



STATE OF THE SAN DIEGO RIVER 2013



MESSAGE FROM THE EXECUTIVE DIRECTOR

We first put together a State of the River Report to try and respond to one of our most commonly asked questions: “Is the River healthy?”

The San Diego River is a large and complex natural system with many factors affecting its overall health and vitality. The River plays an important role in sustaining wildlife, supporting recreation, and providing water for a thirsty region. Despite this critical role the River plays in our community, it also faces some distressing trends and challenges.

The State of the River Report is designed to present a snapshot of the condition of the River, and has been the guiding force behind our award-winning Healthy River, Healthy Communities program. Results from the data collected will be used to establish an action plan for 2014. On the following pages, you will see that the emphasis in the coming year will again be on trash removal. With the help and commitment of volunteers, we seek to accelerate the timeline for this removal of this trash this year to work toward a trash-free River.

This Report Card comprises a key learning component of good watershed management by presenting actual conditions that can be measured over time. This data shows that we have made significant progress, but challenges remain.

We invite you to join us as we continue to work toward a healthy, beautiful and safe San Diego River!

Sincerely,

Rob Hutsel
Executive Director



USING INDICATORS TO DETERMINE HEALTH

The state of the San Diego River is influenced by many different factors. Each indicator we have selected is a measure of health of the River, and together, they point to the condition of the entire River. Trash, water quality and invasive plant cover are used as indicators to interpret river health through our grading system and this report. Using indicators and the grades they inform gives us the ability to provide a concise answer to a complex issue, determine general trends and compare variances over time.

Data used in the report was collected by volunteers during the San Diego River Park Foundation's October 2013 River Blitz survey and RiverWatch monthly water quality monitoring for Water Year 2013. RiverBlitz volunteer teams led by a trained team captain collected the survey data using handheld GPS units, digital cameras and data forms. The RiverWatch volunteer team collected the water quality data using an electronic sonde, field forms and nutrient test kits. RiverWatch monitoring follows strict protocols (QA/QC procedures).



TRASH

Encompasses four categories defined by the most common sources: encampments, litter, stormwater debris and dumping. The more trash volume by acre, the lower the grade.



INVASIVE PLANTS

Incorporates the canopy coverage of seven target invasive non-native species: giant reed, Brazilian pepper tree, pampas grass, Mexican fan palm, Canary Island date palm, castor bean and tamarisk. High total canopy coverage means a low grade.



WATER QUALITY

Integrates aggregate data of four key water quality parameters (temperature, pH, specific conductivity and dissolved oxygen combined with stream discharge) into an index value. Low index values mean a low grade.



Temperature: how hot or cold the water is



Conductivity: ability of water to pass an electrical current



Dissolved Oxygen: how much oxygen is dissolved in the water



Flow: how much water is moving past a cross sectional area at a given time





SECTION LOCATIONS ALONG THE SAN DIEGO RIVER

The most urban part of the River has been divided into sections for the purpose of this report. Each section was divided further into segments corresponding to a survey which would take two to three hours.

- 1 **ESTUARY:** 300+ acre wetland area, includes parts of the Southern Wildlife Preserve, Mission Bay Park, and Dog Beach. Includes several miles of multi-use paved River Trail.
- 2 **MISSION VALLEY WEST:** Includes the Mission Valley Preserve and privately-owned land. The River Trail continues in the west end of the section, with small footpaths. Wide floodplain, mostly vegetated.
- 3 **FASHION VALLEY ROAD TO QUALCOMM WAY:** This section includes most of the First San Diego River Improvement Project (FSDRIP). Mitigation project ensures native vegetation and habitat. No river bank access, but the paved multi-use River Trail has great views of the River, which is deep and wide in this segment.
- 4 **QUALCOMM WAY TO I-15:** Private and public agency-owned land. There is a portion of the River Trail on the west side of this section, but this section is mainly characterized by dense native and non-native vegetation and little public access.
- 5 **MISSION VALLEY EAST:** Private land and a Dept. of Fish and Wildlife site. Large ponds along the River, and dense native and non-native vegetation.
- 6 **MISSION GORGE:** The section goes through Mission Trails Regional Park, a popular City of San Diego Park. Well-used section of the River Trail, and well-cared for natural area.
- 7 **SANTEE WEST:** East of Mission Trails Regional Park is some privately-held land, and then the River Trail restarts in the City of Santee. Wide River Trail to Mast Park West (on the east end of this section), and vegetated areas with views of the Riverbed.
- 8 **SANTEE EAST:** This section includes Mast Park and continues east to the new Walker Preserve. Section includes several City Parks with the River Trail and interpretive elements, natural vegetated areas, and a large pond.
- 9 **LAKESIDE:** This section goes through the community of Lakeside, and features popular River Trail and vegetated areas.
- 10 **EL MONTE VALLEY:** This section is the valley west of the dam for El Capitan Reservoir. Very little surface water in this section running through a rural community with El Cajon Mountain rising to the north.



Working toward a trash-free River



TRASH REPORT

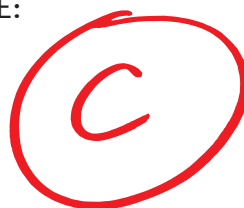
Beyond being an indicator of abuse, trash impedes aquatic health, leaches hazardous substances into the water and habitat, threatens wildlife and can breed bacteria.

The October 2013 surveys identified **47,175 pounds of trash**. The overall grade for trash has remained a C for the past four years, (2010-13) but several sections have shown significant improvement. Eight of ten sections received passing grades. Eastern Santee (section 7) increased two letter grades from an F to a C and for Fashion Valley through FSDRIP (section 3), the grade increased by one letter grade to a B. Only section 4 received an F, and 51% of all trash volume documented occurred in this less than two mile long stretch.

QUICK FACTS

- Average litter site was less than 2 bags of trash
- The most common littered item was plastic
- 75% of all trash volume documented from encampments
- Average encampment was more than 13 bags of trash
- 275 individual sites documented in October 2013

GRADE:





INVASIVE REPORT

Riparian habitats play an important role in the ecosystem, and disruption of the natural condition through introduction and colonization of invasive non-native plants impacts the ability of the ecosystem to regulate flood, stabilize stream banks and support habitats for both aquatic and terrestrial species. This includes several state and federally listed endangered and sensitive species including the Least Bell's vireo and southwestern pond turtle.

The overall grade for invasive non-native plants has increased two letter grades since 2010 to a B. This is due to several invasive non-native removal projects ongoing or recently completed along the lower San Diego River.

Tracking invasive plants

QUICK FACTS

- *Giant reed was found in every section of the River*
- *60% of sections have ongoing or had recent invasive non-native removal projects*
- *Castor bean is the most common species in areas with recent invasive removal projects*
- *Brazilian pepper tree exhibits the highest percentage of canopy coverage*

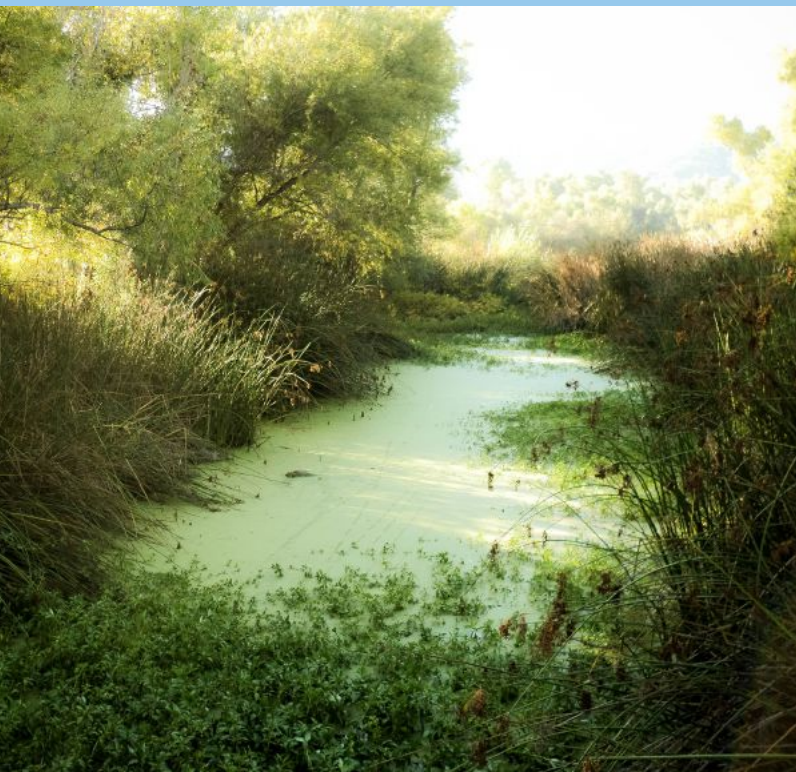
GRADE:

B





Protecting swimmable, fishable water



WATER QUALITY REPORT



The San Diego River water quality ranges from poor in summer to good during winter months. Water Year 2013 represented the poorest water quality in the past nine years of monitoring due to low rainfall. The overall grade declined only slightly remaining a D for 2013. One section showed a letter grade increase in water quality (Section 3 - Fashion Valley through FSDRIP) to a B. Mission Valley East (Section 5) declined one letter grade to a D. Eastern Santee continued in 2013 to exhibit the poorest water quality of all the sections, due to extremely low dissolved oxygen and flow.

QUICK FACTS

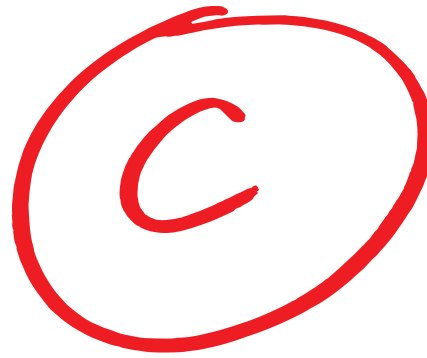
- Water quality shows the largest decline in the summer when temperatures increase and flow decreases
- The Mast Park monitoring station exhibited the worst water quality
- The Mission Trails Regional Park at Jackson Drive site had the best water quality
- The River's average annual conductivity and temperature values tend to be higher downstream than upstream

GRADE:



OVERALL GRADE FOR THE SAN DIEGO RIVER

For October 2013, the San Diego River received an overall grade of C or Fair. See a breakdown of grades by section below. For a complete report or to view the San Diego River Water Quality Report for Water Year 2013, please visit http://sandiegoriver.org/online_info_center.html.



SECTIONS	1	2	3	4	5	6	7	8	9	10	Overall
Trash	A	D	B	F	C	A	C	C	A	A	C
Water Quality		D	C	C	D	C	D	F			D
Invasive Non-Native Plants	A	B	A	F	C		A	C	A	A	B
Cumulative Grade	A	D	B	F	D	B	C	D	A	A	C

SO... IS THE RIVER HEALTHY?

This is one of the most common questions we receive, and it is a complicated answer. A simple way to think about it is to think whether you would swim in it, drink from it, or eat the fish caught in it. The question has many complicated factors, but in short, the answer is no. Sadly, the San Diego River has been neglected over time, and the impacts of a half-million urban residents in the watershed are significant.

The data collected through these programs was used to create a report card for the San Diego River, and to assign a letter grade to each segment as it relates to the indicators. These letter grades are displayed below. As you can see, there is still much work to be done.

Our RiverBlitz survey program began in 2008 as a way to bring awareness to the poor health of the River. Trash, water quality, and invasive non-native plants tell part of this story, but there are more indicators of the River's health. Additional community-based monitoring can help not only to supplement public agency programs, but also help to inform the public of emerging issues.

The simple question we began with is actually not so simple to answer. But it is an important one to keep asking.

YOU CAN BE PART OF THE SOLUTION...



Contact us today to learn more about how you can get involved. From data collection to clean-ups, from education to advocacy, the involvement of the community is critical!

Contact us at volunteer@sandiegoriver.org, (619) 297-7380 or visit our website at www.sandiegoriver.org to learn more!



OUR THANKS TO:

Project Leadership:

San Diego River Park Foundation

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The San Diego River Park Foundation is a 501c3 nonprofit organization dedicated to creating a better future for the San Diego River.