

**REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**EXECUTIVE OFFICER SUMMARY REPORT  
MAY 11, 2022**

**ITEM 7**

**SUBJECT**

San Diego River Watershed Update Part 4: Update on the Status of Investigative Order R9-2019-0014, An Order Directing the City of San Diego, the City of Santee, the City of El Cajon, the City of La Mesa, the County of San Diego, the San Diego County Sanitation District, the Padre Dam Municipal Water District, the Ramona Municipal Water District, San Diego State University, the Metropolitan Transit System, and the California Department of Transportation to Submit Technical and Monitoring Reports to Identify and Quantify the Sources and Transport Pathways of Human Fecal Material to the Lower San Diego River Watershed. (*James Smith*)

**STAFF RECOMMENDATION**

Informational item only; no recommendation.

**KEY ISSUE**

This item is an opportunity for the San Diego Water Board and members of the public to learn about progress in meeting the directives of Investigative Order No. R9-2019-0014 (Investigative Order) requiring identification and quantification of the sources and transport pathways of human fecal material to the Lower San Diego River. Discussion during this item is limited to the matters presented in the informational report, no action will be taken.

**PRACTICAL VISION**

Chapter 1 of the Practical Vision, *Strategize for Healthy Waters*, is focused on improved water quality outcomes for key Beneficial Uses and key Areas. The Investigative Order will provide valuable information to protect and improve the key recreational beneficial uses in the Lower San Diego River Watershed and in the downstream beach coastal waters at the mouth of the river.

**DISCUSSION**

**Background Information**

As part of the investigations conducted under the Surfer Health Study, wet-weather river flows in the San Diego River Estuary were sampled in the winters of 2014 and 2015, and the results showed elevated concentrations of human pathogenic viruses and bacteria, human fecal waste-specific indicators, and general fecal indicator bacteria. The indicators of human fecal waste material were observed despite the pollutant control programs, measures, and discharge prohibitions governing human fecal material discharges required under multiple permits issued by the San Diego Water Board and the State Water Resources Control Board. These findings triggered an Upstream Microbial Source Tracking Study as a follow-up to investigate the extent and magnitude of human fecal material in the Lower San Diego River Watershed.

In the Upstream Microbial Source Tracking Study which extended from the mouth of the

San Diego River to Channel Road in the City of Lakeside, 13 stations located along the mainstem of the San Diego River, or at points in major tributaries joining the river, were sampled during two storm events in the 2016 and 2017 wet seasons. The sample results indicated uniformly high enterococci concentrations and detectable levels of a human-associated fecal source marker HF183 at every station that had flowing water during both sampling events. The study indicated wet-weather river flows in the mainstem of the San Diego River caused or contributed to elevated concentrations of enterococci exceeding applicable water quality objectives in the downstream tidally influenced San Diego River Estuary and adjacent beach coastal waters at the mouth of the river. Pathogen sampling indicated the presence of norovirus, a common cause of gastro-intestinal (GI) illness in humans, in about 30 percent of the 13 stations sampled across both storms and further confirmed the presence of human fecal material in various segments of the mainstem of the Lower San Diego River. The risk of GI illness in humans after water-contact activities is elevated by the presence of human fecal waste material in the flowing water.

Sources of human waste material in the Lower San Diego River Watershed appear to be diffuse and originate from numerous locations, potentially including, but not limited to, discharges from publicly owned sanitary sewer collection systems and private sewer laterals, faulty septic systems on private property, and discharges attributable to homeless populations. As owners and operators of municipal separate stormwater sewer systems (MS4s) and/or publicly owned sanitary sewer collection systems, and as owners of land on which discharges of waste from homeless encampments may originate, each of the public agencies listed below are suspected of having jurisdiction over areas discharging human fecal waste material into the Lower San Diego River Watershed and pursuant to Water Code 13267 are held responsible for complying with the directives and provisions of the Investigative Order:

City of San Diego	County of San Diego
City of Santee	City of El Cajon
City of La Mesa	San Diego State University
California Transportation System	Metropolitan Transit System
Padre Dam Municipal Water District	San Diego County Sanitation District

The County of San Diego owns and operates an MS4 in the Lower San Diego River Watershed. Additionally, the San Diego County Department of Environmental Health (DEH) regulates discharges of waste from on-site wastewater treatment systems (OWTS) but does not itself discharge waste so is not held responsible in the Investigative Order to investigate and quantify contributions of human fecal materials to surface waters within the Lower San Diego River Watershed. However, pursuant to Water Code section 13225, San Diego County's DEH is required to report available information that can inform the investigation to quantify the extent of the contribution, if any, of human fecal material in discharges to the Lower San Diego River Watershed from OWTS.

### **Objectives of the Investigative Order**

The San Diego Water Board adopted the Investigative Order in June 2019 to direct the named public agencies to submit a workplan(s) and a Final Investigative Study Report(s) to identify and quantify relative contributions of actual and suspected sources and transport pathways of human fecal material in dry and wet weather discharges to the Lower San Diego River Watershed.

The Investigative Order mandates that the named agencies quantify the sources and transport pathways of human fecal material to the Lower San Diego River Watershed from the following sources:

- Sanitary sewer overflows (SSO) from publicly owned sewer collection systems;
- Sewage spills from privately-owned lateral sewer lines;
- Exfiltration from publicly owned sanitary sewer collection systems (a type of SSO) and privately-owned lateral sewer lines (a private lateral sewage discharge);
- Faulty privately-owned on-site wastewater treatment systems;
- Illegal connections to Municipal Separate Storm Sewer System (MS4);
- Illicit discharges to Municipal Separate Storm Sewer System (MS4); and
- Direct or indirect deposition from homeless encampments.

Data and information required by the Investigative Order will be considered and may be used by the San Diego Water Board, as well as the named public agencies, to prioritize, target and abate the sources of human fecal material discharges. The information obtained in developing the Final Investigative Study Report(s) required under the Investigative Order can also be used to evaluate effectiveness of existing management measures in preventing and/or controlling discharges of human fecal material into receiving waters of the Lower San Diego River Watershed, including downstream beach coastal waters.

### **Progress to Date**

The Responsible Parties have come together to jointly investigate the sources and quantities of human fecal material discharged to the Lower San Diego River Watershed. They have entered into cost sharing agreements to fund the Southern California Coastal Watershed Research Project (SCCWRP) to lead their efforts and conduct much of the work necessary to identify and quantify sources. The Responsible Parties have designated a Steering Committee, Implementation Committee, and a Technical Review Committee to oversee the project and have timely submitted the required semi-annual progress reports. Several investigations have been initiated and some have been completed. Studies conducted by SCCWRP have found that the microbial community coating the inside of sewer pipes - known as biofilm - has a different DNA-based community profile from the microbial community that lives inside storm drain systems. The cutting-edge use of microbial biofilms has shown the ability to consistently distinguish between signals specific to sewer collection systems from storm drain systems, shown a dilute signal in wet weather, and even allowed human waste to be differentiated from sewer collection systems vs other sources such as direct deposit or septic systems. Since the Investigative Order was issued in June 2019, the Covid-19 pandemic has caused some delays in meeting the requirement to submit a Final Investigative Study Report within 60 months of the effective date of the Investigative Order. Ken Schiff, Deputy Director of SCCWRP, will present a more detailed overview of progress in quantifying the numerous sources to the watershed.

### **LEGAL CONCERNS**

None.

**PUBLIC NOTICE**

The agenda notice for today's meeting was posted on the San Diego Water Board's website and sent to subscribers to the email list for Board meetings. This satisfies the Bagley-Keene Open Meeting Act requirements to publish the meeting notice and agenda.

**SUPPORTING DOCUMENTS**

None.