue at Satan's Cesspool Class 3+ rapid due to a rafter who suffered a broken arm. The recovery was made by river patrol in a cataraft with assistance from El Dorado County Parks & Recreation River Aids and Cal-Fire.

One rescue at Old Scary Class 1-2 Rapid due to Kayaker stranded in the middle of the river. The recovery was made by river patrol in a cataraft with assistance from El Dorado County Parks & Recreation.

This year the water levels were much higher than most years. Much of the time on the river was spent educating non-locals on the dangers of high-water levels. Many arrived on the river with poor quality gear that could have caused them serious bodily injury or death. In these cases, those people were educated and some were escorted down river on the EDSO Cataraft down the rapids they were not prepared to go down.

OUTFITTER VIOLATIONS

There were only 4 violations for pod size in 2023. River staff also spoke to outfitters regarding following distance being too close. Due to the high water conditions many of the outfitters were keeping their rafts closer together for safety.

WATER QUALITY

The water quality monitoring bacterial test results in 2023 showed acceptable readings throughout the season. Water testing is done the first week of the month May – September. The test locations are The Nugget, North Shore (Marshall Gold), HLP, Greenwood Creek and Salmon Falls. Two samples are taken at the shore and a transect (combination of right and left shores and river center), except at Salmon Falls which is just a shore sample.

Water test results are reported to the County Environmental Management Department in accordance with RMP section 4.4. Environmental Management monitors the water sample results and informs the Parks Division if action is needed.

Test results are attached in Appendix A.

The County also has a comprehensive Stormwater Program that implements stormwater mitigation measures and best management practices (BMPs) as prescribed by the County Storm Water Management Plan and the Phase II Municipal National Pollutant Discharge Elimination System (NPDES) Permit.

BUDGET

The budget for the Parks River Program is a non-general fund program. The primary source of funding since 1997 is a \$2.00 per guest user fee paid by permitted outfitters. Any fee change is subject to additional action by the Board of Supervisors. Any funding needs will take into consideration any changes which could increase or decrease the level of funding needed to implement the updated RMP. The table and charts below provide a snapshot of the River Trust Fund balances, the 2022/2023 approved budget, and the 2021/2022 Parks River Program budgeted and actual expenditures.

In 2023, the County's revenue increased \$27,125.50 for State Parks for fee collection and permitting from commercial outfitter use only.

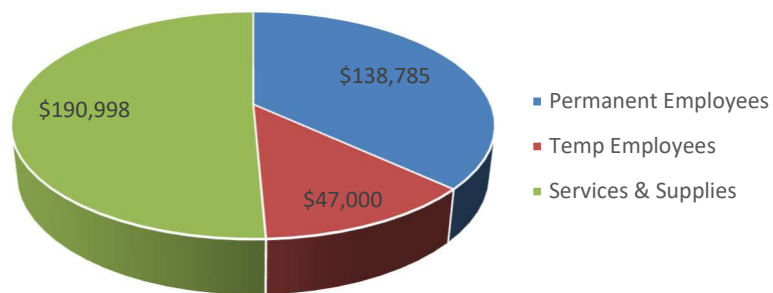
River Trust Fund Balance and Budget Summary

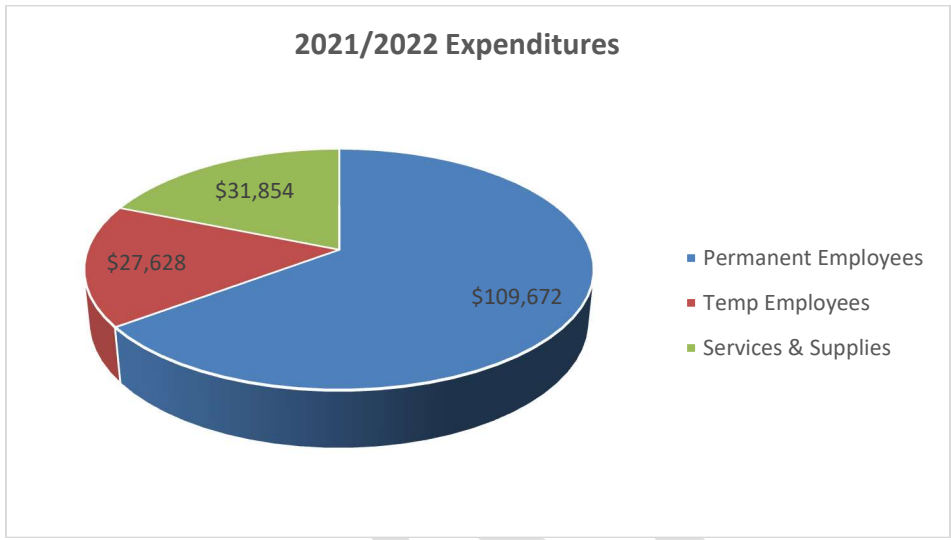
| Fiscal Year 2022/2023 | |
|--|------------|
| Fund Balance as of July 1, 2022 | 329,596.86 |
| 21/22 Balance Adjustment - Fair Market Value | -10,951.65 |
| Revenue (July 1, 2022 through June 30, 2023) | 170,466.61 |
| Expenditures | 142,029.13 |
| River Trust Fund balance as of June 30, 2023 | 347,082.69 |
| 2023/2024 Adopted Budget | 351,783.00 |

2021/2022 Approved River Program Budget

| Fiscal Year 2021/2022 | |
|--|-----------|
| Fund Balance as of July 1, 2021 | \$261,612 |
| Revenue (July 1, 2021 through June 30, 2022) | \$157,417 |
| Expenditures | \$89,432 |
| River Trust Fund balance as of June 30, 2022 | \$329,597 |
| 2022/2023 Approved Budget | \$240,430 |

2023/2024 Budget





***PUBLIC COMMENTS:
CLOSING***

The storms of this year proved to present many challenges. Clean up, rebuilding and new approaches were the main focus at the years beginning. Lower river use numbers reflect the long season of high water levels. In coordination with the BLM, State Parks, and El Dorado County Sheriff's Boating Units, the County River Program was successful in managing the South Fork American River's whitewater recreation from Chili Bar Dam to Folsom Reservoir. The implementation of the County's 2018 revised River Management Plan has met most of the goals and objectives laid out in the plan.

DRAFT

Appendix

Appendix A



**Water
Environmental
Testing Laboratory, Inc.**
California State Certified #2082

(530) 677-5776

5649 Milton Ranch Road, Shingle Springs, CA 95682

May 9, 2023

El Dorado County Parks & Recreation
CAO Parks
Placerville, CA 95667
Attn: Vickie Sanders / Brian Michaelson

Laboratory Reference #23-EDC-001.R

Sampled by: Tim

| <u>Sample Location</u> | <u>Date</u> | <u>Time</u> | <u>Test Parameter</u> | <u>Test Result (MPN)</u> |
|---|-------------|-------------|---|--------------------------|
| Salmon Falls Grab Sample | 5/4/23 | 1130 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 686.7 10.8 |
| Greenwood Creek - Shore Grab Sample | 5/4/23 | 1100 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 261.3 3.0 |
| Greenwood Creek - Transect Composite Sample (5) | 5/4/23 | 1100 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 325.5 6.3 |
| North Beach - Shore Grab Sample | 5/4/23 | 1015 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 228.2 6.3 |
| North Beach - Transect Composite Sample (5) | 5/4/23 | 1015 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 290.9 2.0 |
| Nugget - Shore Grab Sample | 5/4/23 | 0937 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 218.7 5.2 |
| Nugget - Transect Composite Sample (5) | 5/4/23 | 0937 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 248.9 2.0 |
| HLP - Shore Grab Sample | 5/4/23 | 1030 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 235.9 2.0 |
| HLP - Transect Composite Sample (5) | 5/4/23 | 1030 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 275.5 5.2 |

All samples were analyzed using the chromogenic substrate coliform test (ONPG-MUG) in accordance with Standard Methods SM 9223 B. Bacterial densities (MPN) were calculated using Colilert Quanti-tray 2000.

Richard R. Blodgett, PhD

Public Health Epidemiologist
Water Quality Microbiologist

RRB/sb

Cc: El Dorado County Environmental Management Department

This report is applicable only to the sample received by the laboratory. The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the client to whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report of its contents.



**Water
Environmental
Testing Laboratory, Inc.**
California State Certified #2082

(530) 677-5776

5649 Milton Ranch Road, Shingle Springs, CA 95682

June 13, 2023

El Dorado County Parks & Recreation
CAO Parks
Placerville, CA 95667
Attn: Vickie Sanders / Brian Michaelson

Laboratory Reference #23-EDC-002.R

Sampled by: Not Reported

| <u>Sample Location</u> | <u>Date</u> | <u>Time</u> | <u>Test Parameter</u> | <u>Test Result (MPN)</u> |
|---|-------------|-------------|---|--------------------------|
| Salmon Falls Grab Sample | 6/7/23 | 1230 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | >2419.2 13.4 |
| Greenwood Creek - Shore Grab Sample | 6/7/23 | 1200 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | >2419.2 8.3 |
| Greenwood Creek - Transect Composite Sample (5) | 6/7/23 | 1200 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | >2419.2 6.1 |
| North Beach - Shore Grab Sample | 6/7/23 | 1050 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | >2419.2 3.0 |
| North Beach - Transect Composite Sample (5) | 6/7/23 | 1050 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | >2419.2 10.5 |
| Nugget - Shore Grab Sample | 6/7/23 | 1005 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | >2419.2 2.0 |
| Nugget - Transect Composite Sample (5) | 6/7/23 | 1005 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | >2419.2 5.2 |
| HLP - Shore Grab Sample | 6/7/23 | 1120 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | >2419.2 2.0 |
| HLP - Transect Composite Sample (5) | 6/7/23 | 1120 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | >2419.2 4.1 |

All samples were analyzed using the chromogenic substrate coliform test (ONPG-MUG) in accordance with Standard Methods SM 9223 B. Bacterial densities (MPN) were calculated using Colilert Quanti-tray 2000.

Richard R. Blodgett, PhD

Public Health Epidemiologist
Water Quality Microbiologist

RRB/cb

Cc: El Dorado County Environmental Management Department

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**Water
Environmental
Testing Laboratory, Inc.**
California State Certified #2082

(530) 677-5776
5649 Milton Ranch Road, Shingle Springs, CA 95682

July 14, 2023

El Dorado County Parks & Recreation
CAO Parks
Placerville, CA 95667
Attn: Vickie Sanders / Brian Michaelson

Laboratory Reference #23-EDC-003.R
Sampled by: Not Reported

| <u>Sample Location</u> | <u>Date</u> | <u>Time</u> | <u>Test Parameter</u> | <u>Test Result (MPN)</u> |
|---|-------------|-------------|---|--------------------------|
| Salmon Falls Grab Sample | 7/6/23 | 1115 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 2419.2 10.9 |
| Greenwood Creek - Shore Grab Sample | 7/6/23 | 1020 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 866.4 26.2 |
| Greenwood Creek - Transect Composite Sample (5) | 7/6/23 | 1020 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 1119.9 20.3 |
| North Beach - Shore Grab Sample | 7/6/23 | 1010 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 1299.7 22.8 |
| North Beach - Transect Composite Sample (5) | 7/6/23 | 1010 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 686.7 20.1 |
| Nugget - Shore Grab Sample | 7/6/23 | 0915 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 1413.6 13.4 |
| Nugget - Transect Composite Sample (5) | 7/6/23 | 0915 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 1413.6 11.9 |
| HLP - Shore Grab Sample | 7/6/23 | 1023 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 1119.9 24.3 |
| HLP - Transect Composite Sample (5) | 7/6/23 | 1120 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 1732.9 17.1 |

All samples were analyzed using the chromogenic substrate coliform test (ONPG-MUG) in accordance with Standard Methods SM 9223 B. Bacterial densities (MPN) were calculated using Colilert Quanti-tray 2000.

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Public Health Epidemiologist
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**Water
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California State Certified #2082

(530) 677-5776

5649 Milton Ranch Road, Shingle Springs, CA 95682

August 11, 2023

El Dorado County Parks & Recreation
CAO Parks
Placerville, CA 95667
Attn: Vickie Sanders / Tim Canavarro

Laboratory Reference #23-EDC-004.R

Sampled by: T.B.O.

| <u>Sample Location</u> | <u>Date</u> | <u>Time</u> | <u>Test Parameter</u> | <u>Test Result (MPN)</u> |
|---|-------------|-------------|---|--------------------------|
| Salmon Falls Grab Sample | 8/7/23 | 1220 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 1553.1 11.0 |
| Greenwood Creek - Shore Grab Sample | 8/7/23 | 1150 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 980.4 13.5 |
| Greenwood Creek - Transect Composite Sample (5) | 8/7/23 | 1150 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 1190.4 22.8 |
| North Beach - Shore Grab Sample | 8/7/23 | 1100 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 1413.6 6.3 |
| North Beach - Transect Composite Sample (5) | 8/7/23 | 1100 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 1299.7 4.1 |
| Nugget - Shore Grab Sample | 8/7/23 | 1025 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 866.4 9.6 |
| Nugget - Transect Composite Sample (5) | 8/7/23 | 1025 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 410.6 5.2 |
| HLP - Shore Grab Sample | 8/7/23 | 1115 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 866.4 9.7 |
| HLP - Transect Composite Sample (5) | 8/7/23 | 1115 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 1046.2 13.4 |

All samples were analyzed using the chromogenic substrate coliform test (ONPG-MUG) in accordance with Standard Methods SM 9223 B. Bacterial densities (MPN) were calculated using Colilert Quanti-tray 2000.

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Public Health Epidemiologist
Water Quality Microbiologist

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**Water
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California State Certified #2082

(530) 677-5776
5649 Milton Ranch Road, Shingle Springs, CA 95682

September 19, 2023

El Dorado County Parks & Recreation
CAO Parks
Placerville, CA 95667
Attn: Vickie Sanders / Tim Canavarro

Laboratory Reference #23-EDC-005.R

Sampled by: Tim

| <u>Sample Location</u> | <u>Date</u> | <u>Time</u> | <u>Test Parameter</u> | <u>Test Result (MPN)</u> |
|---|-------------|-------------|---|--------------------------|
| Salmon Falls Grab Sample | 9/7/23 | 1325 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 1986.3 2.0 |
| Greenwood Creek - Shore Grab Sample | 9/7/23 | 1300 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 2419.2 58.0 |
| Greenwood Creek - Transect Composite Sample (5) | 9/7/23 | 1300 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | >2419.2 48.0 |
| North Beach - Shore Grab Sample | 9/7/23 | 1201 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 1986.3 24.3 |
| North Beach - Transect Composite Sample (5) | 9/7/23 | 1201 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 2419.2 32.8 |
| Nugget - Shore Grab Sample | 9/7/23 | 1130 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | >2419.2 61.9 |
| Nugget - Transect Composite Sample (5) | 9/7/23 | 1130 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | >2419.2 32.7 |
| HLP - Shore Grab Sample | 9/7/23 | 1230 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | 1986.3 50.4 |
| HLP - Transect Composite Sample (5) | 9/7/23 | 1230 | Total Coliform (ONPG) <i>E. coli</i> (MUG) | >2419.2 44.3 |

All samples were analyzed using the chromogenic substrate coliform test (ONPG-MUG) in accordance with Standard Methods SM 9223 B. Bacterial densities (MPN) were calculated using Colilert Quanti-tray 2000.

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