

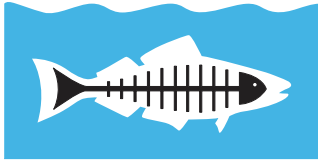


Heal the Bay



*2022* **River  
Report Card**





**Heal the Bay**

**2022**

# **River Report Card**

We would like to acknowledge that Heal the Bay is located on the traditional lands of the Tongva and Chumash People and pay our respects to elders past, present, and emerging.

Heal the Bay is an environmental non-profit dedicated to making the coastal waters and watersheds of Greater Los Angeles safe, healthy and clean. To fulfill our mission, we use science, education, community action, and advocacy.

The River Report Card program is funded by a grant from Environment Now.

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The River Report Card is a service mark of Heal the Bay.

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 policies to protect public health and the environment.

**Cover: Karen Tapia collecting a sample in the L.A. River**

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L.A. River at Rattlesnake Park

# EXECUTIVE SUMMARY

**Heal the Bay is proud to release the fifth annual River Report Card. This report provides a summary of recreational water quality trends for summer 2022 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.

Highlights from the 2022 Report include:

- The River Report Card will look different yet familiar moving forward. With the guidance of water quality experts, we have updated our grading methodology. Report Card users will now see letter grades (A–F) on our website similar to the Beach Report Card.
- Across all 35 sites and all dates graded throughout summer 2022, 65% of grades were Green (indicating no water quality health risks); 15% were Yellow (moderate health risk), and 19% were Red (high health risk). This was an improvement from the previous year.

- Eight monitoring locations did not experience a single bacteria exceedance in summer 2022. 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 in the Lower L.A. River were often 10 times higher than anywhere else in the County.
- Tujunga Wash at Hansen Dam unfortunately experienced its worst year since the start of the River Report Card. This site is the first one outside the Lower L.A. River to receive 100% Red grades.
- Bull Creek and the Lake Balboa Boat Ramp are representing the San Fernando Valley on this year's Freshwater Fails list.
- Las Virgenes Creek at Craggs Road in Malibu Creek State Park made it back on the Freshwater Fails list this year after not receiving a single Green grade during summer 2022.
- 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, which is a major source of pollution.

2022 was a big year for the River Report Card program because we took steps to grow our program. In 2020 and 2021, we had to conduct our monitoring at a reduced capacity due to the COVID-19 pandemic. With health restrictions finally lifted, we were able to hire 10 local college and university students to conduct monitoring, which is the most we have ever hired for the program in a single summer. We were also happy to be back on Los Angeles Trade Technical College's

(LATTTC) campus in 2022, bringing the number of labs our team worked out of to three (another record). A larger crew in 2022 also meant we could continue monitoring storm drains along the Elysian Valley of the L.A. River, which we were not able to do for two summers. The River Report Card is bigger than ever, and we continue to look for ways to grow the program.

Heal the Bay is encouraged to see that the California Water Resources Control Board (State Board) is taking steps to recognize Tribal beneficial uses of waterways across the state.<sup>1</sup> A "beneficial use" is a designation for a body of water that typically carries with it certain water quality or physical requirements. Some designations are based on how people use a body of water, which can include fishing, swimming, boating, and other cultural ceremonies. The State Board has already identified beneficial uses unique to Indigenous people living in California and on Tribal lands. The next step is for the nine Regional Water Quality Control Boards (Regional Boards) to recognize these beneficial uses and the waterways they apply to. Once Tribal beneficial uses are recognized by the Regional Boards, they can set water quality objectives relevant to those uses. In 2022, the Los Angeles Regional Board adopted definitions of Tribal beneficial uses into the region's Basin Plan, which is a plan designed to protect and improve water quality and beneficial uses in waterways throughout the region.<sup>2,3</sup> The next step is to identify waterways that are used by Indigenous communities and put water quality protections in place. This is a major and long overdue update to California's water quality regulations as it will finally protect Indigenous communities from harmful pollution.

1 [https://www.waterboards.ca.gov/tribal\\_affairs/beneficial\\_uses.html#:~:text=Tribal%20Beneficial%20Uses%20are%20a,as%20cultural%20uses%20of%20water](https://www.waterboards.ca.gov/tribal_affairs/beneficial_uses.html#:~:text=Tribal%20Beneficial%20Uses%20are%20a,as%20cultural%20uses%20of%20water)

2 [https://www.waterboards.ca.gov/tribal\\_affairs/beneficial\\_uses.html](https://www.waterboards.ca.gov/tribal_affairs/beneficial_uses.html)

3 [https://www.waterboards.ca.gov/losangeles/water\\_issues/programs/basin\\_plan/](https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/)



# INTRODUCTION



**Heal the Bay is proud to release the fifth annual River Report Card. This report summarizes recreational water quality trends for summer 2022 at Los Angeles (L.A.) County's freshwater recreation sites.**

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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 was a big year for the River Report Card program because we were able to take steps to grow our program. In 2020 and 2021, we had to conduct our monitoring at a reduced capacity due to the COVID-19 pandemic. With health restrictions finally lifted, we were able to hire 10 local college and university students to conduct monitoring, which is the most we have ever hired for the program in a single summer. We were also happy to be back on Los Angeles Trade Technical College's (LATTC) campus in 2022, bringing the number of labs our team worked out of to three (another record). A larger crew in 2022 also meant we could continue monitoring storm drains along the Elysian Valley of the L.A. River, which we were not able to do for two summers. The River Report Card is bigger than ever, and we continue to look for ways to grow the program.

River Report Card users can expect to see some major differences starting in summer 2023. Heal the Bay has completed a project to update our grading methodology. We developed this new methodology with the guidance of a group of water quality experts. The result is a grade that is able to convey more water quality information than our previous grades and uses the most up-to-date water quality objectives. The grades we issue will now be A-F letters like the Beach

Report Card, which will create continuity between the two report cards. We are excited to unveil the new methodology this summer on our River Report Card website, and we are certain it will be more informative for users.

Heal the Bay is encouraged to see that the California Water Resources Control Board (State Board) is taking steps to recognize Tribal beneficial uses of waterways across the state.<sup>4</sup> A "beneficial use" is a designation for a body of water that typically carries with it certain water quality or physical requirements. Some designations are based on how people use a body of water, which can include fishing, swimming, boating, and other cultural ceremonies. The State Board has already identified beneficial uses unique to Indigenous people living in California and on Tribal lands. The next step is for the nine Regional Water Quality Control Boards (Regional Boards) to recognize these beneficial uses and the waterways they apply to. Once Tribal beneficial uses are recognized by the Regional Boards, they can set water quality objectives relevant to those uses. In 2022, the Los Angeles Regional Board adopted definitions of Tribal beneficial uses into the region's Basin Plan, which is a plan designed to protect and improve water quality and beneficial uses in waterways throughout the region.<sup>5,6</sup> The next step is to identify waterways that are used by Indigenous communities and put water quality protections in place. This is a major and long overdue update to California's water quality regulations as it will finally protect Indigenous communities from harmful pollution.

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<sup>4</sup> [https://www.waterboards.ca.gov/tribal\\_affairs/beneficial\\_uses.html#:~:text=Tribal%20Beneficial%20Uses%20are%20a,as%20cultural%20uses%20of%20water](https://www.waterboards.ca.gov/tribal_affairs/beneficial_uses.html#:~:text=Tribal%20Beneficial%20Uses%20are%20a,as%20cultural%20uses%20of%20water)

<sup>5</sup> [https://www.waterboards.ca.gov/tribal\\_affairs/beneficial\\_uses.html](https://www.waterboards.ca.gov/tribal_affairs/beneficial_uses.html)

<sup>6</sup> [https://www.waterboards.ca.gov/losangeles/water\\_issues/programs/basin\\_plan/](https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/)

# 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.**

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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 report because of the negative impact that 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)<sup>7</sup> 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).<sup>8</sup> Data have been collected by these groups for many years and were made public in a timely manner starting in 2017 in the L.A. River Watershed and in 2018 for 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

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<sup>7</sup> <https://www.watershedhealth.org/larwmp>

<sup>8</sup> <http://sgrrmp.org/>





L.A. River at Sepulveda Basin

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 C.

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 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).

**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.**

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

<sup>a</sup> These 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>

<sup>b</sup> This 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.

<sup>c</sup> Value is derived from the U.S. EPA. 2012 Recreational Water Quality Criteria for an illness rate of 36/1000 people.

<sup>d</sup> The 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 freshwater.<sup>9</sup> 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 have recently updated our grading methodology, which we will implement in summer 2023.

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.

## Freshwater Fails & Honor Roll

The Freshwater Fails list is composed of the 10 recreation sites that received the highest percentages of Red grades during the 2022 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 Values,<sup>10</sup> and is a threshold commonly used for Clean Water Act 303(d) listing decisions.<sup>11</sup> The Honor Roll is composed of the 10 freshwater recreation sites with the highest percentages of Green grades issued during the 2022 recreation season.



L.A. River at Sepulveda Basin

## 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 Appendix B) to analyze water quality changes over time.

<sup>9</sup> <https://www.waterboards.ca.gov/bacterialobjectives/>

<sup>10</sup> <https://www.waterboards.ca.gov/bacterialobjectives/docs/bacteria.pdf>

<sup>11</sup> [https://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/resolutions/2015/020315\\_8\\_amendment\\_clean\\_version.pdf](https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2015/020315_8_amendment_clean_version.pdf)





# REPORT CARD SUMMARY



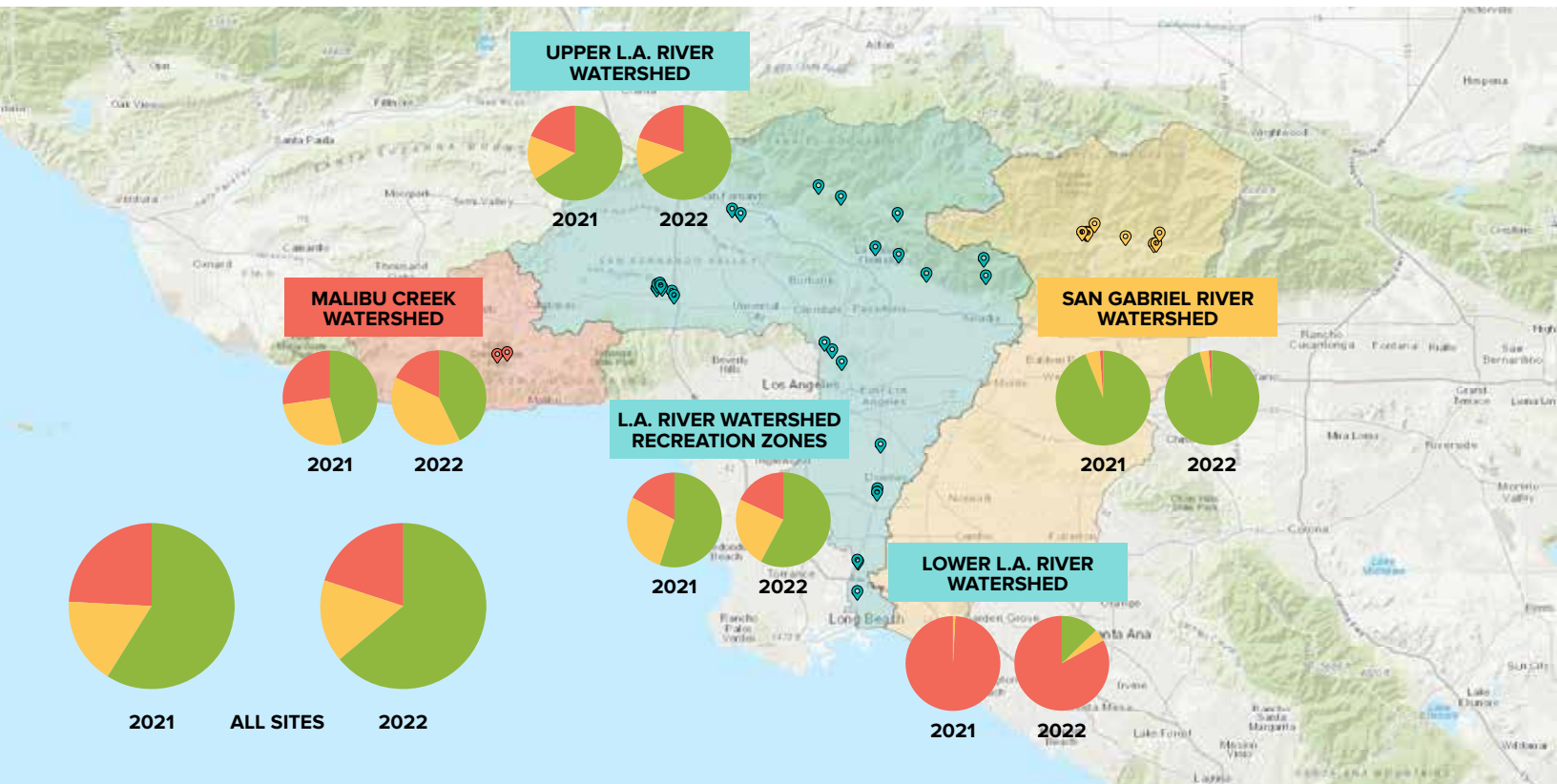


FIGURE 1. 2021 and 2022 water quality grade percentages for monitoring sites in L.A. County, Malibu Creek Watershed, L.A. River Watershed Recreation Zones, Upper L.A. River Watershed, Lower L.A. River Watershed, and San Gabriel River Watershed. Percentages of Green, Yellow, and Red grades are shown for each area and year.

# LOS ANGELES COUNTY OVERVIEW

Across all 35 sites graded over the course of summer 2022, 65% of the grades we issued were Green, 15% were Yellow, and 19% were Red (Figure 1).

Sites in the L.A. River Watershed Recreation Zones received 58% Green, 24% Yellow, and 18% Red grades. The San Gabriel River Watershed had 96% Green, 3% Yellow, and 1% Red grades. The Upper L.A. River Watershed Sites had 68% Green, 13% Yellow, and 20% Red grades. Malibu Creek Watershed sites received 43% Green, 39% Yellow, and 18% Red grades in 2022 (Figure 1). Sites in the lower L.A. River Watershed received 13% Green, 4% Yellow, and 83% Red grades.

Overall, water quality across L.A. County improved slightly in 2022 compared to the previous summer. There were more Green grades issued across the County and an overall decrease in Red grades calculated. Across L.A. County, 15 sites showed an improvement in water quality from 2021 to 2022; 11 sites experienced a decrease in the amount of Green grades issued; and three sites experienced an increase in the percentage of Green and Red grades





Lake Balboa / Upper Los Angeles River Watershed

simultaneously (Appendix B). Six sites remained unchanged from 2021 to 2022 — four of those had 100% Green grades both years, and two had 100% Red grades both years.

Recreation sites in the San Gabriel River Watershed earned the highest amount of Green grades and the lowest amount of Red grades across L.A. County. This Watershed had a very slight uptick in water quality from 2021 when it received more Yellow grades. Six Honor Roll sites are located in this Watershed, and five of them had 100% Green grades.

Water quality in the Upper L.A. River Watershed did not change much in 2022. There was a slight uptick in the number of Green grades, but that was accompanied by a similar increase in Red grades. This watershed has recreation sites located in a wide variety of landscapes so the grade makeup tends to be more mixed. This watershed includes three of this year's Freshwater Fails and four of this year's Honor Roll sites.

The L.A. River Watershed Recreation Zones experienced an increase in the proportion of Green grades issued and a similar increase in the proportion

of Red grades issued. Unfortunately, there were no Honor Roll sites from this watershed in 2022. Rattlesnake Park did not make the Freshwater Fails list this year, but it was on the cusp.

The Lower L.A. River Watershed (subsection of the L.A. River Watershed) was added to our report last year. Consistent with what we saw in 2021, this area had the highest bacteria exceedance rate receiving 83% Red grades in 2022. However, that is an improvement over last year when we issued 99% Red grades. For the first time, we issued a handful of Green grades to this section of the L.A. River. While that is promising to see, all six sites still ended up on our Freshwater Fails list so there is clearly a chronic fecal pollution problem in the Lower L.A. River.

The Malibu Creek Watershed continued to struggle with water quality in 2022. After the Lower L.A. River, Malibu Creek Watershed had the lowest proportion of Green grades (43%). The proportion of Green grades issued in the watershed decreased by three percentage points from the previous year, however, that was offset by a nine percentage point decrease in Red Grades. Therefore, it is difficult to conclude if water quality got better or worse.

# FRESHWATER FAILS



## Freshwater Sites With Highest Health Risk

The Freshwater Fails list is composed of the 10 recreation sites that received the highest percentages of Red grades during the 2022 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 year, we have a three-way tie for the number one spot because three sites received 100% Red grades. The Fails list is dominated by Lower L.A. River Watershed sites for a second straight year.

**TABLE 2. Freshwater recreation sites across L.A. County that received the highest percentages of Red grades from Heal the Bay during the 2022 recreation season. Sites marked with \* were graded using only *E. coli* data.**

Rank	Site	Watershed	% Red Grades
1-3	L.A. River at Riverfront Park	Lower L.A. River Watershed	100
1-3	Compton Creek	Lower L.A. River Watershed	100
1-3	Tujunga Wash at Hansen Dam*	Upper L.A. River Watershed	100
4	L.A. River below the Rio Hondo Confluence	Lower L.A. River Watershed	83
5	L.A. River at Willow Street	Lower L.A. River Watershed	75
6	L.A. River at Hollydale Park	Lower L.A. River Watershed	71
7	L.A. River below the Compton Creek Confluence	Lower L.A. River Watershed	67
8	Bull Creek*	Upper L.A. River Watershed	45
9	Lake Balboa Boat Ramp*	Upper L.A. River Watershed	39
10	Las Virgenes Creek	Malibu Creek Watershed	36



# HONOR ROLL



## Top 10 Freshwater Sites With Lowest Health Risk

The Honor Roll is composed of the 10 freshwater recreation sites with the highest percentages of Green grades issued during the 2022 recreation season. This year, we had an eight-way tie for first place because there were eight sites with 100% Green grades. 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. 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.

**TABLE 3. Freshwater recreation sites across L.A. County that received the highest percentages of Green grades from Heal the Bay during the 2022 recreation season. Sites marked with \* were graded using only *E. coli* data.**

Rank	Site Name	Watershed	% Green
1-8	San Gabriel River Upper Cattle Canyon*	San Gabriel River Watershed	100
1-8	San Gabriel River East Fork at Graveyard Canyon*	San Gabriel River Watershed	100
1-8	Hansen Dam Lake*	Upper L.A. River Watershed	100
1-8	San Gabriel River Upper East Fork*	San Gabriel River Watershed	100
1-8	San Gabriel River Upper West Fork*	San Gabriel River Watershed	100
1-8	Big Tujunga Creek at Vogel Flats*	Upper L.A. River Watershed	100
1-8	Big Tujunga Creek at Delta Flats*	Upper L.A. River Watershed	100
1-8	San Gabriel River Lower West Fork*	San Gabriel River Watershed	100
9	Eaton Canyon*	Upper L.A. River Watershed	95
10	San Gabriel River Upper North Fork*	San Gabriel River Watershed	94

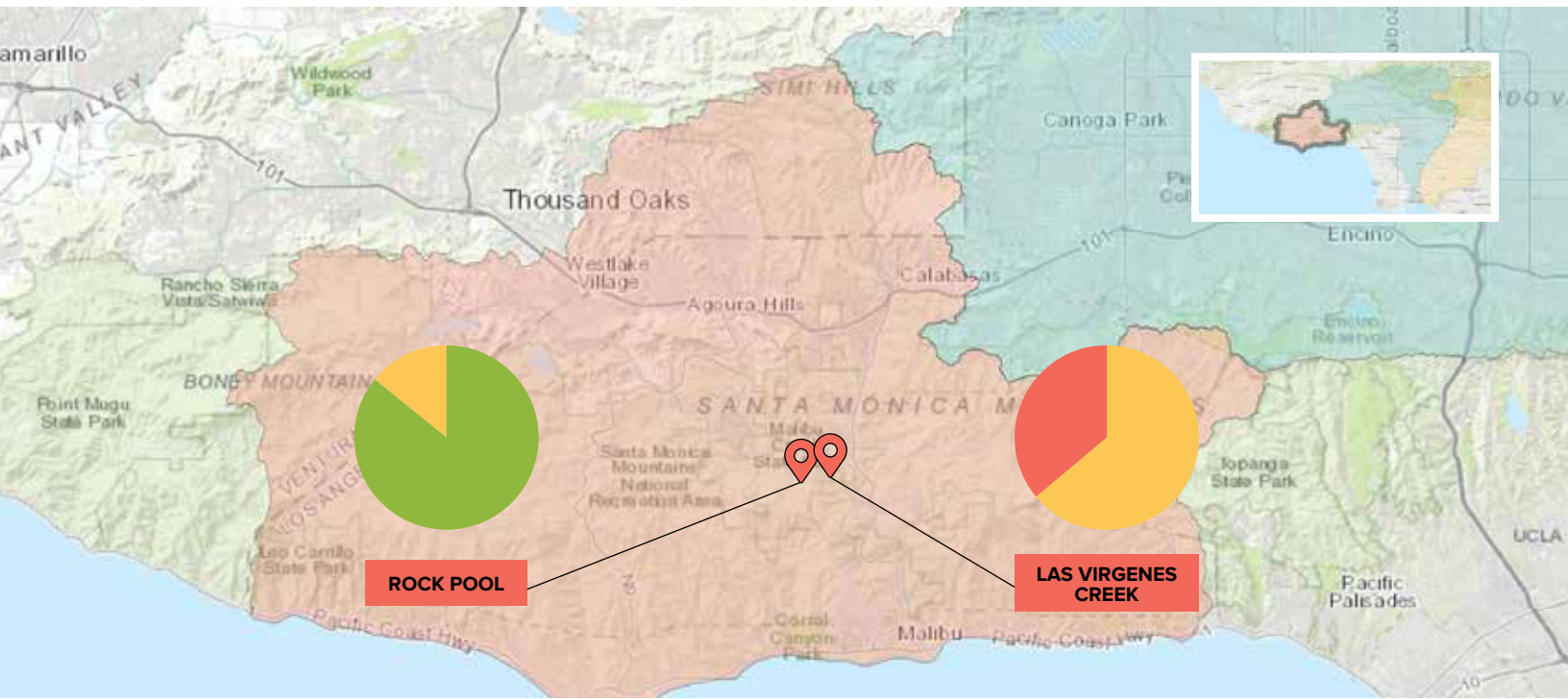


FIGURE 2. Malibu Creek Watershed grade percentages for the 2022 monitoring season. Water quality grades were calculated using *E. coli* and *Enterococcus* data.

# 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*.

Rock Pool has continued to improve in water quality for a fourth straight year (Appendix B). This site did not receive a single Red grade in summer 2022, and Rock Pool’s percentage of Green grades improved to 86%

(Figure 2). With the most recent nine percentage point increase in Green grades, Rock Pool sits above the percentage for the County overall (65%).

Las Virgenes Creek at Craggs Road made it back on the Freshwater Fails list this year after not receiving a single Green grade during summer 2022 (Figure 2). While its percentage of Red grades was down compared to 2021, it also experienced a 15 percentage point decline in Green grades issued (Appendix B). Las Virgenes Creek is the only Fail outside the top three to have 0% Green grades in 2022.



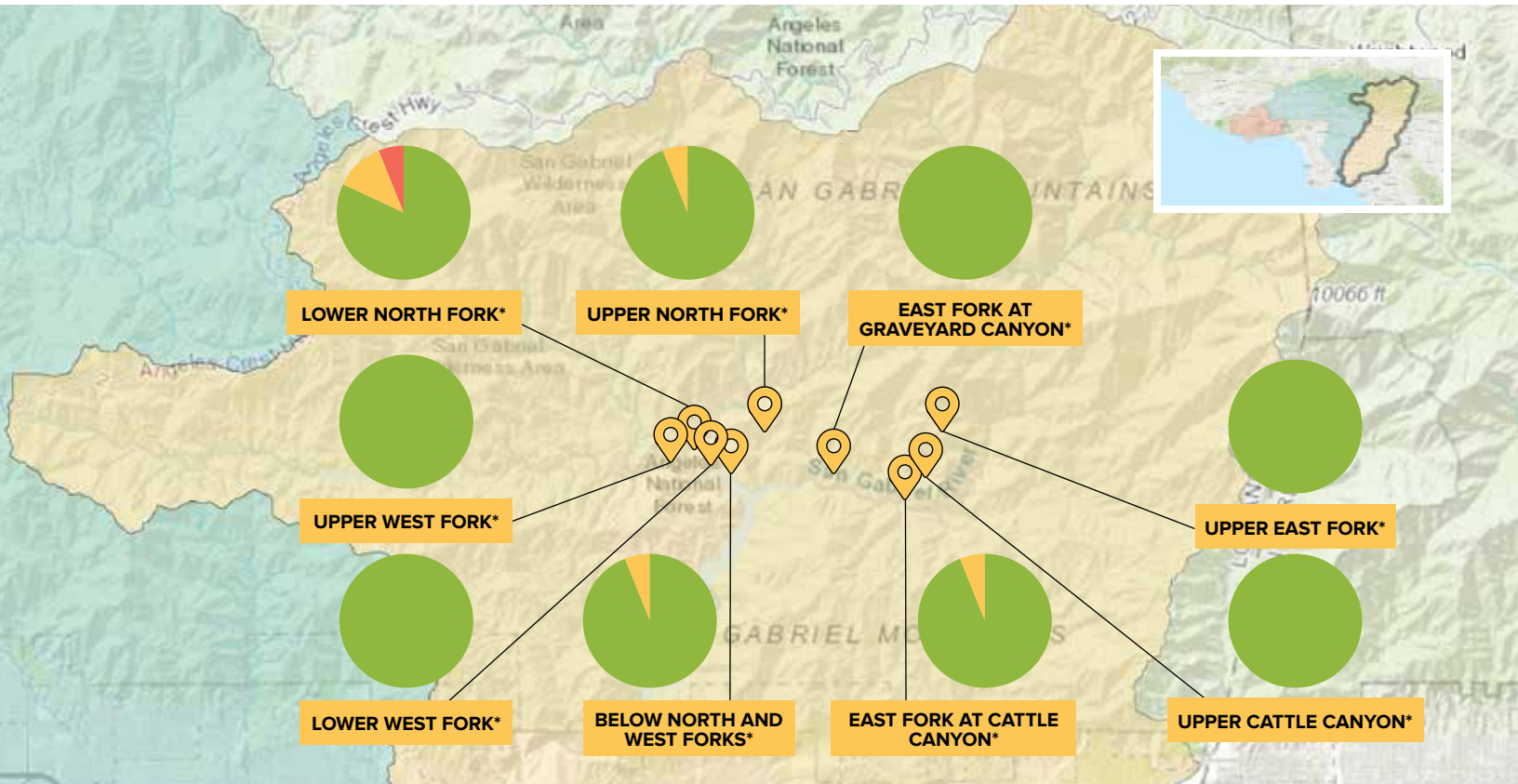


FIGURE 3. San Gabriel River Watershed grade percentages for the 2022 monitoring season. Sites marked with \* were graded using only *E. coli* data.

# 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 the SGRRMP,<sup>12</sup> and includes testing for *E. coli* only. While there are many human visitors to these sites, the National Forest has little urban development upstream.

Three sites from this watershed have now received 100% Green grades for multiple summers (Figure 3). East Fork at Graveyard Canyon has extended its streak of perfect

grades to four consecutive summers (Appendix B). The Upper East and West Forks of the San Gabriel River have now had two consecutive summers with 100% Green grades. All three sites are on the Honor Roll.

The San Gabriel River Lower West Fork improved to 100% Green grades earning it a spot on the Honor Roll for a second straight year (Figure 3; Appendix B). This site improved from 92% Green grades in summer 2021. Upper Cattle Canyon took the same trajectory going from 92% Green grades in summer 2021 to 100% Green grades in 2022 and a spot on the Honor Roll.

<sup>12</sup> <http://sgrrmp.org/>

The San Gabriel River Upper North Fork received 94% Green and 6% Yellow grades as well as the last spot on our Honor Roll (Figure 3). This site improved slightly from 2021 when it earned 92% Green grades (Appendix B). Even though Upper North Fork's percentage of Green grades sits below the rest of its watershed (96%), it still has stellar water quality compared to the rest of L.A. County.

The East Fork at Cattle Canyon received 94% Green grades, which is a slight decrease from last year, when it had perfect marks (Appendix B). The site was also edged off the Honor Roll in summer 2022. Despite the grade slippage, Cattle Canyon still had excellent water quality compared to other swimming holes across L.A. County.

The San Gabriel River below the North and West Forks improved in summer 2022 to 94% Green grades (Figure

3). This site has come a long way from 2020 when it only earned 62% Green grades and appeared on the Freshwater Fails list (Appendix B). This location almost secured a spot on the Honor Roll, but it was nudged out by another site.

The San Gabriel River Lower North Fork received 82% Green, 12% Yellow, and 6% Red grades (Figure 3). This is the only site in the watershed that received Red grades in 2022. Unfortunately, water quality at the Lower North Fork appears to be trending downward as it received 100% Green grades in 2020 and 83% in 2021 (Appendix B). Lower North Fork's percentage of Green grades is higher than other sites across the County (65%), but it is below the percentage of the watershed (96%).



San Gabriel River at Oak Canyon



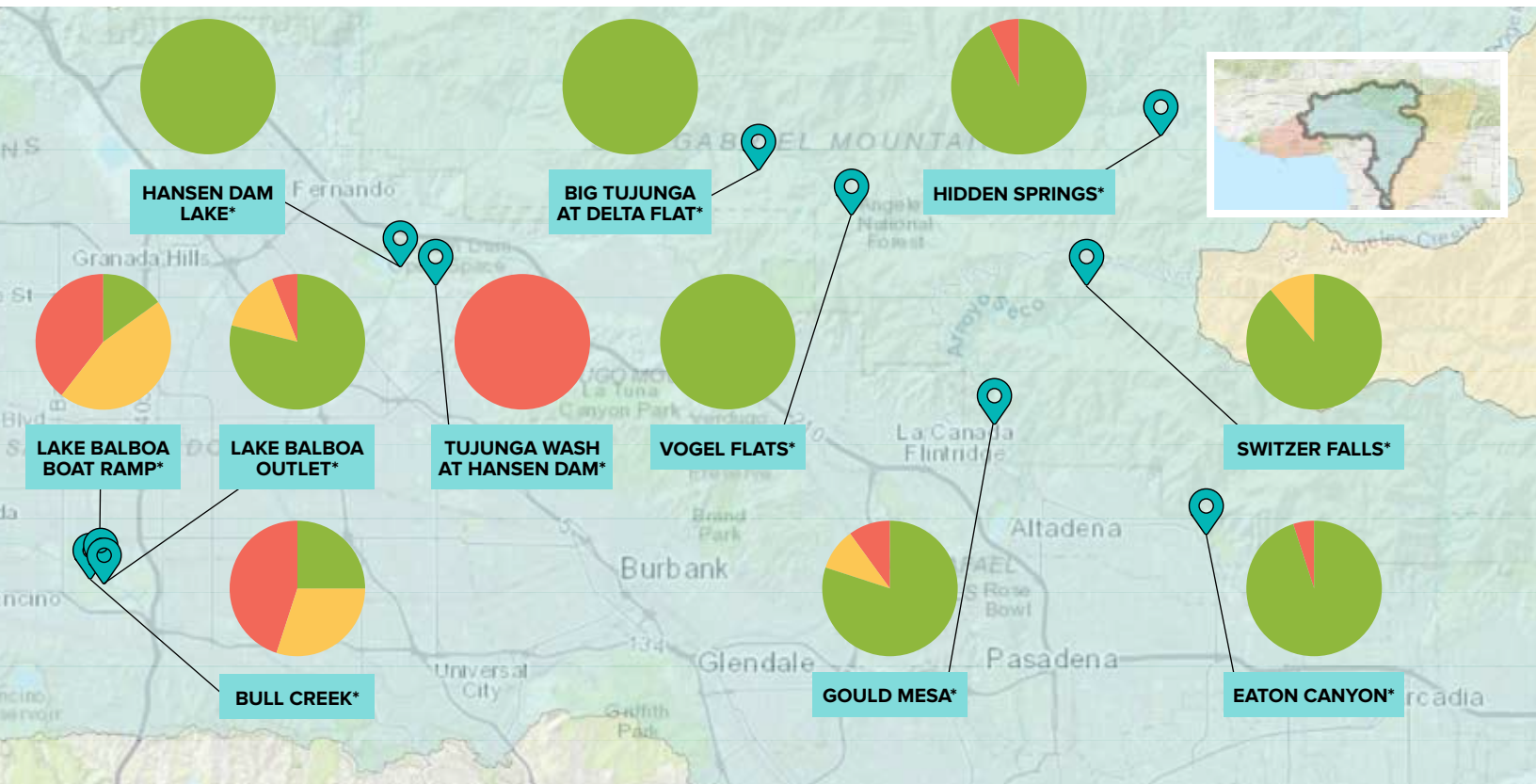


FIGURE 4. L.A. River Upper Watershed grade percentages for the 2022 monitoring season. Sites marked with \* were graded using only *E. coli* data.

# UPPER LOS ANGELES RIVER WATERSHED OVERVIEW

Eleven recreation sites in the Upper L.A. River Watershed were monitored by LARWMP.<sup>13</sup> 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 2022 due to lingering damage from the 2020 Bobcat Fire.<sup>14</sup> Millard Campground was not monitored due to low water levels.

Hansen Dam Lake continues to shine as it has received perfect marks and a spot on the Honor Roll for a fourth straight year (Figure 4; Appendix B). Eaton Canyon joins Hansen Dam Lake on the Honor Roll with 95% Green grades, which is down from 100% the previous year.

Big Tujunga Creek had excellent water quality in 2022 at both of its monitoring sites (Delta Flat and Vogel Flats), which both made this year’s Honor Roll. Delta Flat experienced one of the largest water quality improvements, going from 78% Green grades in 2021 to 100% in 2022 (Figure 4). This is a return to form for the site which received 100% Green grades the last time it

<sup>13</sup> <https://www.watershedhealth.org/larwmp#:~:text=To%20provide%20a%20better%20understanding,State%20of%20the%20Watershed%20Report.>

<sup>14</sup> <https://inciweb.nwcg.gov/incident/7152/>



Unmonitored site in the Upper Arroyo Seco

was monitored in 2018 (Appendix B). Vogel Flats also received 100% Green grades in 2022, which is a large improvement over the previous summer when it earned 89% Green grades (Figure 4; Appendix B).

Mill Creek at Hidden Springs received 93% Green and 7% Red grades in 2022 (Figure 4). While those are high marks, this site has dipped in water quality compared to 2021 when it received 100% Green grades and a spot on the Honor Roll (Appendix B). Despite the dip, Hidden Springs still earned a high percentage of Green grades compared to the rest of L.A. County (65%).

Bull Creek finds itself on the Freshwater Fails list for the fourth straight year mustering only 25% Green, 30% Yellow, and 45% Red grades (Figure 4). Bull Creek actually improved from 2021 when only 17% of its grades were Green (Appendix B). However, it will require a lot more improvement to match the water quality typically seen around L.A. County (65% Green grades).

Tujunga Wash at Hansen Dam unfortunately reached an all-time low in summer 2022. This site has always suffered from fecal pollution and is a perennial Freshwater Fail, but 2022 was the first time that the site received 100% Red Grades (Figure 4; Appendix B). Tujunga Wash at Hansen Dam is now the first site outside

of the Lower L.A. River to earn 100% Red grades in a summer.

Lake Balboa Boat Ramp is back on the Freshwater Fails list this year after earning only 15% Green grades in 2022 (Figure 4). The Boat Ramp is on a three year skid after receiving 40% Green grades in 2021 and 67% in 2020 (Appendix B).

The Lake Balboa Outlet has experienced better water quality than the Boat Ramp in recent years, and this trend continued in 2022. The Lake Outlet earned 79% Green grades in 2022, which is less than the previous year, but the percentage of Red grades issued also decreased to 6%.

Switzer Falls earned 89% Green grades in 2022, which was a major improvement over the 75% earned the year prior (Figure 4; Appendix B). This popular swimming hole has a higher proportion of Green grades than the Watershed (68%) and L.A. County as a whole (65%).

Gould Mesa Campground earned 80% Green, 10% Yellow, and 10% Red grades in 2022 (Figure 4). Those grades are better than summer 2021, but far below the 2020 high of 100% Green grades (Appendix B).



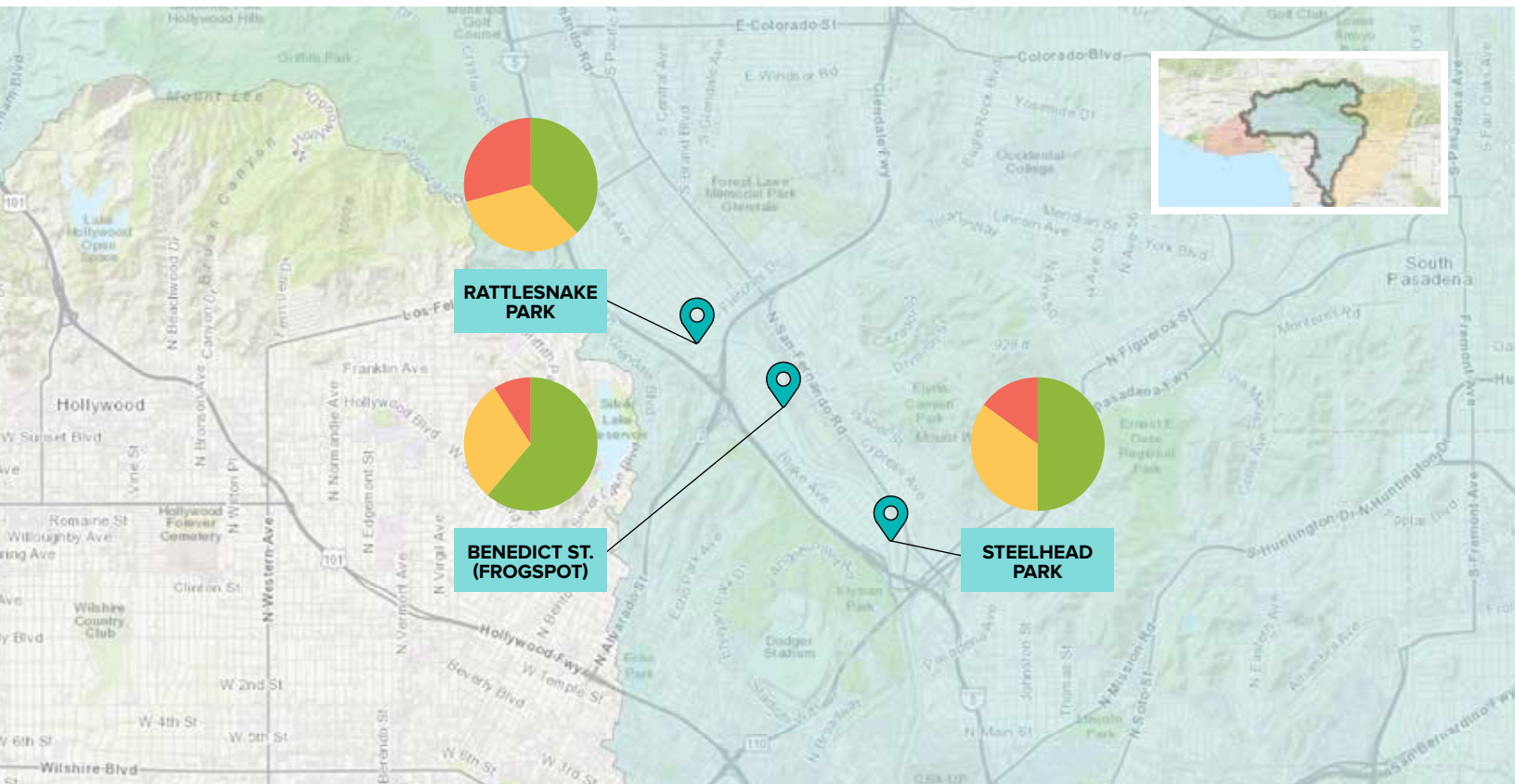


FIGURE 5. L.A. River Watershed Elysian Valley Recreation Zone grade percentages for the 2022 monitoring season. Water quality grades were calculated using *E. coli* and *Enterococcus* data.

# 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.

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.

The L.A. River at Rattlesnake Park experienced one of the largest increases in the proportion of Green grades issued over the previous year. Despite the dramatic increase, Rattlesnake Park still suffered from poor water quality and almost ended up on our Freshwater Fails list for a fifth time earning only 38% Green, 33% Yellow, and





L.A. River at Benedict Street

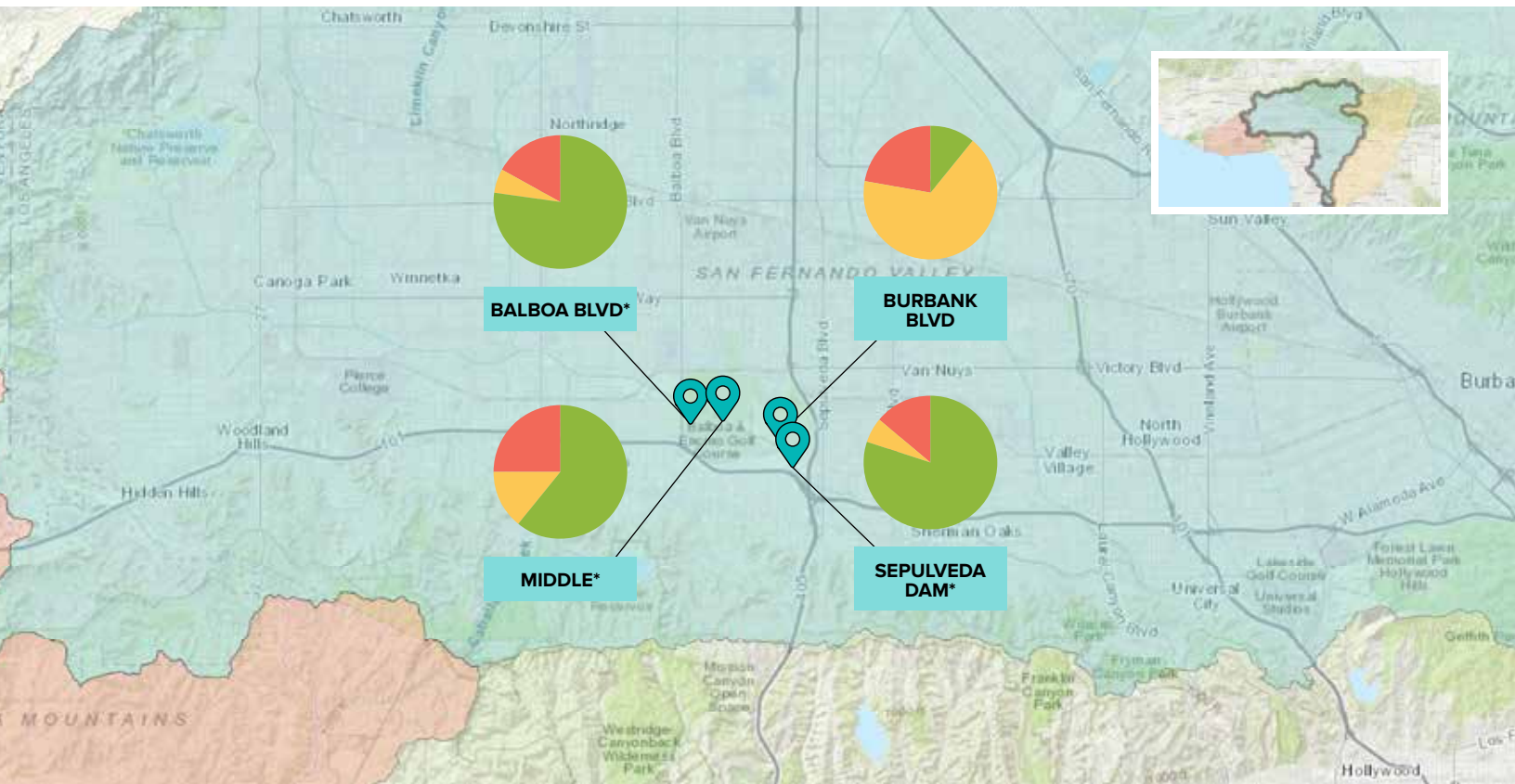
29% Red grades (Figure 5; Appendix B). This site is just downstream from the infamous Fletcher Drive storm drain, which you can read more about in the Storm Drain Outfalls Overview.

The L.A. River at Benedict St. (formerly named Frogspot) had a lackluster year in terms of water quality, earning 62% Green, 30% Yellow, and 9% Red grades (Figure 5). In summer 2021, 60% of this site's grades were Green so there was a small change in water quality (Appendix B). This site has a slightly higher

percentage of Green grades compared to the rest of the sites in the Recreation Zones (58%).

The L.A. River at Steelhead Park had similar water quality to the other Elysian Valley sites. Steelhead Park only received 50% Green, 35% Yellow, and 15% Red grades in 2022, which is a worse performance than 2021 when the site was issued 54% Green grades (Figure 5; Appendix B). Water quality at Steelhead Park is below that of L.A. County as a whole (65%) as well as the rest of the sites in the Recreation Zones (58%).





**FIGURE 6.** L.A. River Watershed Sepulveda Basin Recreation Zone grade percentages for the 2022 monitoring season. Sites marked with \* were graded using only *E. coli* data.

The Sepulveda Basin Recreation Zone site at Balboa Blvd. received 78% Green, 6% Yellow, and 17% Red grades in 2022 (Figure 6). Balboa Blvd. had better water quality in 2021 earning 95% Green grades and a spot on the Honor Roll (Appendix B). This site still had better water quality than the rest of the watershed (58%) and L.A. County as a whole (65%).

The L.A. River at the Middle of the Sepulveda Basin Recreation Zone had a middling year from a water quality standpoint. The proportion of Green grades earned improved from the previous year to 61%, but that was offset by an increase of Red grades to 25% (Figure 6; Appendix B).

The L.A. River at Burbank Blvd. experienced the largest decrease in water quality from the previous year. Only 11% of the grades calculated for this site were Green, 67% were Yellow, and 22% were Red (Figure 6). The 2022 nosedive in water quality at this site erased the upward trajectory it was on the last two years (Appendix B).

The L.A. River at Sepulveda Dam (downstream from the kayak zone) earned 81% Green, 6% Yellow, and 14% Red grades in 2022 (Figure 6). Sepulveda Dam experienced a bump in Green grades compared to 2021, but that was coupled with a similar increase in the proportion of Red grades. Sepulveda Dam still earned more Green grades than the Watershed (58%) and County (65%) as a whole.

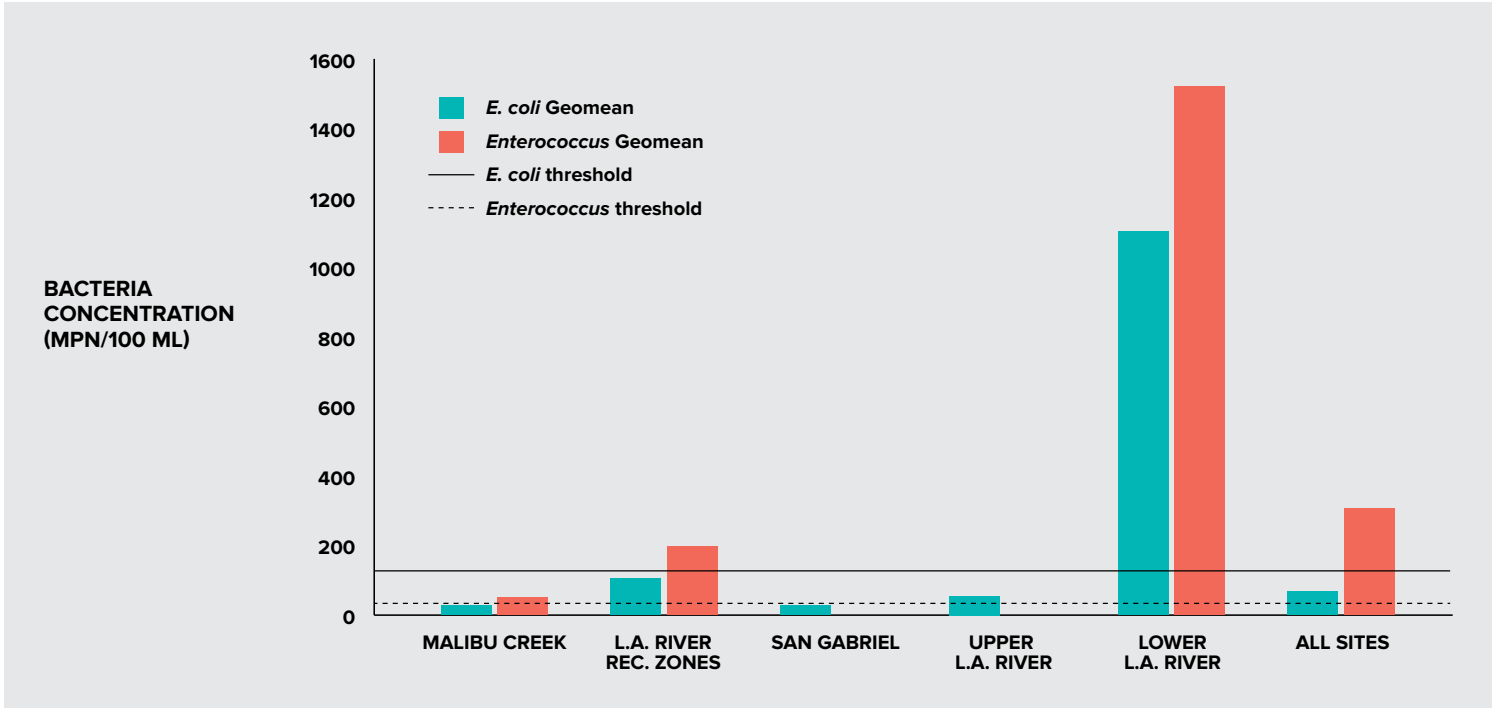


FIGURE 7. Comparison of summer 2022 geometric means for *E. coli* and *Enterococcus* in each watershed/zone. Horizontal lines represent the geometric mean thresholds used in the River Report Card methodology (30 cfu/100ml for *Enterococcus* and 126 cfu/100ml for *E. coli*). The San Gabriel and Upper L.A. River watersheds had no *Enterococcus* data.

# LOWER LOS ANGELES RIVER WATERSHED OVERVIEW

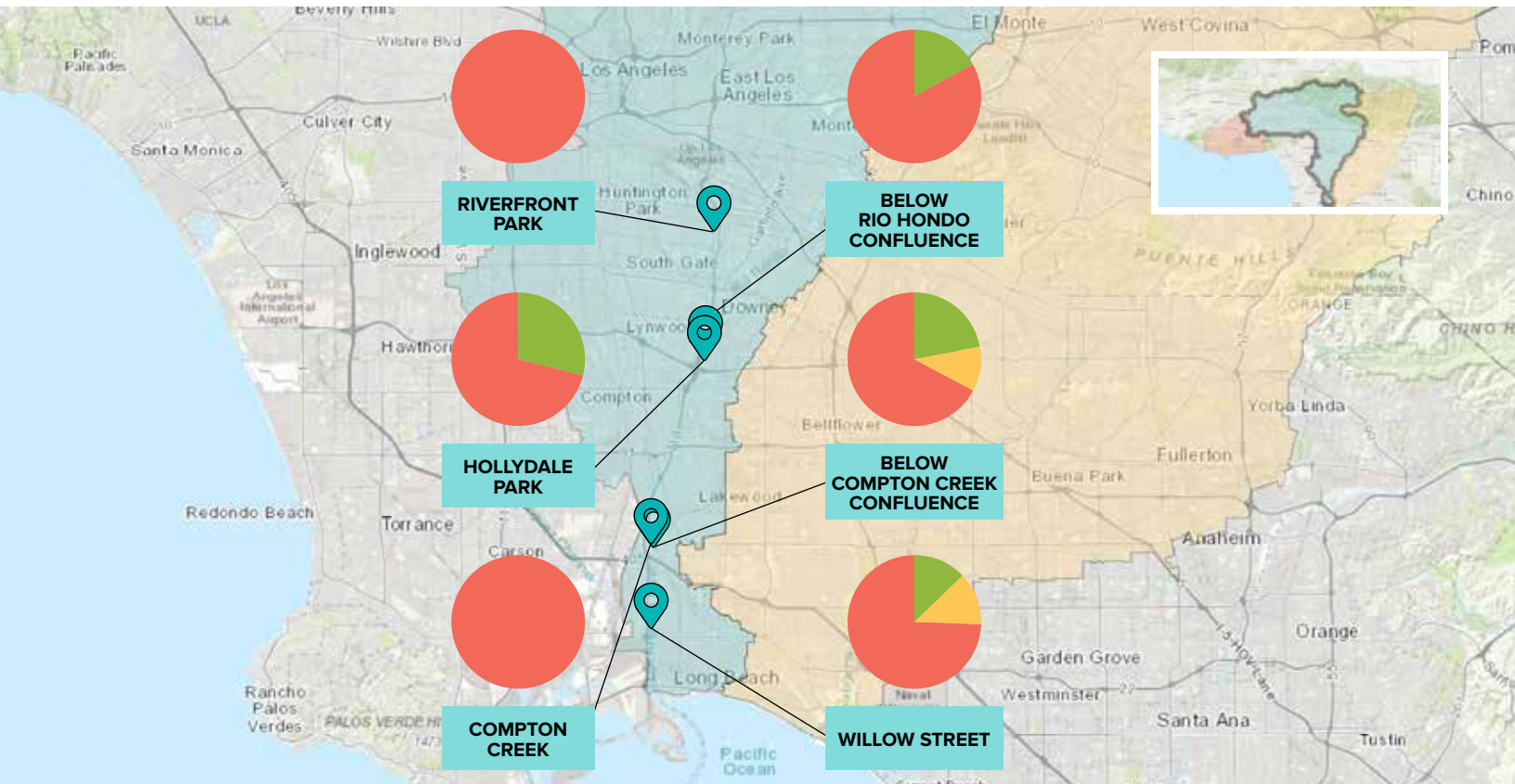
2022 was Heal the Bay’s second year sampling the lower portion of the L.A. River (south of Downtown Los Angeles). A total of six sites were sampled and analyzed for bacteria: L.A. River at Riverfront Park, L.A. River below the Rio Hondo Confluence, L.A. River at Hollydale Park, Compton Creek, L.A. River below the Compton Creek Confluence, and L.A. River at Willow Street. All six sites have a concrete river bed (with the exception of Compton Creek) and banks, and they are not officially designated for recreational use. However, we regularly observe runners, walkers, horseback riders, bird watchers, and cyclists using the river channel. The Lower L.A. River is clearly an important space for the surrounding communities, and 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 dismayed by the hazardous water quality conditions we found throughout the summer in the Lower L.A. River. Bacteria concentrations at these sites exceeded standards frequently and were often ten times higher than concentrations found anywhere else 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 watershed<sup>15</sup> makes its way to the lower watershed. We also found higher turbidity levels at Lower L.A. River sites, which

<sup>15</sup> <https://www.epa.gov/urbanwaterspartners/urban-waters-and-los-angeles-river-water-shed-california>





**FIGURE 8.** Lower L.A. River Watershed grade percentages for the 2022 monitoring season. Water quality grades were calculated using *E. coli* and *Enterococcus* data.

have been found to be correlated with bacteria.<sup>16,17</sup> However, more research is needed to understand why the lower portion of the River is more heavily polluted than the upper reaches.

The L.A. River at Riverfront Park made its debut last year as one of the most polluted sites in L.A. County, and unfortunately, it was the same in 2022. Riverfront Park received 100% Red grades and appeared on the Freshwater Fails list (Figure 8; Appendix B).

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. This location improved in water quality from the previous year, but it still performed dismally with only 17% Green and 83% Red grades (Figure 8; Appendix

B). Regretfully, the improvement in water quality was not enough to lift this site off the Freshwater Fails list.

The L.A. River at Hollydale Park is downstream from the Rio Hondo Confluence. In 2022, Hollydale Park received 29% Green and 71% Red grades, which is a major improvement upon the 100% Red grades that it earned in 2021 (Figure 8; Appendix B). However, even the largest improvement in water quality in L.A. County was not enough to keep it off the Freshwater Fails list.

We collected samples from Compton Creek several hundred yards upstream from its confluence with the L.A. River in Long Beach. The water quality of this vegetated creek was bottom of the class for a second straight year earning 100% Red grades and a spot on the Freshwater Fails list (Figure 8; Appendix B). Despite having a soft bottom like the L.A. River Recreation Zones, water quality at this location was much worse in comparison.

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

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



L.A. River at the Compton Creek Confluence

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 22% Green, 11% Yellow, and 67% Red grades in 2022 (Figure 8). While that is a major improvement in water quality from the previous year, Compton Creek Confluence is a Freshwater Fail for a second straight year.

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. Like the rest of the Lower L.A. River, Willow Street received flunking grades in 2022 and appears on the Freshwater Fails list. This location received 13% Green grades in 2022, which was an improvement from 0% the previous year (Figure 8, Appendix B).



L.A. River at Willow Street



# 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 (listed in Appendix C). We were able to resume monitoring at 10 storm drains in the Elysian Valley after we paused storm drain monitoring in 2020 and 2021. 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.

We found that some storm drains flow intermittently while others like Fletcher Drive do not cease flowing. Most of our samples were collected during dry weather when there were no rain events that could account for the flow so the water likely originated from human activities. The water flowing from the storm drains was often filled with trash and smelled of sewage. Eighty-nine percent of the storm drain samples we collected exceeded state standards for either *E. coli* or *Enterococcus*. Only three of the 10 storm drains had days with no water quality exceedances, and the remaining seven storm drains had elevated bacteria levels each time they were tested. *E. coli* and *Enterococcus* concentrations were regularly more



L.A. River at the Fletcher Drive Storm Drain

than 10 times the limit. One storm drain, SDL-50, was observed with a heavy flow and at least one bacterial exceedance each time it was sampled, indicating that it was a consistent source of pollution in the Elysian Valley Recreation Zone. The Fletcher Drive storm drain was another source of chronic pollution in the Recreation Zone as its average *E. coli* concentration was seven times the limit, and *Enterococcus* was 78 times 78 times higher than the limit. 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 (Appendix D).



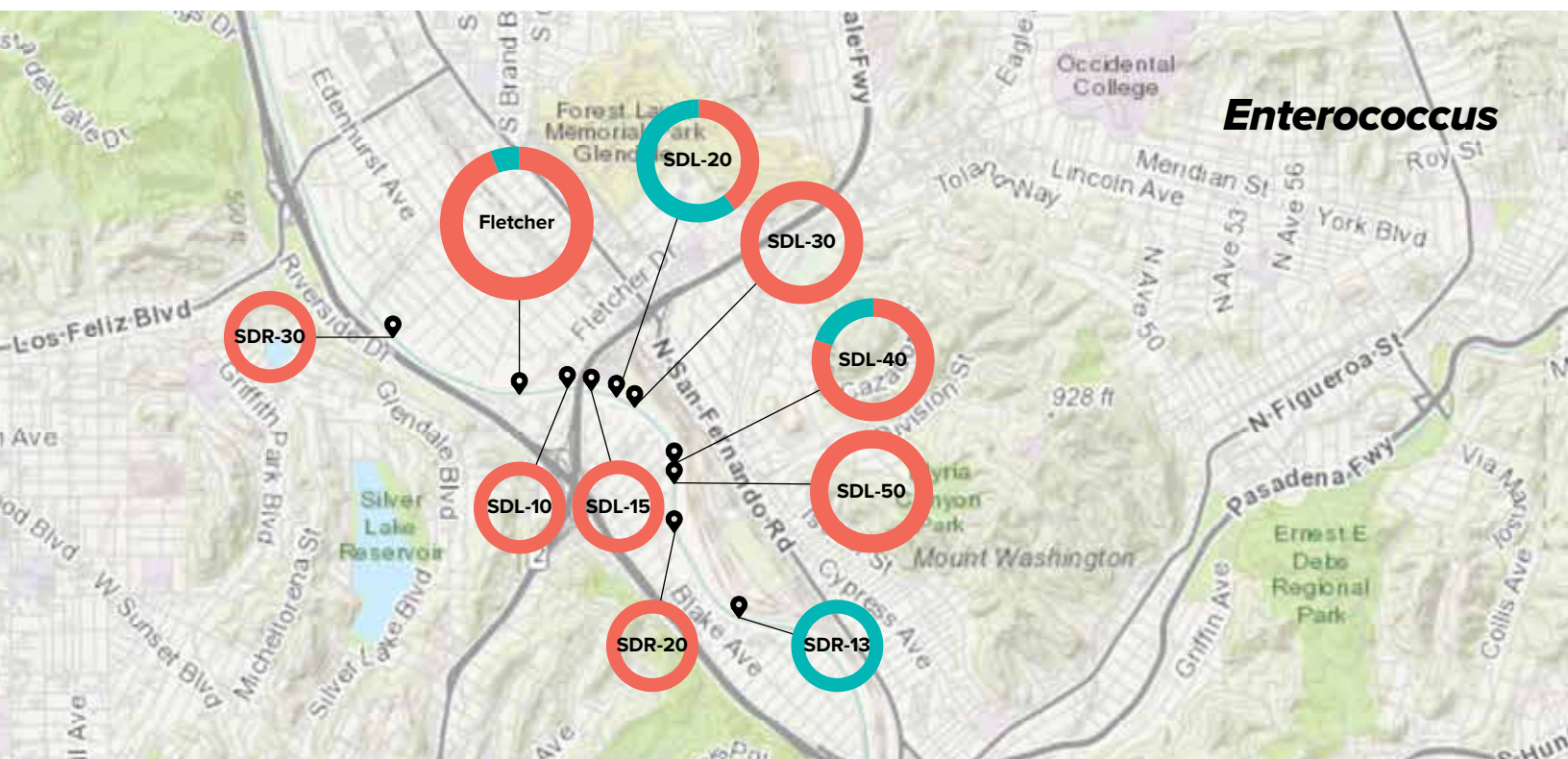
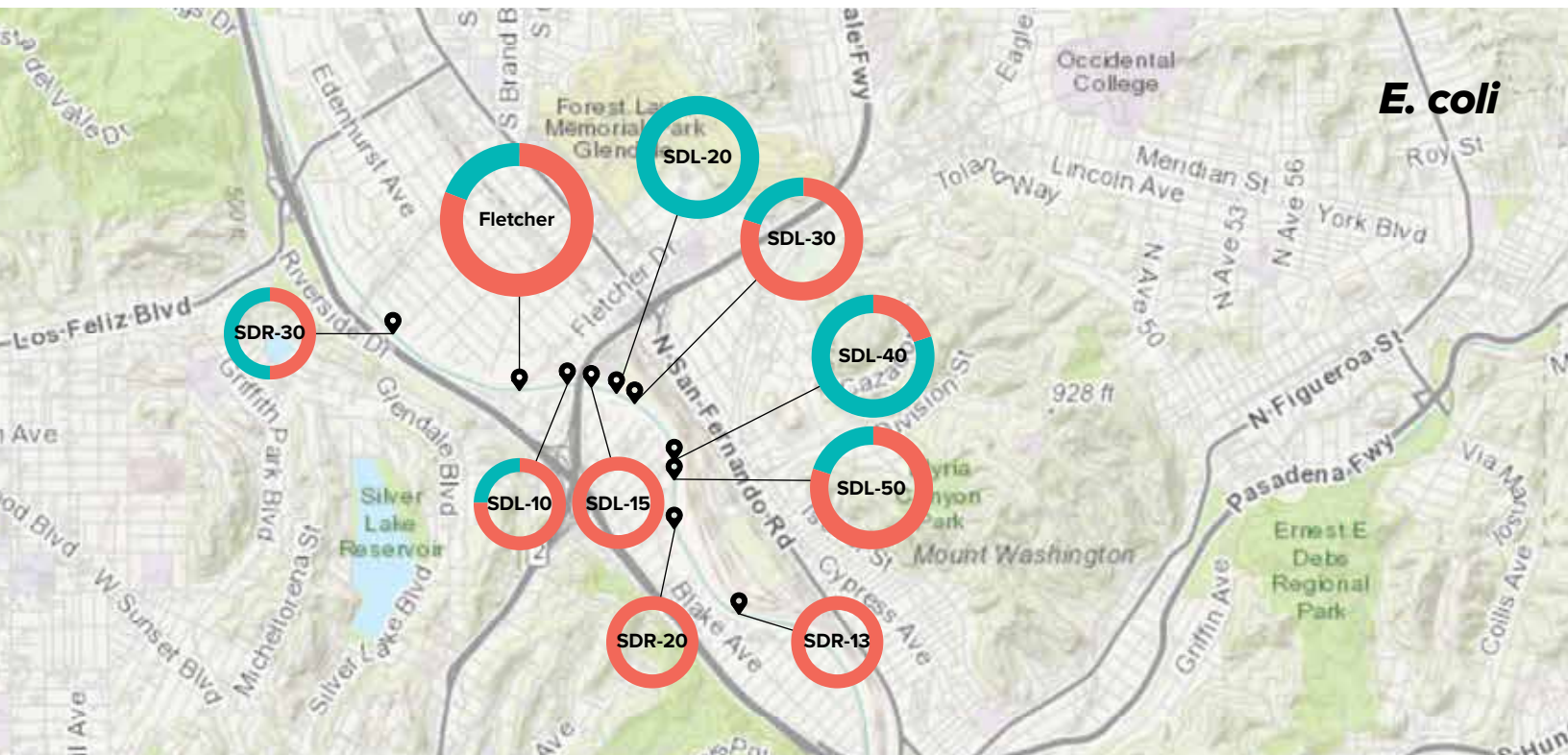


FIGURE 9. Rates of fecal indicator bacteria exceedances at storm drain outfalls in the Elysian Valley Recreation Zone of the L.A. River. Samples were collected in Summer 2022. The pie charts show the percentage of samples that exceeded single sample thresholds in red and the percentages of samples that did not exceed single sample thresholds in aqua. Size of the circle charts indicates how much flow was observed.



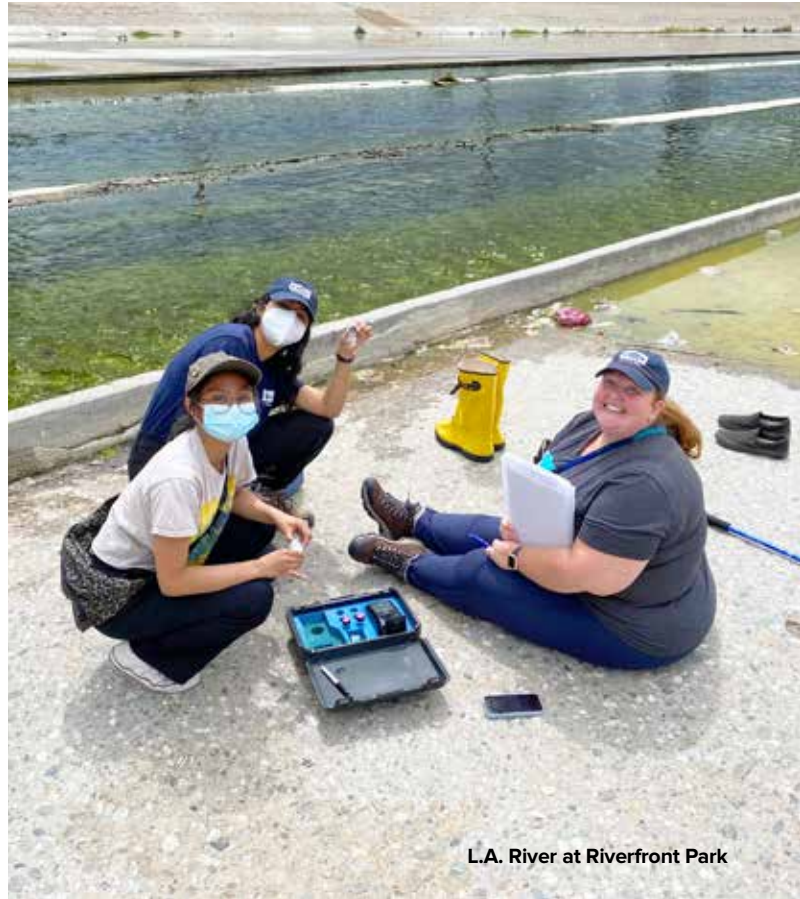
# CONCLUSIONS

**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 65% of the time. Unfortunately, there is a risk of getting sick from water contact about 35% 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 worse 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 worse grades than the others in this report. This pattern is also supported by our storm drain outfall monitoring in the L.A. River Watershed Elysian Valley Recreation Zone; we 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.



L.A. River at Riverfront Park

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 waterways.<sup>18</sup>

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.

<sup>18</sup> [https://mladenov.weebly.com/uploads/2/0/0/7/2007542/sdsu\\_final\\_report.pdf](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 (12 in total), 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. We found that 68% of our *Enterococcus* measurements exceeded standards compared to 20% for *E. coli*. Figure 10 provides an example of how grade composition changes at one monitoring location depending on the FIB used in the grade. However, this disparity in grade composition is different at the sites in the Lower L.A. River, which experienced high *E. coli* and *Enterococcus* concentrations simultaneously throughout the summer. Lower L.A. River grades remained the same when *Enterococcus* was removed from the grading equation because of the high concentrations of *E. coli* present.

Beginning in summer 2023, Heal the Bay will no longer be incorporating *Enterococcus* into our grades (see River News section). The expert advisors we assembled to assist with the methodology update recommended that we create grades using solely

*E. coli* because it would create more continuity among our grades. As demonstrated in Figure 10, comparing grades generated with two bacteria to grades generated with one is a bit like comparing apples to oranges. Additionally, we think the new grades will help with our advocacy efforts. The State of California only recognizes *E. coli* as a freshwater bacteria indicator so we believe our new grades will get more attention and recognition from the government entities responsible for improving water quality.

Heal the Bay is not totally abandoning *Enterococcus*, however. We still believe it is an important indicator for illness risk especially when collected alongside *E. coli*. We have found that *E. coli* and *Enterococcus* often exceed standards independently from one another so monitoring for only one bacteria would miss exceedances from the other. Therefore, it is more health protective to monitor for two bacteria. Heal the Bay will continue to collect *Enterococcus* data, and we will continue to advocate for *Enterococcus* monitoring at freshwater recreation sites. We are working on the implementation of AB 1066 (Bloom, 2021) right now, which will define and identify freshwater recreation sites across California (see River News for more information). Heal the Bay plans on following that up with legislation requiring *E. coli* and *Enterococcus* monitoring at all freshwater recreation sites.

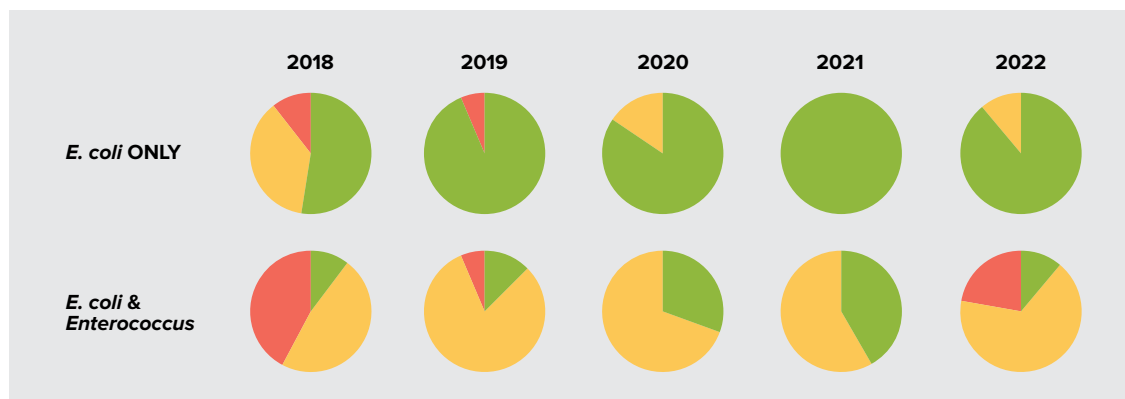


FIGURE 10. Differences in grade composition between *E. coli* only data and *E. coli* & *Enterococcus* combined data for the L.A. River at Burbank Blvd. site for the past 5 summers.



# RIVER VIEWS





## 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 (Wayne, 1997) 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.

Right now, the Council is identifying experts and stakeholders that will assist with defining recreation sites and drafting monitoring program recommendations. This group of experts and stakeholders will assist with 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. This information was originally required to be packaged into a report by July 2023, but that will likely happen later since the Water Quality Monitoring Council has limited funding and capacity for implementing AB 1066.

## River Report Card Methodology Update

Heal the Bay will begin using an updated grading methodology in June 2023. Therefore, our weekly grades and annual report will look different moving forward. Instead of color-coded grades, we will begin using A-F letter grades identical to the Beach Report Card. This type of grading system is an improvement because it allows us to convey information on a wider

variety of water quality scenarios, and it provides more continuity between our two report cards.

Weekly grades will continue to appear on the River Report Card website along with the grades issued in previous weeks so users can see a site's water quality history. Unlike the Beach Report Card, we will not issue grades during wet weather because conditions in many freshwater bodies pose physical hazards like swift moving water and flooding. Instead, we will only issue an advisory when it rains. In addition, the grades will only take into account levels of *E. coli* and will no longer include *Enterococcus*. This will allow us to compare water quality at different sites more easily and will lead to wider acceptance of our grades.

## 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 certain 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





Water quality improvement project at Ladera Park, Los Angeles

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 Project<sup>19</sup> to evaluate the environmental and recreational impacts of reducing wastewater discharge into the L.A. River. The goal was to assess and make recommendations on flow regimes to 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 tool<sup>20</sup> that will help wastewater dischargers identify the amount of water that can be recycled while supporting ecosystem and recreational needs. In 2022, L.A. Sanitation released a plan to recycle water from the Tillman Water Reclamation Plant, which would significantly reduce flows in the L.A. River if implemented. While we are supportive of water recycling, we were not on board with their plan. L.A. Sanitation did not do their due diligence in terms of assessing environmental, recreational, and water quality impacts, and they did not use the Flows Project tool correctly. Their plan has not been implemented, and we will continue to track the project.

<sup>19</sup> [https://www.waterboards.ca.gov/water\\_issues/programs/larflows.html](https://www.waterboards.ca.gov/water_issues/programs/larflows.html)

<sup>20</sup> <https://la-river-eflows-study-2021-sccwrp.hub.arcgis.com/>

## 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. All MS4 permit holders are also responsible for creating watershed management programs (WMPs), which serve as the permittees' plans for reducing stormwater pollution and improving water quality throughout their area. The Los Angeles Regional Board is currently in the process of reviewing each permit holder's WMP. Heal the Bay has been asking the Regional Board for increased transparency in this process as WMPs are difficult for the general public to find and learn about, and permittees do not generally provide progress updates to the public. We urge all L.A. County MS4 permit holders to follow the City of L.A. and provide the public with educational resources about the program.<sup>21</sup>

### Measure W: Safe, Clean Water Program

The Los Angeles County Board of Supervisors approved \$1 billion in stormwater investments for 144 projects under the Safe, Clean Water Program or SCWP (formerly Measure W) to date. The nine Watershed Area Steering Committees (WASCs), which each include five community representatives, have been working for four years to determine where and how funds should be spent.

Heal the Bay holds two of the 12 Watershed Coordinator positions, representing 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 our fellow Watershed Coordinators. 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.

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<sup>21</sup> <https://www.lastormh2o.org/>



## Acknowledgements

We would like to thank current and former Heal the Bay staff who have contributed to this project and report, including: Tracy Quinn, Dr. Katherine Pease, Alison Simard, Jillian Marshall, Gabriele Morgan, Dr. Shelley Luce, Delaney Alamillo, and many more. Heal the Bay staff responsible for conducting monitoring included: Dr. Alison Xunyi Wu, Blaire Edwards, Michelle Allen, Sarah Kambli, Melisa Zelaya, Jasmine Sandoval, Monet Pedrazzini, Vina Rose Matias, Karen Tapia, Willian Quinteros, Zara Mehreban. 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. We would like to thank Manuel Robles, Dr. Rachael Harper Delupio, and Cash Sutton for the continued partnership with Los Angeles Trade Technical College. 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 Environment Now.

## Appendices

Dig deeper into the River Report Card by accessing our appendices. Available at:

<https://healthebay.org/wp-content/uploads/2023/05/RRC-2022-All-Appendices.pdf>

## 2022 River Report Card

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