

IRVINE RANCH WATER DISTRICT POLICY POSITION SANITARY SEWER OVERFLOWS

June 3, 2005

Issue Summary:

It is a priority of the Irvine Ranch Water District to prevent sanitary sewer overflows. Implementation of prudent policies and execution of operating and maintenance plans will promote the District's goal of zero sanitary sewer overflows.

Background:

Properly designed, operated, and maintained sanitary sewer systems collect and transport sewage from residences, industrial and commercial buildings to publicly owned treatment works (POTWs). Occasionally, sewers unintentional discharge raw sewage due to a number of reasons. Sanitary sewer overflows (SSOs) consist of domestic sewage flow and industrial and commercial wastewater, depending on the pattern of land uses in the wastewater collection system tributary area. SSOs can often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen demanding organic compounds, oil and grease and other pollutants. Impacts from SSOs may range from a mere nuisance to violating health standards to threatening public health, adversely affecting aquatic life, and impairing the public's recreational use and aesthetic enjoyment of surface waters.

SSOs occur throughout Orange County, but some wastewater collection systems are more susceptible to overflows than others. Older systems and systems located near many trees are particularly prone to overflows. The causes of sanitary sewer overflows are numerous, and include:

- Blockages from grease build-up, tree roots, and other debris;
- Failures in manhole structures;
- Vandalism;
- Damage by excavation contractors;
- Infiltration of runoff into sewer in excess of the sewer's capacity;
- Mechanical failures at Pump Stations; and
- Pipeline failures at gravity lines or force mains.

Most of these SSOs are preventable with proper operation and maintenance of the wastewater collection system, appropriate source control measures to minimize potentially harmful discharges, and accurate locating and identification of sewer pipelines. In order to prevent SSOs and minimize the environmental impacts of any that may occur, the Irvine Ranch Water District (IRWD) has implemented an aggressive and systematic program to ensure that the integrity of the wastewater collection system is maintained at all times.

IRWD has also developed a Sewer System Management Plan (SSMP), as required by the Santa Ana Regional Water Quality Control Board. The basic elements of the IRWD's SSMP are as follows:

- Design and Performance Provisions;
- Monitoring, Measurement and Program Modifications;
- Overflow Emergency Response Plan;
- Fats, Oils, and Grease Control Program;
- System Evaluation and Capacity Assurance Plan;
- SSMP Program Audits; and
- Communications

IRWD has been very successful in controlling the number of SSOs within its service area. Though IRWD's wastewater collection system is still relatively young, the low rate of SSOs is attributable to proper design, operation, and maintenance of its wastewater collection system, including IRWD's aggressive preventative maintenance program. While the focus of the collections system operation is on preventing SSOs, IRWD has developed and implemented a comprehensive program to ensure that if an SSO occurs, it is expeditiously mitigated thereby minimizing the impacts on public health and the environment.

Policy Principles:

- IRWD has experienced relatively few SSOs due to the proper design, operation, and maintenance of its wastewater collection system.
- IRWD is committed to preventing SSOs and has developed a Sewer System Management Plan to prevent SSOs from occurring, and to minimize the health and environmental impacts.
- IRWD will allocate the appropriate level of District resources to ensure that SSOs are prevented and, if occur, are mitigated in an environmentally sensitive, cost-effective, and timely manner.
- In order to reserve the carrying capacity of its wastewater collection system for the safe collection and transport of sewage to a treatment facility, IRWD discourages and will seek to eliminate the diversion of stormwater from roof drains, yard drains, and pool deck drains into the wastewater sewer collection system.
- IRWD specifically prohibits the purposeful discharge of stormwater from construction sites into the wastewater collection system, unless otherwise approved on a case-by-case basis.