

Sewer System Management Plan Five Year Update June 2020



Introduction and Background.

The Crestline Sanitation District (District) was formed in December 1945 under the San Bernardino County Board of Supervisors to provide sewer collection and treatment service to the Lake Gregory area located in the mountains of the County of San Bernardino California. As of August 3, 2010, the Crestline Sanitation District became an independent Special District, governed by an elected five-member Board of Directors. The District's Mission Statement is "To reclaim community resources and protect our mountain environment".

The District presently provides collection, treatment and reuse of highly treated wastewater for a population of about 12,000 throughout their service area consisting of about 6,600 acres. District facilities include over 384,000 feet of sewers, three pump stations, three treatment plants and an effluent outfall system over 34,000 feet in length. In addition to routine and standard operations and maintenance of these facilities, the mountainous terrain and climate extremes can provide a challenge to the staff.

The SSMP is intended to provide focus for staff to continue good work and implement improvements of the wastewater collection system. This includes continued good performance, safety, levels of service, and use of resources. By proper management, operation and maintenance of the collection system sanitary sewer overflows can be minimized and their impacts mitigated.

The SSMP has no major updates. Climate change section was added to quantify what we are doing for climate change.

There are some Key Performance Indicators KPIs that have been updated and recorded.

- SSMP Accomplishments
- SSMP Record of Spills
- Odor Complaints
- Recording of SSMP Tailgates
- Tracking of Inventory for emergency repairs.
- Updated Emergency Spill Procedures
- CIWQS has been updated each year

Crestline Sanitation District - Sewer System Management Plan (SSMP)

Climate Change in Wastewater.

The District presently provides collection, treatment and reuse of highly treated wastewater for a population of about 12,000 throughout their service area consisting of about 6,600 acres. District facilities include over 384,000 feet of sewers, three pump station, three treatment plants and an effluent outfall system over 34,000 feet in length.

Climate change is considered to be one of the main challenges to wastewater systems in future decades. It is estimated that climate change will have a profound effect on wastewater collection and treatment plants.

- More extreme weather increasing inflow and infiltration for the District.
- New infrastructure will need to be engineered with the idea of more water entering the system during massive “100” year storms.

What Crestline Sanitation District is doing to combat climate change.

- Building a new primary clarifier to help ensure more settling and BOD removal during storm events.
- Staffing 24 hours during large storm events to eliminate Sanitary sewer overflows.
- Aggressive slip lining program
- CCTV year around to find problems
- Smoke testing in areas thought to be subject to high I and I

Summary

Climate change is considered to be one of the main challenges to urban wastewater systems in future decades. It is estimated that climate change has a dual effect on wastewater treatment (WWT) plants. The processes occurring in a wastewater treatment plant (WWTP) are subsequently affected by climate change; more extreme weather events and earlier snowmelt runoff will lead to more untreated sewer overflows, increased flooding, etc. Due to increased scarcity of water

resources, wastewater reuse will become more necessary as climate change accelerates. During wastewater treatment, greenhouse gases (GHGs) including carbon dioxide (CO₂) from aerobic (oxidation processes), methane (CH₄) from anaerobic processes associated with nitrification/ denitrification (NDN) processes, as an intermediate product, can be emitted to the atmosphere.

We are planning on resilience as the capacity to anticipate and prepare for, cope with, recover, and learn from this.

We define adaptation as actions, specific and tangible intended to reduce vulnerability, increase resilience, and adapt to the impacts of climate change. Any new design in our wastewater systems is to withstand and enhance wastewater system resilience under a changing climate and how wastewater systems might adapt to climate impacts We intend to build resilience, and adapt to climate change in practice.