

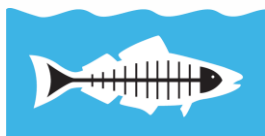
Heal the Bay

2021

River

Report Card





Heal the Bay

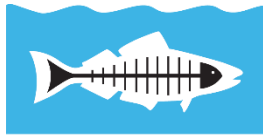
River

Report Card

2021

Heal the Bay believes people have a right to know about the quality of the water where they swim and play. We are pleased to provide our community with this science-based, easy-to-use report card. This annual report can be used to make decisions about where to get in the water, as well as inform policies to protect public health and the environment.

©2022 Heal the Bay. All Rights Reserved.



Heal the Bay

What's Inside:



Lake Balboa

EXECUTIVE SUMMARY.....	4
INTRODUCTION.....	7
METHODOLOGY.....	8
RESULTS.....	11
LA COUNTY OVERVIEW.....	13
MALIBU CREEK OVERVIEW.....	18
SAN GABRIEL OVERVIEW.....	21
LA RIVER OVERVIEW.....	24
CONCLUSIONS.....	34
RIVER NEWS.....	32
RECOMMENDATIONS FOR STAYING SAFE.....	41
ACKNOWLEDGEMENTS.....	42
APPENDICES.....	42

REPORT

Highlights

FRESHWATER FAILS	15
HONOR ROLL	16
RIVER NEWS	37
RECOMMENDATIONS FOR STAYING SAFE	41

Executive Summary

Heal the Bay is proud to release the fourth annual River Report Card. This report provides a summary of recreational water quality trends for 2021 at Los Angeles (L.A.) County's freshwater recreation sites. L.A. County's rivers, streams, and lakes receive multitudes of visitors each year and are vital to meeting community needs for recreation, green space, and cultural practices. Unfortunately, many freshwater recreation sites in L.A. County suffer from fecal indicator bacteria (FIB) pollution, which indicates the presence of pathogens that can cause infections, skin irritation, respiratory illness, and gastrointestinal illness. Our goal is to highlight water quality concerns, advocate for water quality improvements, and equip community members with the information they need to keep themselves safe and healthy when out enjoying their local swimming hole.

- Across all 35 sites and all dates graded throughout summer 2021, 59% of grades were Green (indicating no water quality health risks); 17% were Yellow (moderate health risk), and 24% were Red (high health risk).
- Heal the Bay expanded the River Report Card to include six new monitoring locations in the Lower L.A. River from Maywood to Long Beach. While these sites are not officially designated for recreation, people regularly access the River. The data provide information for river users and insight for future river revitalization efforts.
- Seven monitoring locations did not experience a single bacteria exceedance, earning 100% green grades. Most of those sites are located in Angeles National Forest.
- All six Lower L.A. River monitoring locations experienced extremely poor water quality, which landed them on our Freshwater Fails list. Bacteria concentrations were often ten times greater than the water quality standards.
- After the Lower L.A. River sites, Tujunga Wash at Hansen Dam topped the Freshwater Fails list with 94% Red grades - the highest percentage we have seen at this location since starting the River Report Card.
- The L.A. River at Rattlesnake Park is a Freshwater Fail for a fourth consecutive year. This popular site for fishing, kayaking, and wading receives a steady stream of bacteria pollution from the nearby Fletcher Dr. storm drain.
- Las Virgenes Creek at Craggs Road saw the largest increase in the percentage of Red grades issued over the previous year. This site in Malibu Creek State Park is the number nine Freshwater Fail.

- Areas with urban development tended to have worse grades than natural areas, and most sites on the Freshwater Fails list are in urban landscapes. Sites in the San Gabriel River Watershed and Upper L.A. River Watershed are in less developed areas and are less impacted by urban runoff.

Heal the Bay was thrilled that Governor Gavin Newsom signed Assembly Bill (AB) 1066 into law in 2021, which kicks off a process to protect public health and water quality at California's recreational rivers, lakes, and streams. The bill, authored by Assemblymember Richard Bloom and sponsored by Heal the Bay, tasks the California Water Quality Monitoring Council with making recommendations to the State Water Board for a uniform statewide freshwater monitoring program by December 2023. The Council will propose definitions for recreational water bodies and "priority water-contact recreation sites" in California. AB 1066 takes the first steps toward addressing the water quality monitoring disparities between ocean and freshwater sites.

Heal the Bay is committed to improving water quality in Los Angeles County's watersheds through the creation of more green space. In addition to providing recreation areas and wildlife habitat, green spaces can also function as essential multi-benefit stormwater solutions. They improve local water quality, increase water reuse and supply, reduce carbon, and mitigate the urban heat island effect. An example is Inell Woods Park, a new community-designed, multi-benefit green space coming to South L.A. this year. Heal the Bay is building Inell Woods stormwater park in collaboration with L.A. City Councilman Curren Price Jr. and community members to capture, treat, and reuse urban runoff and provide green space and recreation to the community. Multi-benefit projects like this are an efficient and effective use of our taxpayer dollars that serve both community and environmental needs.

We would like to acknowledge that Heal the Bay's work takes place on the traditional lands of the Tongva, Tataviam, Chumash, and Kizh Peoples, and we would like to pay our respects to elders past and present, and emerging.



Introduction

Heal the Bay is proud to release the fourth annual River Report Card. This report summarizes recreational water quality trends for 2021 at Los Angeles (L.A.) County's freshwater recreation sites. L.A. County's rivers, streams, and lakes receive multitudes of visitors each year and are vital to meeting the surrounding communities' needs for recreation, green space, and cultural practices. Our goal is to highlight water quality concerns, advocate for water quality improvements, and equip community members with the information they need to stay safe and healthy when out enjoying their local swimming hole.

2022 marks the 50th anniversary of the Clean Water Act (CWA) which remains the landmark piece of federal legislation protecting waters of the United States¹. This act of Congress required pollution reductions to guarantee America's waters would be "fishable, swimmable and drinkable". The CWA has served as a strong foundation on which agencies, NGOs, and community groups have fought for water quality protections and improvements, but many of California's waterways still suffer immense degradation. Today, 37% of California rivers and streams are listed as impaired for recreation under the Clean Water Act in addition to 69% of the State's Lakes and Reservoirs². The River Report Card is an important way to highlight to government officials which waterways are in greatest need of cleanup and protection.

In October 2021, California Governor Gavin Newsom signed Assembly Bill 1066 into law. The bill, authored by Assemblymember Richard Bloom and sponsored by Heal the Bay, tasks the California Water Quality Monitoring Council with defining and identifying high-priority freshwater recreation sites across the state, and recommending an appropriate monitoring program. AB 1066 is a critical first step in establishing a monitoring and public notification mandate, similar to the mandate of AB 411 for ocean beaches, to achieve public health protections for freshwater. Heal the Bay will support implementation of AB 1066, and advocate for further legislation requiring monitoring and public advisories for freshwater recreation areas.

Summer 2021 marked the full return of the River Report Card to our local waterways. In 2020, we were unable to hire monitoring staff from local colleges, and we had to scale back our program due to COVID-19 safety measures. In the summer of 2021, we resumed our normal monitoring program and even expanded to the lower reaches of the L.A. River. The River Report Card now covers the entire extent of the L.A. River. Funding for this expansion came from the Watershed Conservation Authority³, and we established a new partnership with California State University Long Beach (CSULB)⁴ who provided us with

¹ <https://www.epa.gov/laws-regulations/summary-clean-water-act>

² <https://environmentalintegrity.org/wp-content/uploads/2022/03/Revised-CWA-report-3.29.22.pdf>

³ <https://www.wca.ca.gov/>

⁴ <https://www.csulb.edu/>

lab space as well as expert staff time. While the lower sections of the L.A. River are not officially designated for recreational use, water quality information is important for the public currently accessing the River and will be useful as L.A. River restoration work progresses.

River Report Card Basics

L.A. County's rivers, streams, and lakes host numerous popular recreation areas that are vital to many peoples' quality of life. Unfortunately, many freshwater recreation sites in L.A. County suffer from fecal indicator bacteria (FIB) pollution, which indicates the presence of pathogens that can cause infections, skin irritation, respiratory illness, and gastrointestinal illness. FIB pollution sources are typically from urban runoff, leaks or spills from wastewater collection systems, illicit or illegal discharges, and failing wastewater systems. Unlike ocean beaches, there is no statewide oversight, standardization, or funding for freshwater FIB monitoring, nor are there mandated public water quality notifications for freshwater swimming and recreation areas. Many freshwater sites must be monitored under regulatory permits, such as stormwater and point source pollution permits. But, the data collected are not compiled and shared with the public in an accessible or user-friendly manner. Heal the Bay compiles that data and transforms it into easily understood, color-coded grades of Red, Yellow, and Green. The River Report Card is accessible, free of charge, and online to ensure that the information is widely available.

Sampling, Locations, and Dates

Heal the Bay collects water samples weekly during summer months at 12 freshwater sites in L.A. County. Two sites are located in the Malibu Creek Watershed and 10 sites are located in the L.A. River Watershed. Heal the Bay uses the Defined Substrate Technology (DST) method to quantify fecal indicator bacteria (total coliform, *E. coli*, and *Enterococcus*) utilizing Colilert™ and Enterolert™ (IDEXX, Westbrook, ME). Any samples collected within three days of 0.1 inches or more of rain were not included in this analysis because of the negative impact rain has on water quality. We advise the public to avoid contact with the water for at least three days after a rain event of 0.1 inches or more as rainfall poses a flood/swift water risk and washes harmful contaminants into waterways.

In addition to monitoring, Heal the Bay compiles water quality data from other monitoring programs and government agencies that oversee some of the same locations that Heal the Bay monitors as well as 23 other locations. Typically, agencies collect samples on a weekly basis and quantify levels of *E. coli* only. For the L.A. River Watershed, data is collected and shared by the Los Angeles River Watershed Monitoring Program (LARWMP)⁵ and City of L.A., Bureau of Sanitation and the Environment (LASAN). The locations in the San Gabriel River Watershed are monitored by the San Gabriel River Regional Monitoring Program (SGRRMP).⁶ Data have been collected by these groups for

⁵ <https://www.watershedhealth.org/larwmp>

⁶ <http://sgrrmp.org/>

many years and were made public in a timely manner in 2017 in the L.A. River Watershed and in 2018 in the San Gabriel River Watershed. Site locations, monitoring groups, and date ranges are detailed in Appendix A.

Heal the Bay began monitoring storm drain outfalls in 2017 in the Elysian Valley Recreation Zone of the L.A. River. We collect water samples from flowing storm drain outfalls in the recreation zone and upstream of the recreation zone to Glendale Blvd. However, during 2020 and 2021, we only collected samples at the Fletcher Dr. storm drain due to constraints the pandemic placed on us. A full list of outfall locations is in Appendix B.

Complete field and laboratory protocols are available in Heal the Bay's Quality Assurance Project Plan (QAPP), which was approved by the U.S. EPA, with reviewers from the California State Water Resource Control Board, and the City of L.A., Bureau of Sanitation and Environment, Environmental Monitoring Division.

Grading

Heal the Bay developed its own grading methodology to transform technical information into an easy-to-understand format. Grades are presented as Red, Yellow, or Green based on up to four parameters: single sample *E. coli* level, geometric mean *E. coli* level, single sample *Enterococcus* level, and geometric mean *Enterococcus* level.

- **Green:** Zero parameters exceeded; low risk of illness when there is water contact.
- **Yellow:** One to half of the parameters exceeded; moderate risk of illness when there is water contact.
- **Red:** More than half of the parameters exceeded; high risk of illness when there is water contact.

A single sample reflects the water quality at the time of sampling while a geometric mean gives an indication of water quality over the last 30 days; it is a type of average that is not as heavily affected by very high or very low values. For each parameter, the value was determined to be under (not exceeding) or at/over (exceeding) the regulatory or health limit (Table 1).

	Objectives Used in River Report Card		State Water Board Basin Plan Water Quality Objectives ^d (For illness rate of 32 per 1000)	
<i>Fecal Indicator Bacteria</i>	<i>Single Sample</i>	<i>Geometric Mean</i>	<i>Statistical threshold value (STV)</i>	<i>Geometric Mean</i>
<i>Enterococcus</i>	110 cfu/100ml^a	30 cfu/100ml^a	N/A	N/A
<i>E. coli</i>	235 cfu/100ml^b	126 cfu/100ml^c	320 cfu/100ml	100 cfu/100ml

Table 1. Limits for freshwater fecal indicator bacteria. Heal the Bay uses the bold limits in the River Report Card compared to the California water quality objectives for freshwater.

^aThese values are recommended in the U.S. EPA. 2012 Recreational Water Quality Criteria for an illness rate of 32/1,000 people. <https://www.epa.gov/sites/production/files/2015-10/documents/rwqc2012.pdf>

^bThis value is derived from the U.S. EPA. 2012 Recreational Water Quality Criteria Beach Action Value for freshwater at an illness rate of 36/1000 people.

^cValue is derived from the U.S. EPA. 2012 Recreational Water Quality Criteria for an illness rate of 36/1000 people.

^dThe State of California recreational water quality criteria can be found here:

<https://www.waterboards.ca.gov/bacterialobjectives/docs/bacteria.pdf>

Our methodology was originally developed using the California and U.S. EPA's recreational water quality objectives. However, the California State Water Board has since updated their bacteria objectives for *E. coli* in freshwater⁷. In our methodology, we used the standards that were in place when our methodology was developed. While the values we use are still valid and justified (Table 1), we are currently in the process of updating our methodology, which we will implement in the near future.

Grades were issued approximately weekly (depending on sampling frequency) during summer months and were determined by the number of bacterial health limits that were exceeded. Sites were graded on the information that was available and the number of parameters varied from one to four, depending on whether both *E. coli* and *Enterococcus* were being measured and whether there were enough samples to calculate a geometric mean. Geometric means were calculated when there were a minimum of four samples within a 30-day period.

⁷ <https://www.waterboards.ca.gov/bacterialobjectives/>

Freshwater Fails & Honor Roll

The Freshwater Fails list is composed of the recreation sites that received the highest percentages of Red grades during the 2021 recreation season. Red grades must comprise at least 10% of the grades issued over the summer to make it on the list. We chose 10% as the cutoff because it is a typical threshold used in water quality standards such as Statistical Threshold Values⁸, and is a threshold commonly used for Clean Water Act 303(d) listing decisions⁹. The Honor Roll is composed of the 10 freshwater recreation sites with the highest percentages of Green grades issued during the 2021 recreation season.

Results

For our analysis, sites were grouped by watershed with the L.A. River Watershed further split into three areas: 1) sites within official recreation zones, 2) sites in popular recreation sites outside of the official recreation zones (Upper L.A. River), and 3) sites in the Lower L.A. River that are not officially designated for recreation. Each site was compared to grades across all sites in L.A. County and across all sites in that watershed or zone. Grades were also compared to previous years of monitoring (shown in Appendices C & D) to analyze water quality changes over time. Additional detailed results are available in Appendices E-J, including sample sizes, single sample exceedance numbers and rates, bacteria ranges, and geometric means for each monitoring site and year.

⁸ <https://www.waterboards.ca.gov/bacterialobjectives/docs/bacteria.pdf>

⁹ https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2015/020315_8_amendment_clean_version.pdf

Los Angeles County Overview



*Heal the Bay Stream Team
Photo: Linnea Bullion*

Los Angeles County Overview

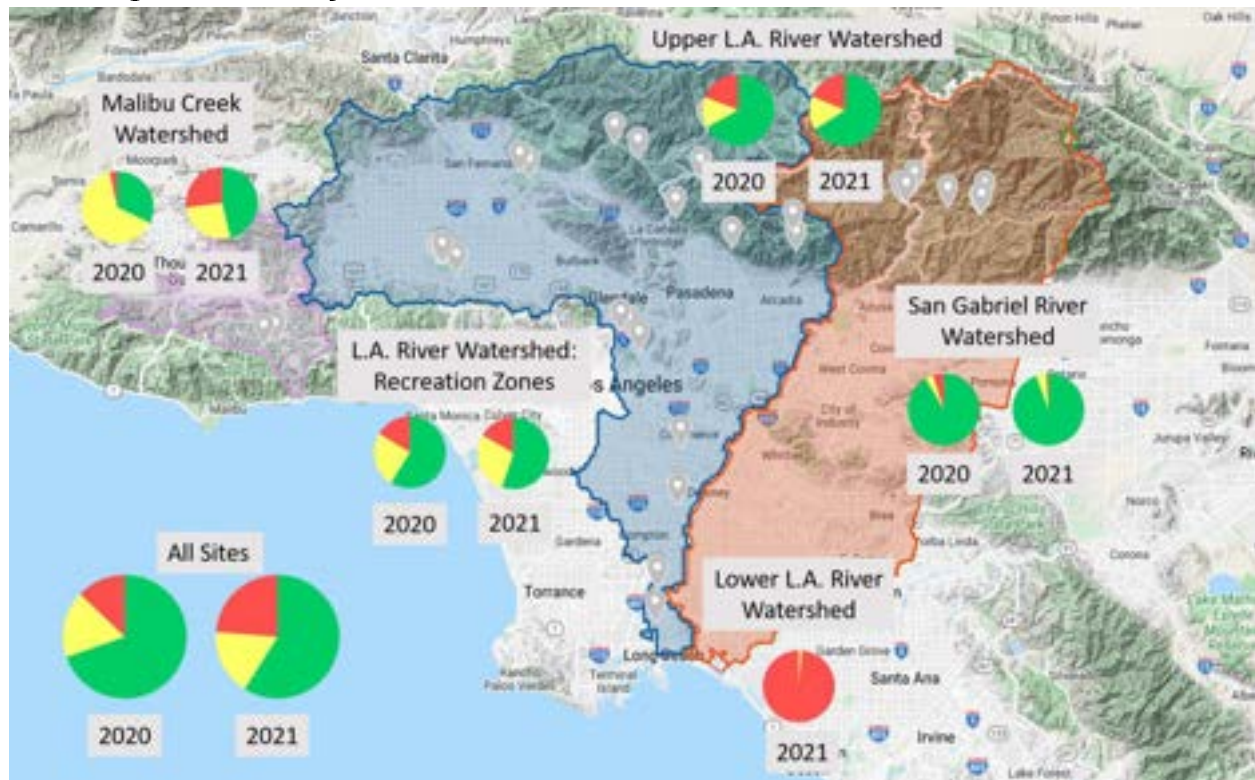


Figure 1: 2020 and 2021 water quality grade percentages for monitoring sites in L.A. County, Malibu Creek Watershed, L.A. River Watershed Recreation Zones, Upper L.A. River Watershed, Lower L.A. River Watershed, and San Gabriel River Watershed. Percentages of Green, Yellow, and Red grades are shown for each area and season.

Across all 35 sites graded over the course of summer 2021, 59% of the grades we issued were Green, 17% were Yellow, and 24% were Red (Figure 1). Sites in the L.A. River Watershed Recreation Zones received 55% Green, 28% Yellow, and 17% Red grades. The San Gabriel River Watershed had 94% Green, 5% Yellow, and 1% Red grades. The Upper L.A. River Watershed Sites had 66% Green, 15% Yellow, and 19% Red grades. Malibu Creek Watershed sites received 46% Green, 27% Yellow, and 27% Red grades in 2021 (Figure 1). Sites in the lower L.A. River Watershed, newcomers to the River Report Card, received 99% Red grades and 1% Yellow grades.

Overall, water quality across L.A. County decreased in 2021 compared to the previous summer. There were fewer Green grades issued across the County and an alarming eleven percentage point increase in Red grades calculated. Part of this trend is explained by the inclusion of the Lower L.A. River data, which exceeded bacterial objectives consistently and by large amounts. However, even with that data removed, L.A. County still experienced a four percentage point decrease in Green grades issued and a two percentage point increase in Red grades compared to 2020.

Of the 27 sites in this report with multiple years of consecutive data, 10 showed an increase in the percentage of Green grades issued from 2020 to 2021, and two sites had 100% Green grades in 2020 and 2021. However, 13 sites experienced a decrease in water

quality, and two sites experienced a decrease in the percentage of Green and Red grades simultaneously (Appendices C & D).

Recreation sites in the San Gabriel River Watershed earned the highest proportion of Green grades and the lowest proportion of Red grades across L.A. County. This Watershed had an uptick in water quality from 2020 when it received more Red grades and was home to a Freshwater Fail site. Summer 2021 was a return to normalcy for the San Gabriel River Watershed, as it had zero Freshwater Fails and eight sites on the Honor Roll.

The L.A. River Watershed Recreation Zones experienced a slight decrease in the proportion of Green grades issued in 2021, but that did not result in any additional Red grades. For a second consecutive year, a site from the L.A. River Recreation Zones made it on the Honor Roll (L.A. River at Balboa Blvd); however, that is balanced out by this area's sole Freshwater Fail (Rattlesnake Park).

The Lower L.A. River Watershed (subsection of the L.A. River Watershed) is new to the River Report Card program, and our sampling results further illustrate the water quality problems of the L.A. River. Bacteria exceedances were detected in all Lower L.A. River samples collected in summer 2021 except one, and in that instance, only one bacterial parameter was found to be at a safe level. Concentrations of bacteria were often more than ten times higher than the thresholds we use, and one sample had a concentration of *E. coli* higher than our method could detect. This part of the L.A. River Watershed experienced the most fecal pollution by far, and all six sites ended up on the Freshwater Fails list.

The Malibu Creek Watershed struggled with poor water quality in summer 2021. The proportion of Green grades issued to the watershed increased by 14 percentage points from the previous year; however, the proportion of Red grades increased even more, by 23 percentage points. After the Lower L.A. River, Malibu Creek Watershed had the lowest proportion of Green grades and highest proportion of Red grades issued.

Water quality in the Upper L.A. River Watershed remained steady in 2021 compared to the previous year. This watershed has recreation sites located in a wide variety of landscapes so the grade makeup tends to be more mixed. Two of this year's Freshwater Fails are in this watershed, and three slots on our Honor Roll are occupied by Upper L.A. River Watershed sites.

Freshwater Fails

Freshwater Sites With Highest Risk

The Freshwater Fails list is composed of the recreation sites that received the highest percentages of Red grades during the 2021 recreation season (Table 2). Red grades must comprise at least 10% of the grades issued over the summer to make it on the list. This is the first time in the history of the River Report Card that any site has received 100% Red grades, and all of them are in the Lower L.A. River. Tujunga Wash at Hansen Dam had a record high percentage of Red grades as well.

Rank	Site	Watershed	% Red Grades
1-5	L.A. River at Riverfront Park	Lower L.A. River Watershed	100
1-5	L.A. River below the Rio Hondo Confluence	Lower L.A. River Watershed	100
1-5	L.A. River at Hollydale Park	Lower L.A. River Watershed	100
1-5	Compton Creek	Lower L.A. River Watershed	100
1-5	L.A. River below the Compton Creek Confluence	Lower L.A. River Watershed	100
6	Tujunga Wash at Hansen Dam*	Upper L.A. River Watershed	94
7	L.A. River at Willow Street	Lower L.A. River Watershed	92
8	L.A. River at Rattlesnake Park	L.A. River Watershed: Recreation Zones	59
9	Las Virgenes Creek	Malibu Creek Watershed	46
10	Bull Creek*	Upper L.A. River Watershed	44

Table 2: Freshwater recreation sites across L.A. County that received the highest percentages of Red grades from Heal the Bay during the 2021 recreation season. Sites marked with * were graded using only *E. coli* data.

Honor Roll

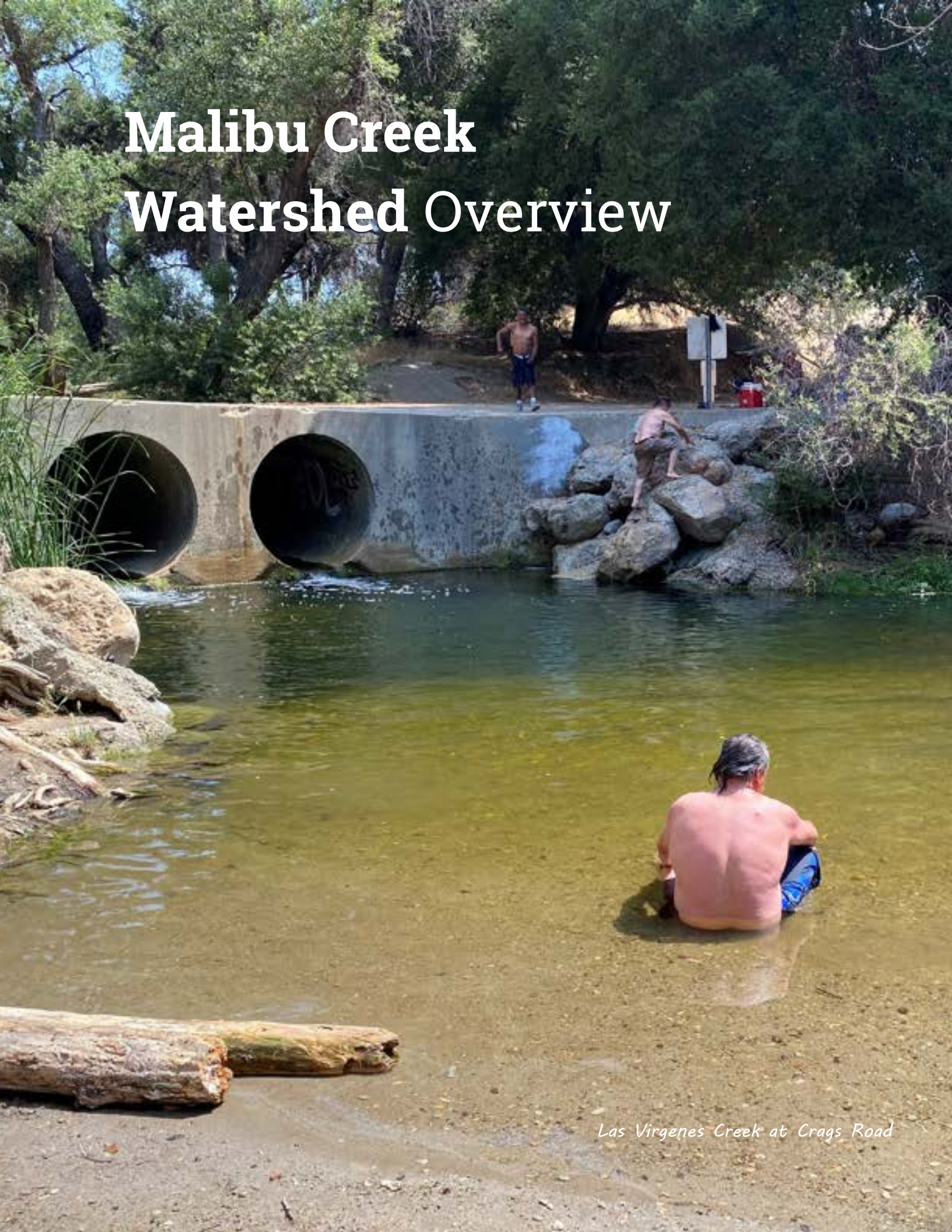
Top 10 Freshwater Sites With Low Risk

The Honor Roll is composed of the 10 freshwater recreation sites with the highest percentages of Green grades issued during the 2021 recreation season. This year, we had a four-way tie for ninth place so there are 12 Honor Roll locations. Eleven out of the 12 sites did not receive a single Red grade in 2021. Similar to previous years, most sites on the list are located in more natural landscapes in the San Gabriel River Watershed and Upper L.A. River Watershed. For a second straight year, a site located in the L.A. River Watershed Recreation Zones has made it on the Honor Roll. We would also like to note that all the sites on our Honor Roll were only monitored for *E. coli* - later in the report we discuss how that may influence grades.

Rank	Site Name	Watershed	% Green
1-7	<i>San Gabriel River East Fork at Cattle Canyon*</i>	<i>San Gabriel River Watershed</i>	100
1-7	<i>San Gabriel River East Fork at Graveyard Canyon*</i>	<i>San Gabriel River Watershed</i>	100
1-7	<i>Eaton Canyon*</i>	<i>Upper L.A. River Watershed</i>	100
1-7	<i>Hansen Dam Lake*</i>	<i>Upper L.A. River Watershed</i>	100
1-7	<i>San Gabriel River Upper East Fork*</i>	<i>San Gabriel River Watershed</i>	100
1-7	<i>San Gabriel River Upper West Fork*</i>	<i>San Gabriel River Watershed</i>	100
1-7	<i>Mill Creek at Hidden Springs*</i>	<i>Upper L.A. River Watershed</i>	100
8	<i>L.A. River at Balboa Blvd*</i>	<i>L.A. River Watershed: Recreation Zones</i>	95
9-10	<i>San Gabriel River Lower West Fork*</i>	<i>San Gabriel River Watershed</i>	92
9-10	<i>San Gabriel River below North and West Forks*</i>	<i>San Gabriel River Watershed</i>	92
9-10	<i>San Gabriel River at Upper Cattle Canyon*</i>	<i>San Gabriel River Watershed</i>	92
9-10	<i>San Gabriel River Upper North Fork*</i>	<i>San Gabriel River Watershed</i>	92

Table 3: Freshwater recreation sites across L.A. County that received the highest percentages of Green grades from Heal the Bay during the 2021 recreation season. Sites marked with * were graded using only *E. coli* data.

Malibu Creek Watershed Overview



Las Virgenes Creek at Craggs Road

Malibu Creek Watershed Overview

Heal the Bay has regularly monitored two recreation sites in the Malibu Creek Watershed since 2014: Malibu Creek at Rock Pool and Las Virgenes Creek at Craggs Road. The sites are swimming holes in Malibu Creek State Park, making them easy to access and popular for recreation. Both sites are listed as impaired for bacteria by the State Water Board and U.S. EPA. The sites' grades are based on two FIB: *E. coli* and *Enterococcus*.

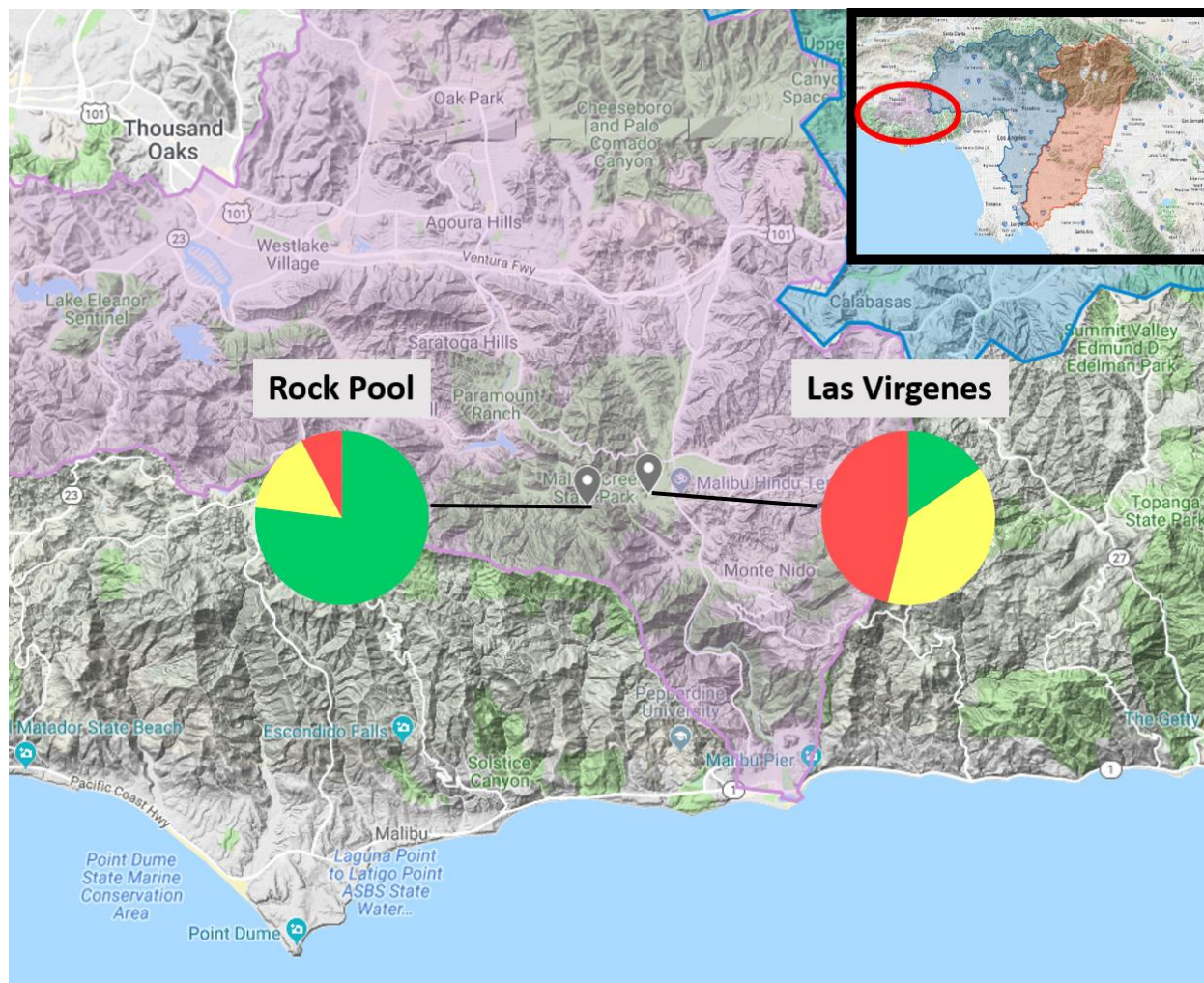


Figure 2: Malibu Creek Watershed grade percentages for the 2021 monitoring season. Water quality grades were calculated using *E. coli* and *Enterococcus* data.

Rock Pool has shown an improvement in grade makeup for a second straight year, and we hope the trend continues. In summer 2021, 77% of its grades were Green, 15% were Yellow, and 8% were Red (Figure 2). The previous year, 64% of this site's grades were Green, and in 2019 only 31% were Green. With the most recent 13 percentage point increase in Green grades, Rock Pool sits above the percentage for the County overall (59%). The bad news is that Rock Pool broke its 4-year streak of not getting any Red grades (Appendices C & D).

Las Virgenes Creek at Craggs Road suffered from poor water quality all summer receiving 15% Green, 38% Yellow, and 46% Red grades (Figure 2). Even though more Green grades

were issued in 2021 compared to 2020, this site saw the largest increase in the percentage of Red grades issued over the previous year (Appendices C & D). Las Virgenes also made it on our Freshwater Fails list at number nine, and the percentage of Green grades issued in 2021 is far below the County's percentage (59%).

San Gabriel River Watershed Overview



San Gabriel River East Fork at Oak Canyon

San Gabriel River Watershed Overview

The San Gabriel River Watershed contains nine popular recreation sites within the Angeles National Forest. Water quality monitoring is conducted by SGRMP, and includes testing for *E. coli* only. While there are many human visitors to these sites, the National Forest has little urban development upstream.

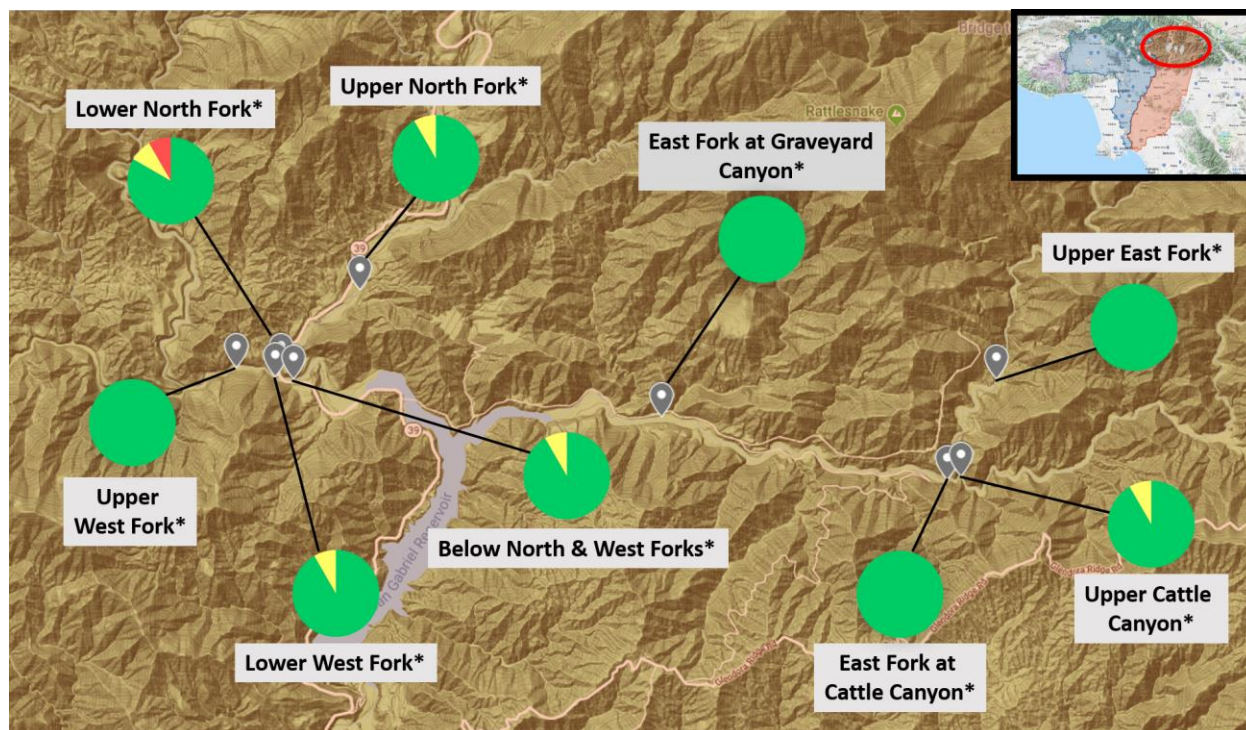


Figure 3: San Gabriel River Watershed grade percentages for the 2021 monitoring season. Sites marked with * were graded using only *E. coli* data.

Four sites from this watershed received 100% Green grades during summer 2021 (Figure 3). East Fork at Graveyard Canyon has not received a Yellow or Red grade for three straight years (Appendices C & D). The Upper East and West Forks of the San Gabriel River improved slightly from 2020 when they each received 94% Green grades. The East Fork at Cattle Canyon showed improvement with a 17 percentage point increase in Green grades compared to last year. All four of these sites made it to the top of our Honor Roll.

The San Gabriel River below the North and West Forks showed a major improvement this year with 92% Green grades and a spot on the Honor Roll (Figure 3). Last year, this site only earned 62% Green grades and appeared on the Freshwater Fails list (Appendices C & D). This site was the first from the San Gabriel River Watershed to end up on the Fails list, but we are pleased to see that it has rebounded. The San Gabriel River below the North and West Forks site had water quality well above the L.A. County grade makeup (59% Green grades), and it is close to the Green grade percentage for the watershed (94% Green grades).

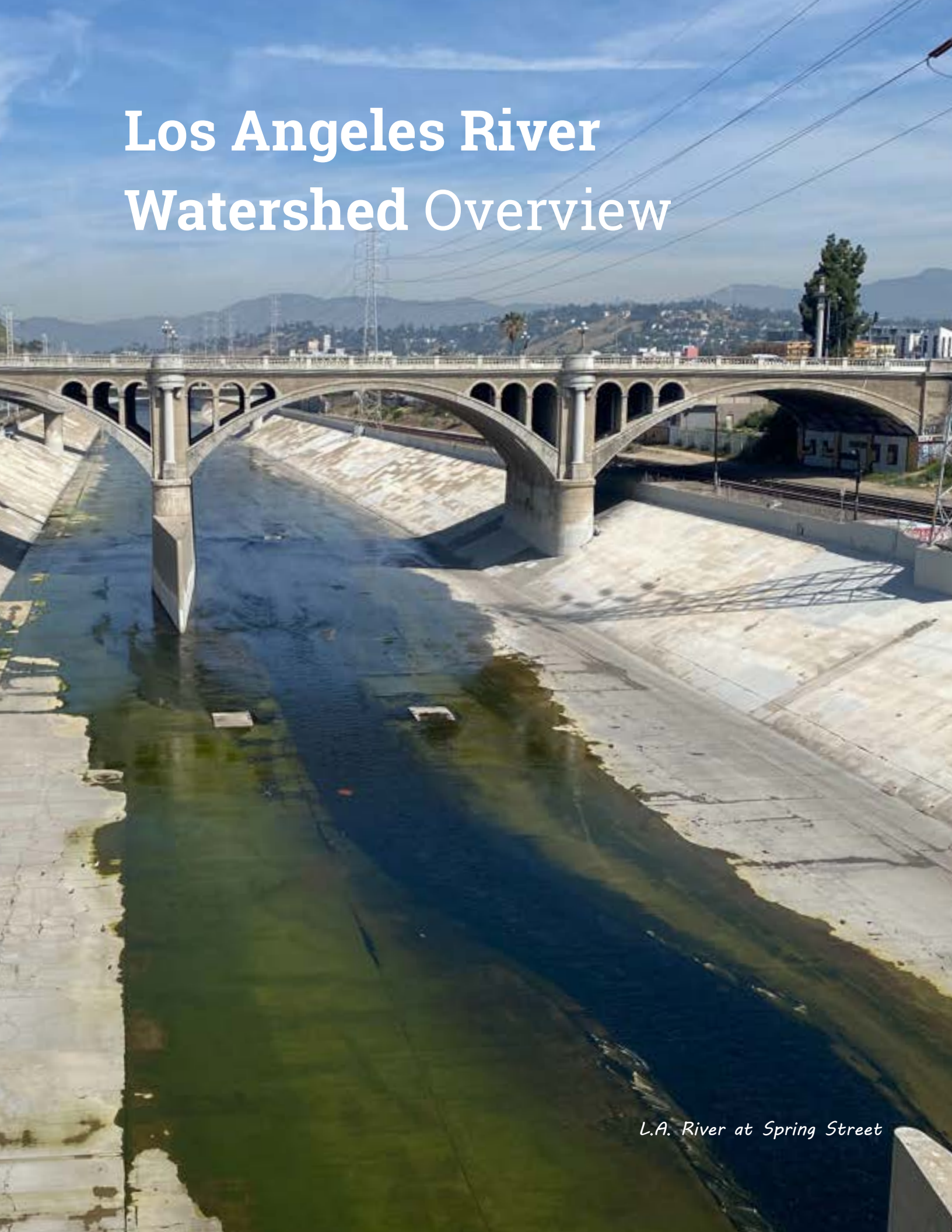
The San Gabriel River at Upper Cattle Canyon made it onto the Honor Roll with 92% Green and 8% Yellow grades (Figure 3). Upper Cattle Canyon received slightly higher marks last year with 93% Green grades (Appendices C & D), but it was nudged off the Honor Roll by higher-scoring locations in 2020. This swimming hole has higher water quality than most sites across the County (59% Green grades).

The San Gabriel River Lower West Fork earned 92% Green grades and 8% Yellow grades in summer 2021. The Lower West Fork is also back on the Honor Roll after a hiatus in 2020. This site experienced a slight uptick in water quality from last year when it earned 88% Green grades (Appendices C & D). Its percentage of Green grades is higher than most other sites across the County (59%) and close to the percentage for the watershed (94%).

The San Gabriel River Upper North Fork received 92% Green and 8% Yellow grades as well as a coveted spot on our Honor Roll (Figure 3). However, this site experienced a decrease in grades from 2020 when 100% of its grades were Green (Appendices C & D). While water quality at this site is still exceptionally good compared to others across L.A. County (59% Green grades), we are hoping it can get back to being an overachiever.

The San Gabriel River Lower North Fork is the only swimming hole in the watershed to not make it onto the Honor Roll. In summer 2021, this site could only muster 83% Green, 8% Yellow, and 8% Red grades (Figure 3). This was a dramatic decrease from 2020 when it received 100% perfect marks. Lower North Fork's percentage of Green grades is higher than most other sites across the County (59%), but it is below the percentage of the watershed (94%).

Los Angeles River Watershed Overview



L.A. River at Spring Street

Upper Los Angeles River Watershed Overview

Eleven swimming sites in the Upper L.A. River Watershed were monitored by LARWMP. These sites are in tributaries of the L.A. River Main Channel, and many of them are within the Angeles National Forest. Grades for these sites are based only on *E. coli*. Hermit Falls and Sturtevant Falls were not monitored in 2021 due to lingering damage from the 2020 Bobcat Fire¹⁰. Millard Campground was not monitored due to low water levels. However, LARWMP added Mill Creek at Hidden Springs to the monitoring program and began sampling Big Tujunga Creek at Delta Flat again after a few summers of no monitoring. LARWMP also continued to monitor Big Tujunga Creek at Vogel Flats, which was added last year.

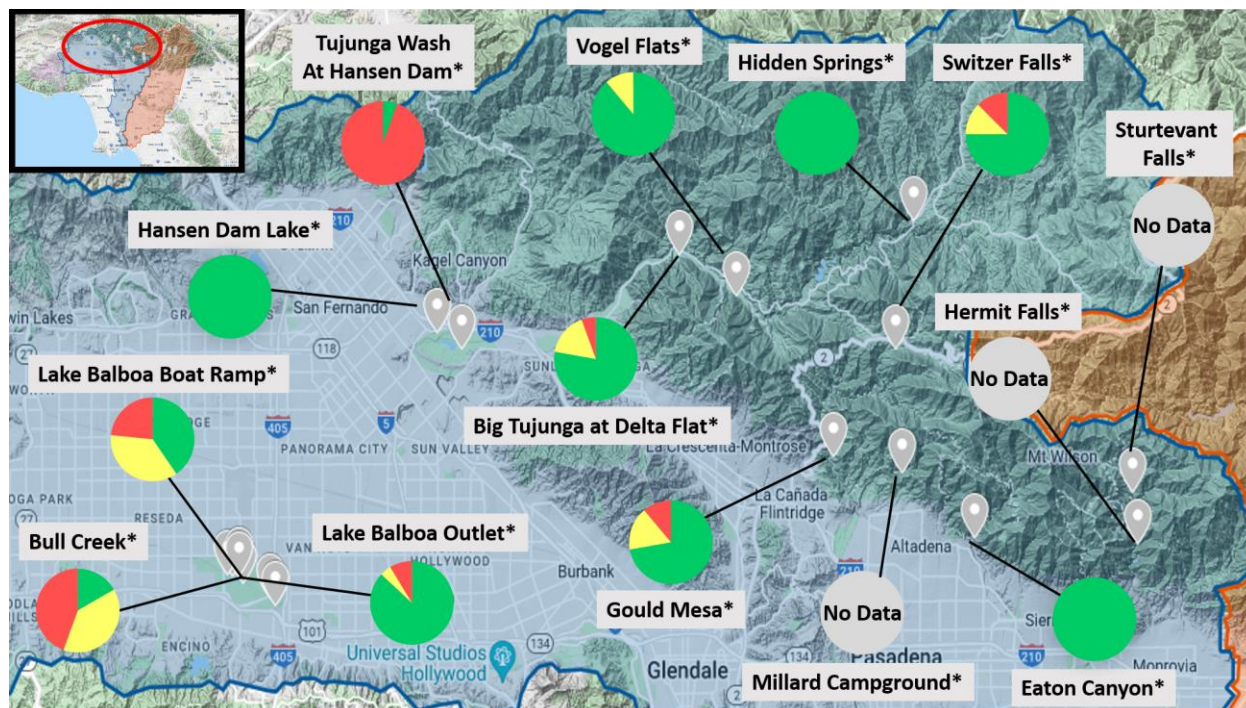


Figure 4: L.A. River Upper Watershed grade percentages for the 2021 monitoring season. Sites marked with * were graded using only *E. coli* data.

Hansen Dam Lake is now on a three-summer-streak of perfect grades and a spot on the Honor Roll (Figure 4; Appendices C & D). Eaton Canyon joins Hansen Dam Lake on the Honor Roll with 100% Green grades. Eaton Canyon improved in water quality from 2020 when 89% of its grades were Green (Appendices C & D). Mill Creek at Hidden Springs is making a tremendous River Report Card debut with 100% Green grades and a place on this year's Honor Roll.

Big Tujunga Creek at Vogel Flats received 89% Green and 11% Yellow grades, which is a decrease from last year when it had 100% Green grades and a spot on the Honor Roll (Figure 4; Appendices C & D). Despite the slump, Vogel Flats still has a higher percentage of Green grades compared to the rest of the Upper Watershed (66%) and the County (59%).

Tujunga Wash at Hansen Dam continued to struggle with water quality in 2021. This site received 94% Red grades, which is a 14 percentage point increase in Red grades from the

¹⁰ <https://inciweb.nwcg.gov/incident/7152/>

previous summer (Figure 4; Appendices C & D). Tujunga Wash at Hansen Dam has been a mainstay on our Freshwater Fails list, and would top the list were it not for the addition of the Lower L.A. River sites this year.

Lake Balboa Boat Ramp received 40% Green grades, 36% Yellow grades, and 23% Red grades in 2021 (Figure 4). The Boat Ramp is off the Freshwater Fails list this year, but only because it was edged out by the Lower L.A. River sites. The Boat Ramp's water quality actually decreased substantially from the previous year when it received 67% Green grades (Appendices C & D).

The Lake Balboa Outlet has shown a marked improvement in water quality with 87% Green grades, 4% Yellow grades, and 9% Red grades (Figure 4). Last year, the Lake Outlet was a Freshwater Fail with 73% Green grades and 13% Red grades (Appendices C & D). In 2021, this site had a higher percentage of Green grades compared to the Upper Watershed (66%) and the County (59%).

Switzer Falls received 75% Green grades, 13% Yellow grades, and 13% Red grades during summer 2021 (Figure 4). This is a slip in water quality from 2020 when 80% of the grades issued were Green (Appendices C & D). Despite the decrease in water quality, Switzer Falls still received more Green grades compared to the Upper Watershed as a whole (66%).

2021 is the third consecutive year that Bull Creek landed on the Freshwater Fails list with only 17% Green grades, 39% Yellow grades, and 44% Red grades (Figure 4). Last year, Bull Creek's percentage of Green grades was actually eight percentage points higher at a still lowly 25% (Appendices C & D).

Gould Mesa Campground experienced a dramatic drop in water quality from the previous year. In 2021, 72% of Gould Mesa's grades were Green, 17% were Yellow, and 11% were Red. In 2020 this site earned perfect marks and a spot on our Honor Roll. Gould Mesa was still issued more Green grades compared to the other sites in the Upper Watershed (66%) and County (59%), but we would like to see water quality improvements next summer.

Big Tujunga Creek at Delta Flat made its return to the River Report Card in 2021 after it went unmonitored for 2 years. It earned 78% Green, 17% Yellow, and 6% Red grades during the summer (Figure 4). In 2018, the last time this site was monitored, Delta Flat earned 100% Green grades so there appears to have been a drop in water quality since then.

Los Angeles River Watershed Recreation Zones Overview

Heal the Bay monitored four sites in the Los Angeles River Watershed Recreation Zones; one site is in the Sepulveda Basin recreation zone and three sites are in the Elysian Valley recreation zone. These sites are kayak entry and exit locations, and were selected as locations where people were most likely to come into contact with the water. Heal the Bay resumed sampling the L.A. River at Benedict St. (formerly named Frogspot) in 2021 as we did not have the capacity to monitor the site in 2020.

The three Elysian Valley sites are also monitored by LASAN as well as three sites in the Sepulveda Basin Recreation Zone in the San Fernando Valley. The grades for sites monitored by Heal the Bay are based on *E. coli* and *Enterococcus*, while the grades for the sites that are only monitored by LASAN are based solely on *E. coli*. For the sites that are monitored by Heal the Bay and LASAN, grades are based on both fecal indicator bacteria, however, samples collected by LASAN were tested only for *E. coli*.

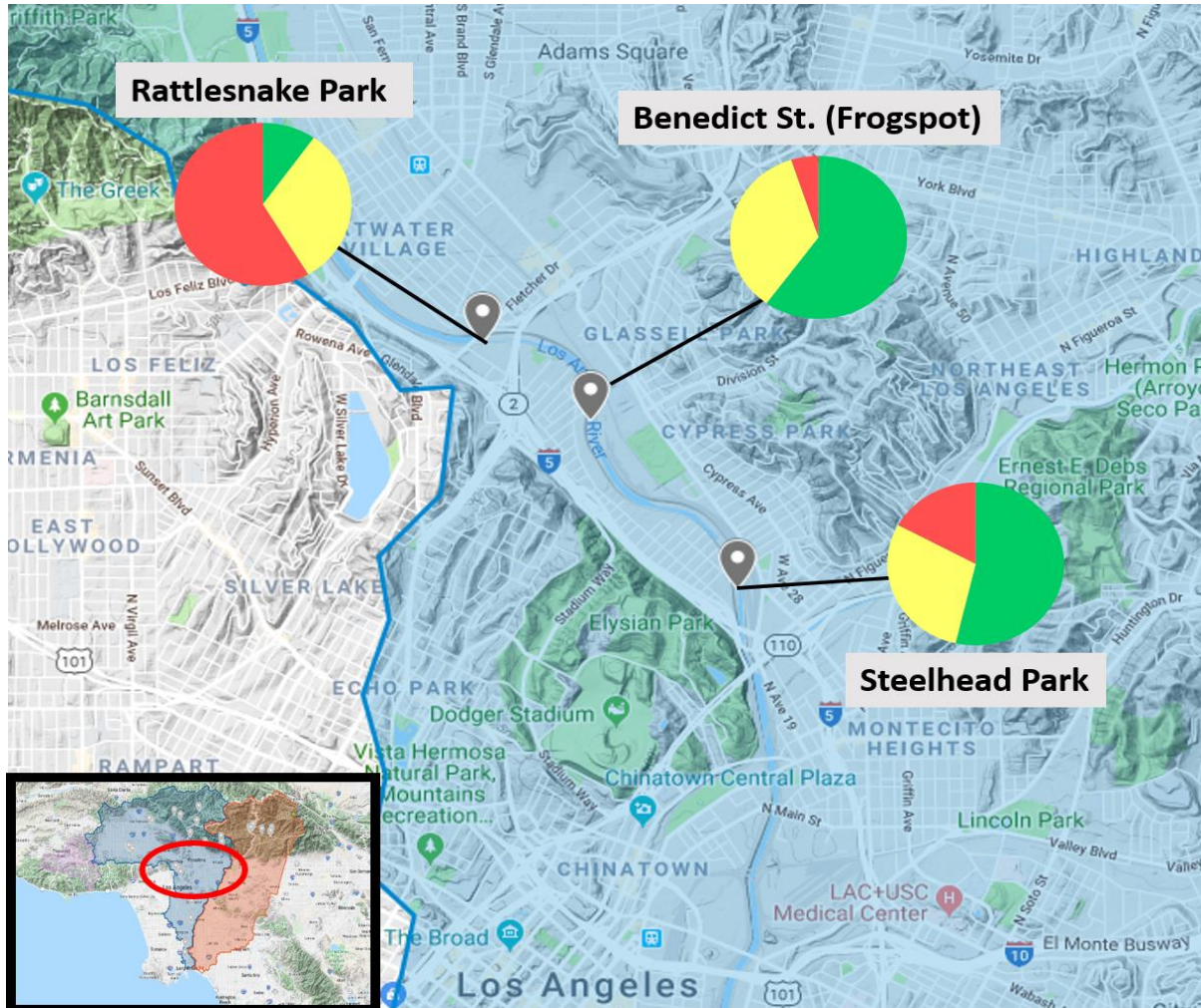


Figure 5: L.A. River Watershed Elysian Valley Recreation Zone grade percentages for the 2021 monitoring season. Water quality grades were calculated using *E. coli* and *Enterococcus* data.

The L.A. River at Rattlesnake Park is yet again a Freshwater Fail after another summer of poor water quality. Only 10% of the grades issued to Rattlesnake Park were Green, and a dismal 59% were Red (Figure 5). Rattlesnake Park earned more Green grades and fewer Red grades in 2020, indicating a decline in water quality (Appendices C & D). This site has now earned Freshwater Fail designation for a fourth consecutive year.

The L.A. River at Benedict St. (formerly named Frogspot) had an underwhelming year in terms of water quality earning 60% Green, 35% Yellow, and 5% Red grades (Figure 5). In summer 2020, all grades issued to this site were Green (Appendices C & D). However, we expected this decrease in grades to occur when we resumed sampling Benedict St. in 2021 because we collect *Enterococcus* and *E. coli* data. *Enterococcus* data can have a dampening impact on grades (see Figure 10 for more details).

The L.A. River at Steelhead Park had a lackluster grade makeup, earning 54% Green grades, 29% Yellow grades, and 17% Red grades (Figure 5). Steelhead Park experienced a 14 percentage point increase in Red grades over the previous year, which is an alarming trend (Appendices C & D). Unfortunately, this site's small proportion of Green grades is on par with the Recreation Zones (55%) and the County (59%).

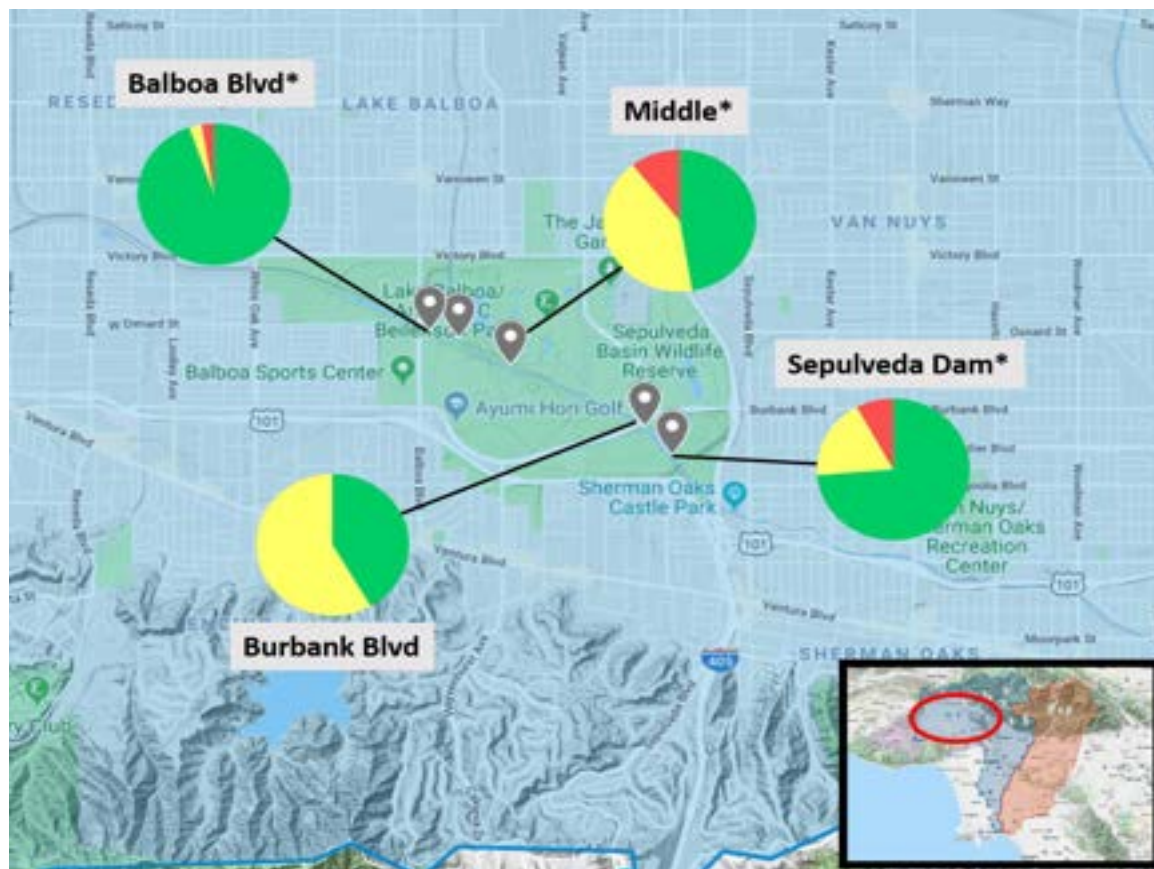


Figure 6: L.A. River Watershed Sepulveda Basin Recreation Zone grade percentages for the 2021 monitoring season. Sites marked with * were graded using only *E. coli* data.

The Sepulveda Basin Recreation Zone site at Balboa Blvd. received stellar marks in 2021 earning 95% Green grades and the number eight spot on our Honor Roll (Figure 6). This

site underwent a 17 percentage point increase in Green grades from 2020 (Appendices C & D). This now the second year in a row where an L.A. River Recreation Zone location has made it on the Honor Roll.

The L.A. River at the Middle of the Sepulveda Basin Recreation Zone did not appear on this year's Freshwater Fails list as it did last year, but its water quality struggles continued in 2021. Only 47% of the grades issued in 2021 were Green; meanwhile, 42% were Yellow, and 11% were Red. This site had more Green and more Red grades in 2020 so it is difficult to discern an improvement or decline in water quality (Appendices C & D).

The L.A. River at Burbank Blvd. received 42% Green grades, 58% Yellow grades, and zero Red grades, which is an improvement over last year (Figure 6). While this location has a long way to go in terms of improving water quality, it has experienced an increase in grades for a second straight year. The percentage of Green grades at Burbank Blvd. sits below the percentage for the Recreation Zones (55%) and the County (59%).

The L.A. River at Sepulveda Dam (downstream from the kayak zone) earned 74% Green, 18% Yellow, and 8% Red grades in 2021 (Figure 6). Unfortunately, there was a decrease in water quality at this site from the previous year when it earned 89% Green grades (Appendices C & D). Despite the decrease in water quality, Sepulveda Dam still earned more Green grades than the Recreation Zones (55%) and County (59%) as a whole.

Lower Los Angeles River Watershed Overview

2021 was Heal the Bay's first year sampling the lower portion of the L.A. River (south of Downtown Los Angeles). A total of six sites were sampled and analyzed for bacteria: L.A. River at Riverfront Park, L.A. River below the Rio Hondo Confluence, L.A. River at Hollydale Park, Compton Creek, L.A. River below the Compton Creek Confluence, and L.A. River at Willow Street. These sites are located near parks, wildlife viewing areas, and proposed revitalization projects. All six sites have a concrete river bed (with the exception of Compton Creek) and banks, and are not officially designated for recreational use. However, runners, walkers, horseback riders, and cyclists were often spotted in the channel and on the adjacent path. Various types of wildlife were also observed throughout the summer including birds, rabbits, squirrels, turtles, and dragonflies.

While recreation, such as kayaking, is not allowed in the Lower L.A. River, there are numerous projects that would increase river access (e.g. Urban Orchard project, Parque Dos Rios, SELA Cultural Center) as well as studies (e.g. State Water Board L.A. River Flows Study) being conducted and planned in the area. Therefore, there is a need for public water quality information and a greater understanding of water quality issues as more changes occur in and around the L.A. River channel.

We are excited to have these locations added to our report card; however, we are dismayed by the hazardous water quality conditions we found throughout the summer. Bacteria concentrations exceeded standards in all of the samples we collected at each site (with the exception of two instances), and concentrations at these sites were the highest in L.A. County (Figure 7). This may be because the Lower L.A. River is at the end of the watershed's drainage area. Pollution from most of the 870-square-mile watershed¹¹ makes its way to the lower watershed. We also found higher turbidity levels at Lower L.A. River sites, which have been found to be correlated with bacteria^{12,13}. However, more research is needed to determine that the lower portion of the River is more heavily polluted than the upper reaches and why.

¹¹ <https://www.epa.gov/urbanwaterspartners/urban-waters-and-los-angeles-river-watershed-california>

¹² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8389397/>

¹³ <https://pubs.er.usgs.gov/publication/sir20095192>

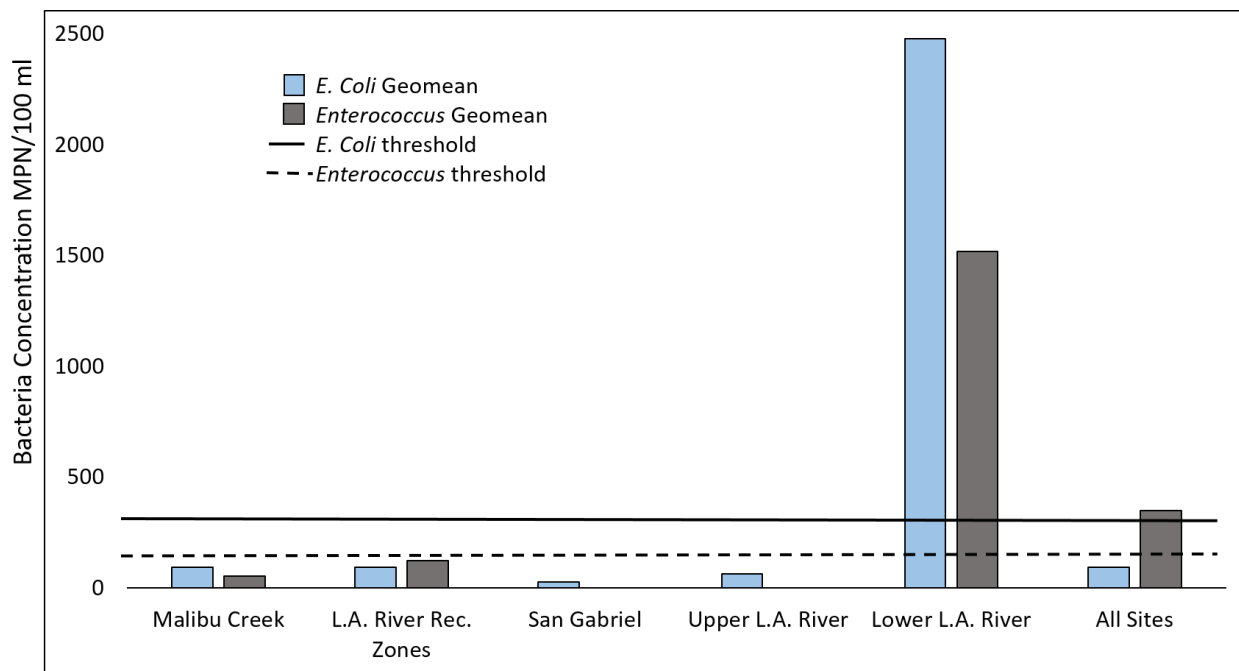


Figure 7: Comparison of summer 2021 geometric means for *E. coli* and *Enterococcus* in each watershed/zone. Horizontal lines represent the geometric mean thresholds used in the River Report Card methodology.

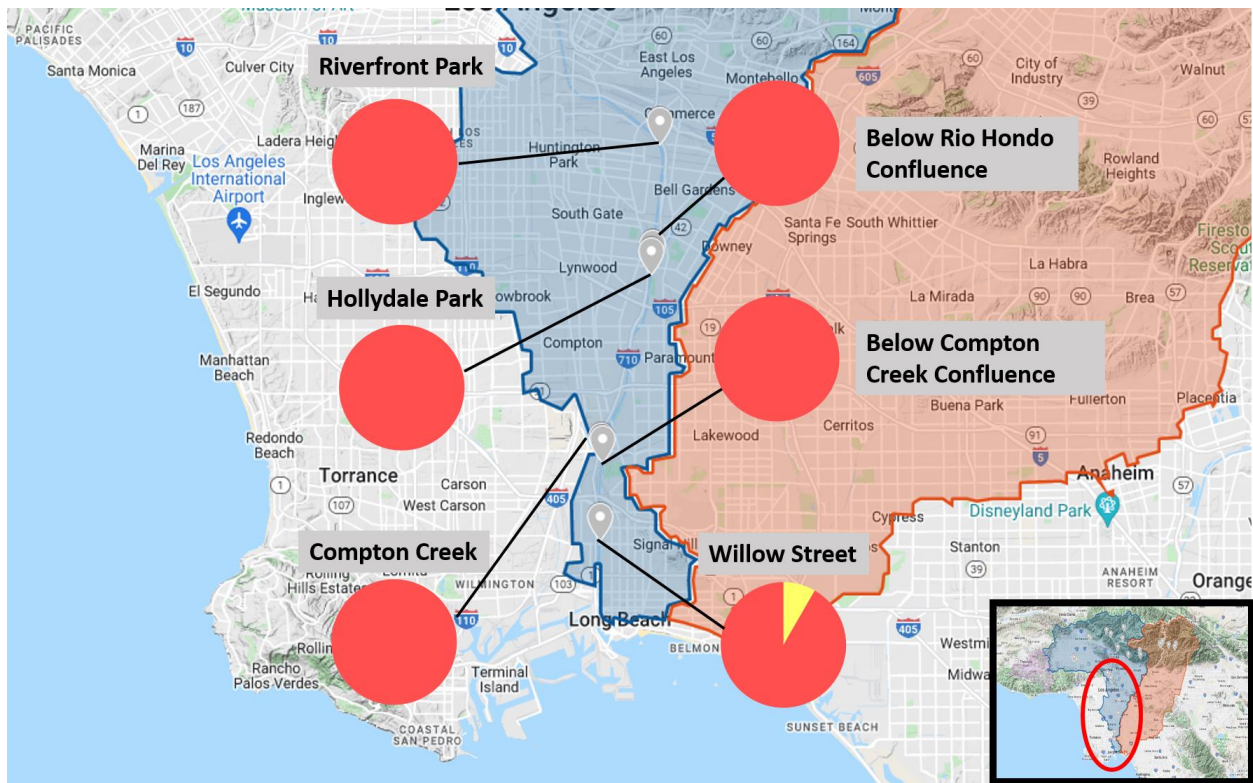


Figure 8: Lower L.A. River Watershed grade percentages for the 2021 monitoring season. Water quality grades were calculated using *E. coli* and *Enterococcus* data.

The L.A. River at Riverfront Park is south of Downtown Los Angeles in Maywood. Bacteria concentrations at this site were thousands of units above the thresholds each time we

monitored, indicating an extremely unsafe level of fecal pollution (Appendices C & D). This site received 100% Red grades (Figure 8).

The L.A. River below the Rio Hondo Confluence is a site in South Gate where the Rio Hondo flows into the L.A. River. All grades issued at this site were Red because bacteria concentrations exceeded thresholds by thousands of units (Figure 8; Appendices C & D). Only one sample from the summer indicated safe levels of *Enterococcus*; however, *E. coli* levels in that same sample were extremely elevated and it still received a Red grade.

The L.A. River at Hollydale Park is also located in South Gate, and it is not far downstream from the Rio Hondo Confluence sample location. High concentrations of fecal pollution were detected at this site all summer resulting in 100% Red grades (Figure 8; Appendices C & D).

We collected samples from Compton Creek several hundred yards upstream from its confluence with the L.A. River in Long Beach. Compton Creek has a soft bottom and therefore supports vegetation similar to the Recreation Zones of the L.A. River. Unfortunately, the water quality of this vegetated creek was much higher than the L.A. River Recreation Zones. We measured unsafe levels of bacteria in every sample, and 100% of this site's grades were Red in 2021 (Figure 8; Appendices C & D).

The L.A. River below the Compton Creek Confluence is located in Long Beach near the Dominguez Gap Wetlands. Our samples were collected downstream from where Compton Creek flows into the L.A. River. This location earned 100% Red grades in 2021 (Figure 8). As with the other Lower L.A. River sites, bacteria concentrations were far higher than the thresholds (Appendices C & D).

The L.A. River at Willow Street in Long Beach is the southernmost section of the L.A. River that is freshwater. South of Willow Street, the River mixes with ocean water creating the L.A. River Estuary. Willow Street had the best water quality in the Lower L.A. River, though still very poor, with high bacteria concentrations and 92% Red grades, and 8% Yellow grades (Figure 8, Appendices C & D).

Los Angeles River Watershed Storm Drain Outfalls Overview

Beginning in 2017, Heal the Bay investigated sources of bacterial pollution impacting the Recreation Zones in the L.A. River by monitoring storm drain outfalls in the Elysian Valley Recreation Zone (Appendix B). Typically, we monitor 10-15 storm drains in the Elysian Valley (Figure 9); however, we were only able to monitor one during 2020 and 2021. The COVID-19 pandemic limited our ability to hire staff to conduct the storm drain monitoring. The one storm drain we monitored is located at Fletcher Dr. directly adjacent to Rattlesnake Park. We compared bacteria levels to the single sample thresholds in Table 1 even though these values are typically only used for ambient water quality and not outfalls. Although, it should be noted that ocean outfalls are monitored in California where storm drain runoff mixes with ocean water, and those sites must adhere to the state bacteria standards.

The Fletcher storm drain had a substantial amount of flow reaching the main channel of the L.A. River each day it was monitored. There were no rain events that can account for this flow so the water is likely originating from human activities. The water flowing from the storm drain was often filled with trash and smelled of sewage. *E. coli* levels exceeded standards in 87% of samples, and nine of those samples exceeded standards by an order of magnitude (10 times the limit). *Enterococcus* standards were exceeded in 100% of samples collected, and the lowest concentration observed was 2282 MPN/100ml, which is 21 times higher than the single sample standard. Unfortunately, these results are not out of the ordinary for storm drains in the L.A. River. We have consistently observed dangerously high levels of bacteria flowing into the River from storm drains (Appendices B and J).

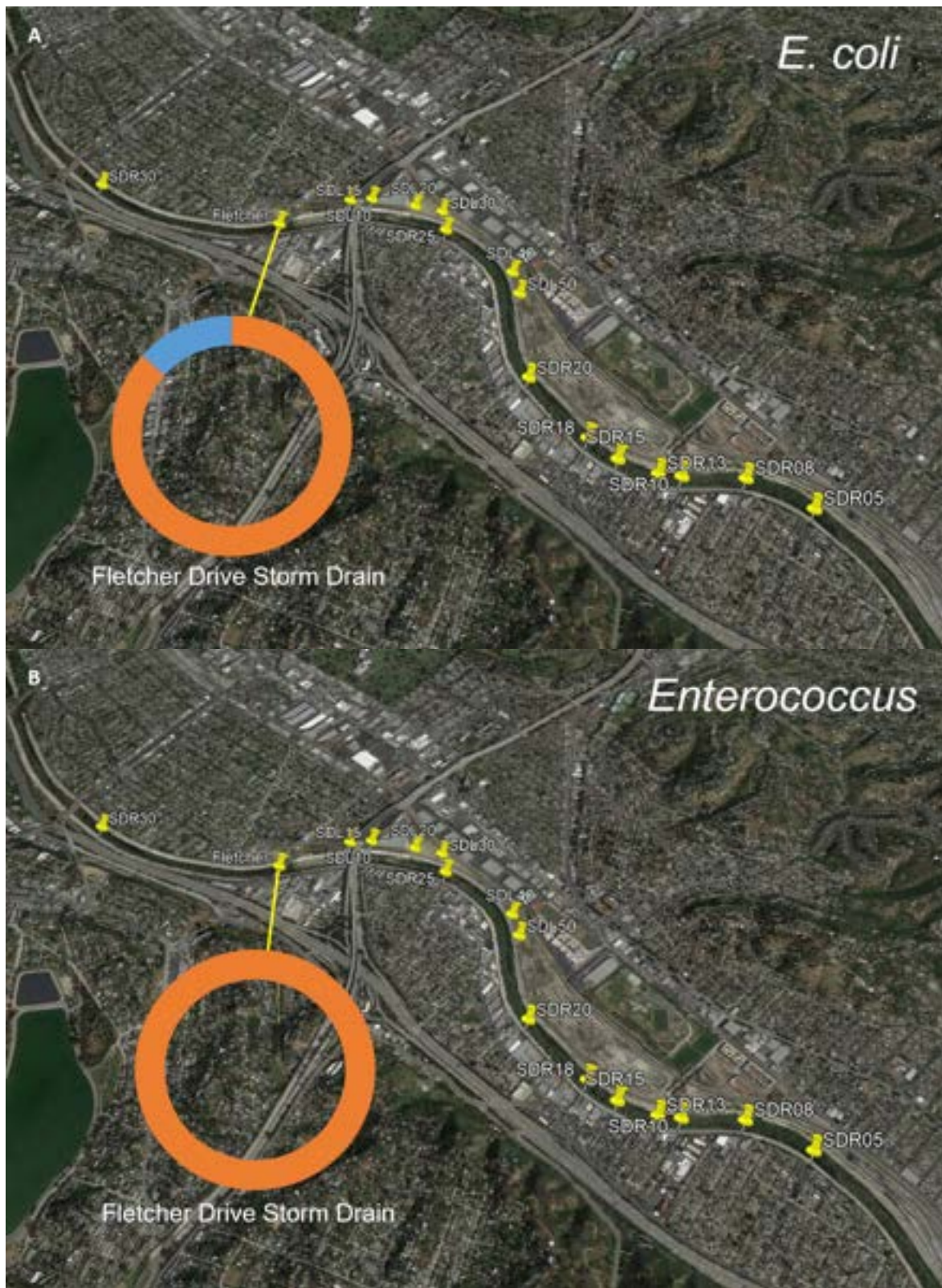


Figure 9: Rates of fecal indicator bacteria exceedances at the Fletcher Drive storm drain outfall in the Elysian Valley Recreation Zone of the L.A. River. Samples were collected in Summer 2021. The pie charts show the percentage of samples that exceeded single sample thresholds in orange and the percentages of samples that did not exceed single sample thresholds in blue. Heal the Bay collected 15 samples from this storm drain during summer 2021. Storm drains sampled in previous years are also shown on the maps.

Conclusions

Most water quality grades are Green in natural environments and Yellow or Red in developed areas.

Across L.A. County, there is a low risk of illness when coming into contact with the water about 59% of the time. Unfortunately, there is a risk of getting sick from water contact about 41% of the time during dry weather. To protect public health in these valuable recreational areas, government agencies must increase water quality monitoring and public notification while improving water quality at these sites (see the River News section for more information).

Areas surrounded by urban development and concrete (particularly the Lower L.A. River) tended to have lower grades than more natural areas, and most sites on the Freshwater Fails list are in urban landscapes (Table 2). The sites in the Lower L.A. River Watershed are primarily surrounded by development and have a concrete bottom (with the exception of Compton Creek), and these sites tend to have lower grades than the others in this report. This pattern is also supported by our previous storm drain outfall monitoring in the L.A. River Watershed Elysian Valley Recreation Zone; we have found that many storm drains in urban landscapes flow consistently in dry weather and contribute high levels of bacteria into the L.A. River, acting as sources of contamination.

Many of L.A. County's waterways and riparian corridors are used for shelter and basic needs such as washing by people experiencing homelessness. With no or limited access to clean water, sanitation, and health care, this community can be disproportionately affected by poor water quality. Providing shelter, clean water, and restrooms to the houseless community will help keep this community safe. Recent research has shown that homeless encampments were not a significant source of fecal pollution in San Diego area waterways¹⁴.

Sites in the San Gabriel River Watershed and a portion of the Upper L.A. River Watershed sites are in less developed areas, and consequently, are less impacted by urban runoff. Therefore, sites in these watersheds tend to have better water quality. This is reflected in our Honor Roll where most sites on the list are in natural mountainous landscapes. In urban areas, water runoff flows over the hard, impervious surfaces like concrete and asphalt picking up contaminants before entering a storm drain or waterway. In natural landscapes, water runoff soaks into the soil and plant roots which filter contaminants before that water flows into rivers and streams.

¹⁴ https://mladenov.weebly.com/uploads/2/0/0/7/2007542/sdsu_final_report.pdf

There are differences between *E. coli* and *Enterococcus*.

Grades that included *Enterococcus* as an indicator were generally lower than grades with only *E. coli*, and caution should be used when directly comparing grades for sites using different fecal indicator bacteria. For sites where we had both *Enterococcus* and *E. coli* data, we graded both indicators and found that grades worsened with both indicators compared to when we graded with *E. coli* only. This is due to the higher exceedance rate for *Enterococcus* we observed in the data. Figure 10 provides an example of how grade composition changes at one monitoring location depending on the FIB used in the grade. There are twelve sites where we have both *E. coli* and *Enterococcus* data.

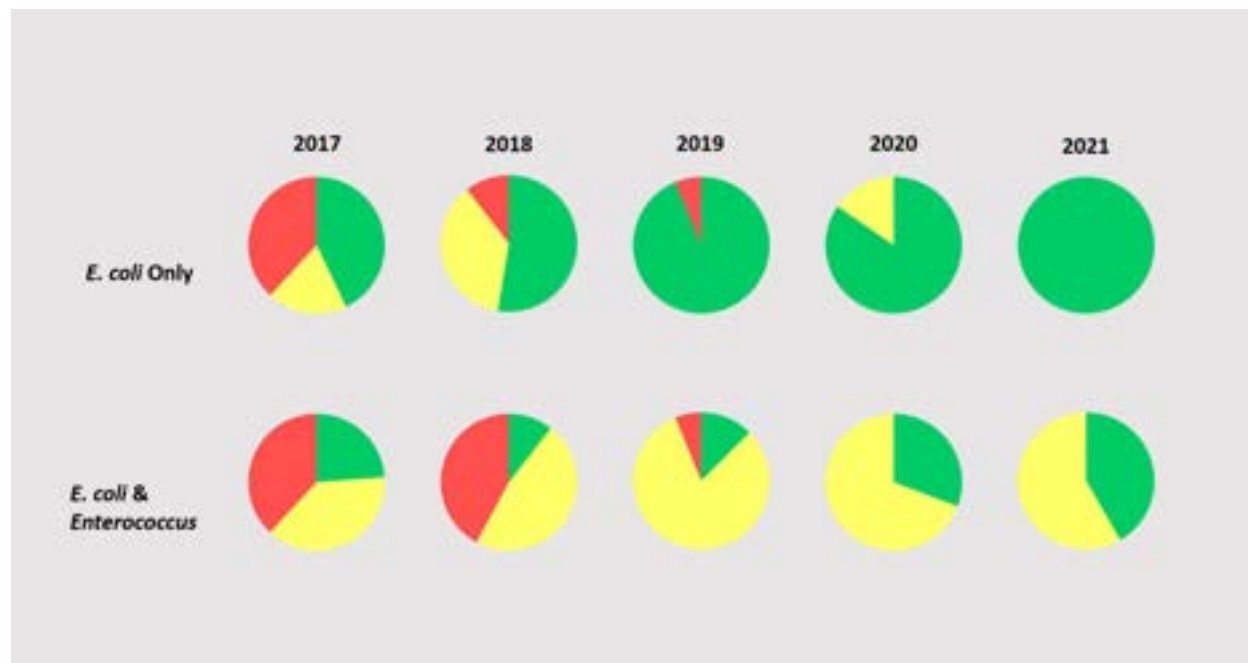


Figure 10: Differences in grade composition between *E. coli* only data and *E. coli* & *Enterococcus* combined data for the L.A. River at Burbank Blvd. site for the past 5 summers.

However, the disparity in grade composition is only present at some of our monitoring locations. The sites in the Lower L.A. River experienced high *E. coli* and *Enterococcus* concentrations simultaneously so their grades remained the same when *Enterococcus* was removed from the grading equation (Figure 11). While *E. coli* and *Enterococcus* concentrations appear to be strongly correlated in the Lower L.A. River, we have found that some sites experience more exceedances of one bacteria over the other (33% of exceedance events in 2021 included an exceedance of just one indicator). Conversely, 66% of bacteria exceedances happened simultaneously. Consequently, monitoring for only one bacteria can put the public at unnecessary risk because harmful water quality captured by the other indicator may go undetected. Monitoring both indicator bacteria would also help ensure the public is protected across different geographical areas.



Figure 11: Differences in grade composition between *E. coli* only data and *E. coli* & *Enterococcus* combined data for the Lower L.A. River sites in summer 2021.

River News

Assembly Bill 1066

In October 2021, California Governor Gavin Newsom signed Assembly Bill 1066 into law. The bill, authored by Assemblymember Bloom and sponsored by Heal the Bay, tasks the California Water Quality Monitoring Council with defining and identifying high-priority freshwater recreation sites across the state, and recommending an appropriate monitoring program. AB 1066 is a critical first step in establishing a monitoring and public notification mandate, similar to the mandate of AB 411 for ocean beaches, to achieve public health protections for freshwater. Heal the Bay will support implementation of AB 1066, and advocate for further legislation requiring monitoring and public advisories for freshwater recreation areas.

In their report due by July 2023, the Council is compiling and analyzing existing information on freshwater recreation sites across California, existing water quality data, and proposed criteria for defining how monitored areas are prioritized such as frequency of use and equity-based metrics. Right now, the Council is identifying experts and stakeholders that will assist with defining recreation sites and drafting monitoring program recommendations.

River Report Card Program Update

Our current River Report Card method relies on binary assessments of water quality data where each parameter either exceeds or does not exceed an objective. A sample that is slightly higher than the objective is treated the same as a sample that is much higher than the objective. We are currently developing a new methodology with the assistance of a group of water quality experts to create a grade that more accurately conveys a range of illness risks. We also plan to consider weighting the different parameters and utilize letter grades, similar to our Beach Report Card. The water quality standards used in our grading method also need to be reassessed. We hope to implement the new methodology by Summer 2023.

LA River Flows

Historically, the water in the L.A. River came from rainfall and groundwater upwelling in the Glendale Narrows as well as tributaries that flow into the River. While that remains the case today, despite significant alterations to natural processes, wastewater is now the dominant source of water in the main channel of the river during dry weather. The Tillman Water Reclamation Plant in Van Nuys and the Los Angeles-Glendale Water Reclamation Plant near Griffith Park both discharge treated wastewater into the L.A. River on a daily basis. Although this water originated from toilets, sinks, and drains, it is relatively free of contaminants like fecal matter.

In light of the recent long-term drought conditions in California and the ongoing climate crisis, wastewater managers in L.A. are rethinking the practice of discharging treated

wastewater into the L.A. River. That wastewater is an asset and can be recycled or reused, which would result in improved water resilience in times of drought and sustainable local water. However, the reduction of wastewater discharges into the river poses a potential problem for the river ecosystem that has come to rely on that water source and has implications for water quality as well. The State Water Board and other stakeholders established the L.A. River Flows Project¹⁵ to evaluate the environmental and recreational impacts of reducing wastewater discharge into the L.A. River. The goal is to assess and make recommendations on flow regimes that will support a healthy river ecosystem, allow for recreation opportunities, and promote water resilience. Heal the Bay served as a member of the Technical Advisory Committee as well as part of the Stakeholder Working Group.

The Flows Project concluded in January 2022. In conjunction with the Southern California Coastal Water Research Project (SCCWRP), the Flows Project developed a tool¹⁶ that will help wastewater dischargers identify the amount of water that can be recycled while supporting ecosystem and recreational needs.

Water Quality Improvement Work

In addition to the River Report Card and ensuring that the public is aware of good and bad water quality, Heal the Bay is actively working to keep pollution from even entering our waterways. We are working on the following water quality improvement efforts throughout L.A. County:

The Municipal Separate Storm Sewer System (MS4) Phase 1 Permit:

The California State Water Resources Control Board and the Regional Water Quality Control Board issue permits to government entities (cities, towns, counties, etc.) who operate both sewage and stormwater systems. The permits that specifically address the stormwater system are called Municipal Separate Storm Sewer System (MS4) Permits, and L.A. County has had an MS4 Permit since 1990. The permit system was created to help regulate the amount of stormwater pollution that permittees were putting into the environment and ensure pollution discharges decreased over time. Unfortunately, there has been a lack of accountability in the MS4 Permit program which has allowed permittees to fall behind schedule in reducing pollution discharges. To change this trajectory, Heal the Bay launched the Take L.A. by Storm campaign in July 2020 to provide support for environmental advocates to engage in the MS4 permit process and hold pollutant dischargers accountable. The Regional Water Quality Control Board voted in Summer 2021 to approve a Regional MS4 Permit that included the same loopholes that made the 2012 MS4 Permit so ineffective, even after dozens of community members asked them directly for clean water and more accountability. Some improvements were made to increase transparency; however, without enforcement by the Board, there is no accountability for polluters. Heal the Bay will continue to engage with the Regional Board

¹⁵ https://www.waterboards.ca.gov/water_issues/programs/larflows.html

¹⁶ <https://la-river-eflows-study-2021-sccwrp.hub.arcgis.com/>

and their staff, as well as with the Take L.A. By Storm community to create accountability and push for a decrease in stormwater pollution across the region.

Federal TMDL deadlines and requirements:

Under the Clean Water Act of 1972, some polluted waterbodies have limits on the amount of pollution that can be discharged into them. These limits are called Total Maximum Daily Loads (TMDLs), and they are defined as the maximum amount of pollution that a waterbody can handle before people get sick or aquatic life is harmed. There are 59 TMDLs in the Los Angeles Region for various contaminants (e.g. trash, bacteria) polluting our rivers, lakes, and coastal waters. These TMDLs have deadlines that were set decades ago with lengthy timelines that gave dischargers many years (in some cases *nearly 20 years*) to achieve these pollution limits. Unfortunately, permittees are far behind schedule in reducing pollution discharges, as Heal the Bay reported back in 2019 in our Stormwater Report¹⁷. Last year, the L.A. Regional Water Board confirmed this trend of very slow progress, reporting that only 6.6% of required pollution reduction projects were completed in the assessed areas. On March 11, 2021, the L.A. Regional Water Board voted to extend nine water quality deadlines for these assessed areas, which were set decades ago to improve water quality and protect the health of our communities and our ecosystems. These TMDLs and their associated deadlines are the basis for water quality regulation and protection, and therefore are essential to the protection of public and environmental health. To ensure that everyone has access to clean and safe water as well as a healthy environment to live in, dischargers must be held accountable to reducing pollution discharges by the current deadlines without receiving additional extensions. One of Heal the Bay's priorities for this year is to maintain existing deadlines, and hold accountable the polluters who do not meet federal water quality requirements by the time those deadlines pass.

Measure W: Safe, Clean Water Program

The Los Angeles County Board of Supervisors approved over \$623 million in new investments for 77 projects under Measure W (the Safe Clean Water Program or SCWP¹⁸) to date. The nine Watershed Area Steering Committees (WASCs), which each include five community representatives, have been working for three years to determine where and how funds should be spent.

Heal the Bay, as a core team member of the OurWaterLA Coalition, has been involved in this program since its inception. We have engaged with the public and met with County staff as part of the OurWaterLA Coalition to help ensure that the goals of the Program are met, while our former President and CEO, Shelley Luce, oversaw progress as Co-Chair of the Regional Oversight Committee. Heal the Bay is the Watershed Coordinator for the South Santa Monica Bay and Central Santa Monica Bay. We continue to lead public engagement efforts in these areas for the Safe, Clean Water Program, and coordinate across the County with all 12 Watershed Coordinators.

¹⁷ <https://healthebay.org/wp-content/uploads/2019/12/Stormwater-Report-FINAL.pdf>

¹⁸ <https://safecleanwaterla.org/>

L.A. River Planning Revitalization

The effort by L.A. County to add parks and other projects to the L.A. River corridor has taken several major steps forward since the last River Report Card. The County just addressed public comments on the first draft of the L.A. River Master Plan¹⁹ (LARMP), and the L.A. County Board of Supervisors voted to adopt the final draft of the LARMP in June 2022.

As members of the LARMP steering committee, Heal the Bay strongly advocated for improved water quality and ecological health in the L.A. River in addition to more inclusion of Indigenous and environmental justice voices in the steering committee. Unfortunately, L.A. County failed to consider our input, and we are concerned that the LARMP will have an overall negative impact on the health of the L.A. River and surrounding communities. Heal the Bay, in partnership with seven other environmental and community groups, formally asked for our names to be removed from the final LARMP as a Steering Committee member, since we did not feel that our input was adequately included and we were not supportive of the final Plan.

Inell Woods Park

Heal the Bay is committed to improving water quality in Los Angeles County's watersheds through the creation of more green space. In addition to providing recreation areas and wildlife habitat, green spaces can also function as essential multi-benefit stormwater solutions. They improve local water quality, increase water reuse and supply, reduce carbon, and mitigate the urban heat island effect. An example is Inell Woods Park²⁰, a new community-designed, multi-benefit green space coming to South L.A. this year. Heal the Bay is building Inell Woods stormwater park in collaboration with L.A. City Councilman Curren Price Jr. and community members to capture, treat, and reuse urban runoff and provide green space and recreation to the community. Multi-benefit projects like this are an efficient and effective use of our taxpayer dollars that serve both community and environmental needs.

¹⁹ <https://larivermasterplan.org/>

²⁰ <https://healthebay.org/inell-woods-park-open-house-event/>

Staying Safe

The Centers for Disease Control and Prevention (CDC) have not found evidence that COVID-19 can spread through recreational water²¹. However, there are still some COVID-19 and fecal pollution safety precautions to take before heading out. Heal the Bay has the following recommendations for the public.

1. Get a COVID-19 vaccine and booster as soon as possible and follow all local pandemic-related regulations²².
2. Check Heal the Bay's River Report Card before visiting your favorite recreation area. Please be advised that not all recreation areas are monitored for water quality. If you don't see a grade for your location on our website, check the local health authority's website, Swim Guide²³, or the Blue Water Task Force²⁴. If you still can't find water quality information, ensure you avoid swimming near any storm drains.
3. If the water quality is shown to be poor or unknown, consider choosing a site with good water quality.
4. If poor water quality is unavoidable, limit contact with the water, refrain from submerging your head, avoid hand-to-face water contact, and wash off after contact using soap and water.
5. Avoid entering the water after significant rainfall in the last 72 hours as it poses a flood risk and significantly lowers water quality to harmful levels.
6. People who are immunocompromised or anyone with an open wound should avoid entering the water, particularly when water quality is poor.
7. Follow all posted signage at recreation sites. Please note that swimming is prohibited in the L.A. River main channel.

²¹ https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fphp%2Fwater.html

²² <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/visitors.html>

²³ <https://www.theswimguide.org/>

²⁴ <https://bwtf.surfrider.org/>

Acknowledgements

We would like to thank current and former Heal the Bay staff who have contributed to this project and report, including: Dr. Shelley Luce, Dr. Katherine Pease, Delaney Alamillo, Talia Walsh, Gabriele Morgan, and many more. Heal the Bay staff responsible for conducting monitoring included: Dr. Alison Xunyi Wu, Blaire Edwards, Alex Alonso, Michelle Allen, Jason Camorlinga, Sarah Kambli, Sarah Valencia, Melisa Zelaya, Jasmine Sandoval, Monet Pedrazzini, Emely Garcia, and Lucy Rieves. We would like to thank Dr. Varenka Lorenzi, Dr. Christine Whitcraft, and other California State University Long Beach staff who provided us with the opportunity to expand our program to the Lower L.A. River. While our partnership with Los Angeles Trade Technical College was put on hold in summer 2021, this program would not be possible without support from the school, and we would especially like to thank Manuel Robles and Dr. Rachael Harper Delupio. We appreciate the advice and resources from Erick Burres and the Clean Water Team. We thank California State Parks and Santa Monica Mountains National Recreation Area for access to water sampling locations. Finally, the funding that made this project possible came from the Garfield Foundation, Watershed Conservation Authority, Rivers and Mountains Conservancy, and Environment Now.

2021 Annual River Report Card

Report Research and Copy: Luke Ginger, Sarah Kambli, Sarah Valencia, Melisa Zelaya, Jasmine Sandoval, Monet Pedrazzini

Data Compilation and Analysis: Luke Ginger, Blaire Edwards, Alison Xunyi Wu, Sarah Kambli, Sarah Valencia, Melisa Zelaya, Jasmine Sandoval, Monet Pedrazzini

Copy Editors: Katherine Pease, Shelley Luce, Talia Walsh, Bria Royal

Photography: Heal the Bay Staff & credited on photo

Design: Bria Royal

Appendices

Dig deeper into the River Report Card by accessing our appendices. Available at: https://healthebay.org/wp-content/uploads/2022/06/RRC-2021-All-Appendices_Final.pdf