

Orange County Sanitation District
Environmental Water Quality, Stormwater Management, and
Urban Runoff Policy

Summary Policy Statement

Orange County Sanitation District (OC San) will collaborate with regional stakeholders to accept up to ten (10) million gallons per day of dry weather urban runoff at no cost to the dischargers through its permit-based Dry Weather Urban Runoff Diversion Program (DWURD Program). The primary objective of the DWURD Program is to improve water quality in streams, rivers, and beaches in OC San's service area without adversely impacting the OC San occupational safety, collection and treatment systems, reuse initiatives, or permit compliance. Unauthorized discharge of urban runoff to OC San is strictly prohibited.

Background

OC San is a regional governmental agency principally chartered to protect public health and the environment through an extensive regional sanitary sewer system and a highly effective wastewater treatment operation. The governing Board of Directors (Board) has refined this role to include the recovery and utilization of resources from wastewater for the public good. In addition to beneficial reuse of biosolids and responsible ocean discharge, OC San delivers high-quality treated wastewater to Orange County Water District's (OCWD) Groundwater Replenishment System (GWRS) for advance treatment and purification followed by storage in the Orange County groundwater basin.

OC San operates its regional wastewater collection system in accordance with its Sewer System Management Plan which was developed in compliance with the California Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ. The Board periodically updates OC San's Wastewater Discharge Regulations Ordinance (Ordinance) to set uniform requirements for all users of OC San's system and enable OC San to comply with all applicable state and federal regulations. The Ordinance establishes limits on all wastewater discharges which may adversely affect OC San's system and includes language that prohibits sewer users from discharging groundwater, stormwater, surface runoff, or subsurface drainage to the sewer without written authorization or a valid permit. Uncontrolled discharge of any type is strictly prohibited and any person who violates any provision of the Ordinance is subject to administrative, civil and criminal penalties.

Most of the local sanitary sewer systems within OC San's highly urbanized service area are owned and operated by cities, water districts, or sanitary districts. These local systems are designed to transport wastewater from homes and businesses to OC San's regional sewers. These local and regional wastewater systems are designed to be wholly separate from Orange County's Municipal Separate Stormwater Sewer System (MS4),

which is a system of conveyances that includes roads, streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains that carry surface runoff into receiving waters and is regulated by the Santa Ana Regional Water Quality Control Board. Throughout the year, dry and wet weather urban runoff are collected through the MS4 and discharged along the coastline.

During wet weather, the vast majority of urban runoff is comprised of stormwater from rainfall that either travels at a flow rate that does not allow enough time to soak into the ground or whose volume has exceeded the ability of the soil to hold any more moisture. In communities with a high percentage of covered or impervious surfaces, the runoff volume and velocity can be considerably greater when compared to rural areas. Additionally, sheets of runoff in these communities can pick up pollutants and debris from transportation, construction, industrial, and residential sources as they travel by gravity toward storm drains or other low points. Stormwater runoff carries trash, debris, bacteria, chemicals, oil, silt, sediments, microplastics, and other common and emerging contaminants and is the responsibility of MS4 permittees, who typically have jurisdiction over land use practices and flood control.

During dry weather, accumulation of surface pollutants is typically managed by the MS4 through managerial Best Management Practices (BMPs) such as street sweeping, spill prevention, and waste reduction campaigns. However, pollutants that are not removed by the BMPs can be carried by runoff from sources such as excess outdoor irrigation into storm drains and discharged along the coastline.

In response to the significant and persistent adverse impacts from urban runoff to coastal beaches and waters, OC San sought support from the California legislature to accept controlled discharge of surface urban runoff into its wastewater system and was authorized in April 2000 to initiate a permit-based DWURD Program to accept up to three (3) million gallons of dry weather flow per day. OC San Board Resolution No. 00-04 allowed local agencies to apply for a Dry Weather Urban Runoff (DWUR) Permit where there was not an economically or practically feasible alternative and permittees are subject to requirements of the Ordinance.

Since its inception, the DWURD Program has significantly improved beach water quality throughout OC San's service area as evidenced by excellent ratings in Heal the Bay's Annual Beach Report Cards and a notable decrease in water quality-based beach closures. In June 2013, OC San modified the Dry Weather Urban Runoff Policy (Resolution No. 13-09) to cap discharges received to ten (10) million gallons per day (MGD) and waived fees associated with the program until discharges exceeded 10 MGD, or until the policy is revised. The Board established an action threshold of 9 MGD to trigger revisiting the policy.

In addition to DWUR Permits, OC San's Ordinance allows for normally prohibited wastes such as groundwater, stormwater, surface runoff, and subsurface drainage to be discharged to OC San through a Special Purpose Discharge Permit (SPDP) or written

authorization from OC San when no alternate method of disposal is reasonably available to mitigate an environmental risk or health hazard.

Current Situation

As of April 2021, OC San has issued 21 DWUR Permits for diversions owned and operated by the City of Huntington Beach, the City of Newport Beach, OC Public Works, Irvine Ranch Water District, and a LLC responsible for the areas in and around Pelican Point community. For the July to December 2020 reporting period, OC San received on average 1.4 MGD from these facilities, which is well below the current 10 MGD policy cap and 9 MGD action threshold. Since the program's inception in 2000, the Dry Weather Urban Runoff Program has treated over 10 billion gallons of urban runoff.

Under special circumstances, OC San may also accept runoff on a limited-term and limited-volume basis through the SPDP or direct authorization process if there is adequate capacity, the runoff/wastewater meets applicable effluent discharge standards, there is no practical alternative method of disposal, and the runoff/wastewater is captured and held until it can be safely discharged to OC San.

In combination, these practices have enabled responsible management of persistent urban runoff challenges in OC San's service area and support a thriving and healthy local economy.

Key Issues for the Future

Since the inception of OC San's DWURD Program, the program success has depended on collaboration among stakeholders to improve beach water quality, urban runoff diversion water quality, coordinate flow management, and minimize any potential adverse impact on ocean discharge, biosolids management, and potable reuse.

OC San's enhanced source control program and vigilant operations provide a solid foundation for GWRS water's safety and reliability. Much of the current urban runoff diversion is attributable to Plant No. 2 in Huntington Beach which does not provide source water for OCWD. However, as OC San and OCWD progress toward maximizing potable reuse at GWRS to 130 MGD in 2023, OC San is keenly aware of the critical role of source water quality and the need for a region-wide commitment to prevent Constituents of Emerging Concern from entering OC San's system.

Although OC San will continue to accept controlled discharge from DWURDs in accordance with Resolution No. 13-09 and support long-term integrated regional water management, OC San recognizes that urban runoff is a well-established carrier for surface contaminants. The best available scientific studies continue to highlight the need for enhanced surveillance and best management practice for pollution control prior to discharge to OC San consistent with MS4 permit requirements of diversion owners. For example, a 2020 study by the San Francisco Estuary Institute showed that runoff into San Francisco contained over 300 times the amount of microplastics when compared with treated wastewater. A 2021 study that was co-authored by the Southern California

Coastal Research Project showed that tire debris in urban runoff released a rubber preservative (6-PPD) that is highly toxic to aquatic life in the Pacific Northwest.

Moreover, upon completion of the industry-leading GWRS Final Expansion, the system will be fully built out, both in terms of performance as well as capacity. Adding significant flows beyond the current allotment will increase OC San's ocean discharge.

Initiatives to Support Progress Toward the Policy Goal

Initiative: Issue dry weather urban runoff connection permits to accept up to a total of ten million gallons per day of controlled discharge of dry weather urban runoff where existing conveyance capacity exists, and the constituents within the flow will not adversely impact the OC San.

Initiative: Safeguard OC San system against uncontrolled and unregulated discharge by supporting responsible industry practices for flow management and urban runoff pollutant reduction at the source. Utilize OC San's pretreatment expertise to support effective urban runoff best management practices and special purpose discharge requests among OC San's regional stakeholders.

Initiative: Support responsible and practicable urban runoff management and reuse legislations and regulations.