Independent Study Finds Leaking Wastewater Infrastructure Largest Source of Human Fecal Pollution in the San Diego River

Sanitary Sewer Overflows Far Outweigh Unhoused Encampments' Contribution

SAN DIEGO, CA, UNITED STATES, November 13, 2024 / EINPresswire.com/ -- A five-year study conducted by the Southern California Coastal Water Research Project ("SCCWRP") to assess sources and volumes of human fecal bacteria in the San Diego River reveals a disturbing reality – spills, leaks, and subterranean seepage from public sanitary sewer systems are, by far, the largest contributors to human fecal contamination throughout the entire urbanized portion of the San Diego River watershed. Sewage spills, known as sanitary sewer overflows (SSOs), and exfiltration, the leakage of wastewater out of a sanitary sewer system through cracks, gaps, defective joints or otherwise, account for well over 90% of the total human fecal contamination loading. The third largest contributor is leaks and spills from septic systems, referred to in the report as onsite wastewater treatment systems (OWTS).

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> *Phillip Musegaas, Executive Director of San Diego Coastkeeper*

Overflows from private sewer systems and exfiltration from private laterals (the connections between private homes and other properties and the public sewer main), contribute only a small fraction of human fecal contamination. The study also determined that people experiencing homelessness contribute the smallest relative quantities, less than 0.25%, of human fecal bacteria in the San Diego River. This determination hopefully puts to rest long-standing assertions by local municipalities and water agencies that unhoused encampments in the San

Diego River watershed are a potentially significant source of bacterial pollution in the river.

The SCCWRP study ("Summary of Technical Research: Quantifying Sources of Human Fecal Pollution in the Lower San Diego River Watershed") was required by the San Diego Regional Water Quality Control Board's (Regional Water Board) 2019 Investigative Order (IO), which instructed all wastewater and stormwater agencies in the San Diego River watershed to assess the relative contributions of various sources to bacterial pollution of the river. Water quality monitoring and reporting by these agencies has shown chronically high levels of bacteria during
wet weather, often exceeding state water quality standards designed to protect public health. San Diego Coastkeeper has participated as a member of the study's Steering Committee with SCCWRP since its inception. The results of the study will be presented to the Regional Water Board on Wednesday, November 13, 2024, at its regular meeting.

"This comprehensive study confirms that San Diego's degraded wastewater infrastructure is the main culprit when it comes to chronic contamination of the San Diego River, highlighting the urgent need for better maintenance and increased investment in this critically important but often unseen urban system," said Phillip Musegaas, Executive Director of San Diego Coastkeeper. "The public expects, and the law requires, that our shared rivers, lakes and coastal marine waters are clean and safe for swimming, fishing and other public uses – not relied on as overflow channels for untreated human wastewater and stormwater."

Background
Municipalities, stormwater departments, researchers, and enforcement agencies have long been
aware that human fecal matter is omnipresent in rivers, streams, lakes, and ocean during rain events across Southern California. This is why San Diego County officials issue a blanket advisory not to swim or surf at any beach for at least 72 hours after every rain event.

The San Diego River is one of the waterbodies consistently showing high levels of fecal indicator bacteria particularly during wet weather. . For decades, municipal agencies blamed coyotes, birds, other wildlife and people experiencing homelessness as potential sources. However, a preliminary study from 2016-2017 measuring specific markers revealed that every single wet weather sample collected at thirteen different stations along the San Diego River tested positive for human fecal matter. Subsequent studies and sampling have confirmed that when it rains, human sewage is in fact found in waterbodies through the region.

Looking at the sheer magnitude of the different potential pollution inputs, the findings of the study should be unsurprising. The estimated population of the studied area is about 506,000. There are an estimated 1,079 miles of public sanitary sewers, 130,453 parcels connected to public sewer (i.e., with private lateral), 6,760 parcels with OWTS, and only about 350 people experiencing homelessness and living along the river corridor.

The SCCWRP report also supports the finding of a 2020 SDSU study which found that “untreated
wastewater was found to be the main source of San Diego River pollution during storm events,” as opposed to unhoused encampments.

The SCCWRP study quantified human fecal contamination levels using HF183, a genetic marker found only in human feces. Since its first use 20 years ago, HF183 has become the tool of choice
for tracking human fecal contamination in aquatic environments worldwide. HF183 is also a marker of “fresh” human fecal inputs because it cannot survive long outside of the human body.
Lab-based decay studies of HF183 in surface water are on the order of a few days, and roughly a
week in groundwater. This ensures that, when detected, HF183 is not from sewage discharged weeks or months previously.

About Coastkeeper

Founded in 1995, San Diego Coastkeeper protects and restores San Diego County’s bays, beaches, watersheds, and ocean for the people and wildlife that depend on them. Coastkeeper balances community outreach, education, science, advocacy, and legal enforcement to promote clean water stewardship and a healthy coastal ecosystem. For more information, visit sdcoastkeeper.org.

Spencer HIggs
San Diego Coastkeeper
spencer@sdcoastkeeper.org
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