



Bear Creek Watershed Association

Wastewater Treatment Facility Information Sheet 08

Conifer Metropolitan District & Conifer Sanitation Association

Facility: Treatment Plant Conifer Metropolitan District; Lift Station serves separate service area for Conifer Sanitation Association

Conifer Sanitation Association Lift Station:	A lift station and force main connect the Conifer Sanitation Association (CSA) to the Conifer Metropolitan District (CMD) or the Conifer Town Center for wastewater service. The wastewater distribution system requires a return flow of treated wastewater from the CMD treatment plant back upstream to the CSA discharge point because of the water rights decree. As such, the CSA will own and operate the lift station and force main. CSA has a fixed the capacity of 19,000 gpd. The total service area of the CSA is approximately 61 acres. The CSA facility consists of a 20-gpm lift station and force main that conveys the entire sewage volume from the current CSA plant site for treatment at the regional CMD facility. The grinder pumps have a capacity of 20 gpm each, which is greater than the average equalized influent rate of 13.1 gpm. This will provide a conservative pumping rate of 35% above the average influent flow rate. The lift station will operate automatically with a float mechanism provided by ABS to trigger operation. The pumps will be able to pump the entire influent flow rate independently of each other providing a 100% redundancy. A 7'-6" diameter precast manhole, which serves as the wet well on the existing CSA site. This manhole will have an interior depth of 10 ft. The wet well will have a working depth of 5.2 ft. It has a working volume of 1,833 gallons, equal to 28 minutes of the peak influent flow rate. Overflow containment is stored in three existing 6,000-gallon tanks on site, which will provide an additional 3-3/4hrs of emergency storage at peak flow rates. This provides a 4 hr emergency response time to the facility at peak flow rates, and 20 hrs at the average flow rate.
TYPE OF PERMIT - CMD	Domestic - Minor Municipal, Mechanical Plant; Domestic Minor, Renewal Groundwater-State Permitting Only
Permit Number:	CMD - COX-047392
Permit Issue Date	12/23/2013
Permit Expire Date	1/31/2019
Facility Location:	NW 1/4 of SE 1/4 of Section 41, Township 6 South, Range 71 West; Sixth Principal Meridian; Jefferson County. The WWTF is located at 10420 South US Highway 285, Conifer, Colorado 80433
SIC Code:	4952 Sewerage Systems
Facility Classification:	Class B per Section 100.5.2 of the Water and Wastewater Facility Operator Certification Requirements
Facility Hydraulic Capacity:	0.0435 Million Gallons per Day (MGD)
Facility Organic Capacity:	251 lbs. BOD5 per day for organic loading (30-day average).

Conifer Metropolitan District & Conifer Sanitation Association

Treatment Works:	The CMD consists of the following treatment processes: Influent and effluent flow measurement will be measured by a 6-inch magmeter and recorder; Preliminary treatment will be provided by a mechanical rotary screen with 2 millimeter (mm) slot openings; Secondary treatment will be provided by two separate parallel trains each consisting of an 15,000-gallon anoxic basin, 33,150-gallon complete mix aeration basin, and the clarification shall be provided by two Zenon ultra filtration membrane units; Disinfection will be provided by redundant Aquafine ultraviolet light system; An effluent pump station fitted with two 50 gallon per minute (gpm) pumps shall convey treated effluent to the exfiltration gallery for discharge to groundwater; The exfiltration gallery consists of approximately 12,000 square feet of recharge area divided into four separate areas for independent dosing; Biosolids shall be stabilized by two 33,150-gallon aerobic digesters and disposed of by a local land application.
Service Areas:	Conifer Metropolitan District North Turkey Creek Regional Wastewater Treatment Plant Utility Plan. See BCWA Policy 9 - Aspen Park Wastewater Strategy for defined service area.
Compliance Schedules	None
Chloride Variance	The Water Quality Control Division (Division) has granted a "variance" to this facility because it cannot comply with the chloride effluent limitation of 250 mg/L. The source of chloride is either the raw water and/or chemical addition used to improve the quality of the drinking water, e.g., drinking water treatment or water softeners. This renewal permit will include a "Report Only" for chloride.
Groundwater Classification for CMD Discharge	Groundwater below Conifer Metropolitan District WWTF does not have a "site-specific" classification. The Division shall implement the Interim Narrative Standards that are in "The Basic Standards for Ground Water" (Regulation # 41) to establish ground-water protection. The groundwater standards are included in Regulation No. 41, Tables 1 through 4. These numeric standards are utilized to establish compliance limitations. Compliance limitations shall be at the point of discharge (subsequent to treatment) and prior to subsurface discharge, identified in the permit as 001A.
Industrial Pretreatment Program	None
2014 Service Area Population Estimate:	CMD - 10 EQRs, Retail, 10+ businesses (1,250 Transients/day, Yearly Average); CSA - 4 EQRs, Retail, 4+ businesses (450 Transients/day, Yearly Average)
2035 Service Area Population Estimate:	No population estimates; retail EQRS fixed for CSA and could expand to 20 EQRs for CMD
2014 Average Daily Effluent Treated:	0.0039 MGD
Plant Expansion:	None planned
Discharge Point:	Outfall 001A: following disinfection and prior to discharge to groundwater. Latitude: 39° 31' 49.83" North, Longitude: 105° 18' 17.21" West
Waterbody Identification:	North Turkey Creek
Receiving Water Designation (Segment):	CSA - 6b, Mainstem of North Turkey Creek, from the source to the confluence with Turkey Creek. CMD - Groundwater
Receiving Water Classification (Segment):	Aq Life Cold 1, Recreation E, Water Supply, Agriculture

Conifer Metropolitan District & Conifer Sanitation Association

Threatened and Endangered Species	None
Control Regulation #74	Because the discharge from this facility ultimately impacts Bear Creek Reservoir, it is subject to the Bear Creek Control Regulation, Regulation 74. This regulation imposes a total phosphorus concentration limitation of 1.0 mg/l on all dischargers in the watershed. In addition, the regulation specifies a mass limitation for dischargers of record.
Control Regulation #74 Wasteload Allocation	The CMD permit only lists 40 pounds of total phosphorus. The actual cumulative annual limitation is 80 pounds of total phosphorus; The Association recommended the 40 annual pounds total phosphorus allocation assigned to the Conifer Sanitation Association in the Control Regulation be assigned to the Conifer Metropolitan District for a total allocation to the CMD of 80 pounds.
Control Regulation #74 Total Phosphorus Limit	0.5 mg/l as monthly average
303(d) Listing Regulation #93	None
Temporary Modifications	None
Water Quality Pollutants of Concern	phosphorus, nitrogen, temperature, ammonia.
Water Quality Assessment	WQCD 12-23-2013 factsheet completed for CMD; Liftstation report available for CSA
BCWA Factsheets	BCWA Factsheet 26 BCW Demographics, BCWA Factsheet 41 Wastewater Demographics

