

NFRWQPA 2011 WATER QUALITY PLAN UPDATE
Major Point Source Inventory Data

Operating Agency: *City of Ft. Collins*

Utility Plan Approved: 1/2009

Mulberry: CDPS Permit #: CO-0026425

Permit Expires: 10/31/2013

Drake: CDPS Permit #: CO-0047627

Permit Expires: 10/30/2013

Description of Treatment Facilities: Mulberry WRF (MWRF): primary sedimentation, trickling filtration, intermediate clarification and activated sludge secondary treatment in series, followed by secondary clarification, and UV disinfection. Drake WRF (DWRF): primary sedimentation, biotowers, activated sludge, secondary clarification, chlorination, and dechlorination.

Treatment Facility Location: MWRF: 920 Mulberry St., SE ¼, SE ¼, Section 12, T7N, R69W. DWRF: 3036 East Drake St., E ¼, SE ¼, Section 20, T7N, R68W.

Discharge Location: MWRF outfall 001A to Segment 11, Cache la Poudre River; DWRF outfall 002D to Segment 11, Cache la Poudre River; DWRF outfall 002B to Fossil Creek Ditch; and DWRF outfall 005B to Rawhide Power Plant.

Stream Segment Classification: COSPCP11, Cache la Poudre River Segment 11, Class 2 Warm Water Aquatic Life, Recreation Class E, and Agriculture.

Service Area Population:

Existing	2015	2020	2025	2030
126,438	132,876	139,314	145,752	152,190

Capacities:

	Design Capacity	Existing	2015	2020	2025	2030	Year at 80% Design	Year at 95% Design
Flow (mgd)	29*	22.9	24.0	25.1	26.2	27.3	2012	>2025
Organic (lbs./day BOD ₅)	67,007	43,178	45,206	47,234	49,262	51,290	>2025	>2025

* MWRF permitted for 6 mgd, DWRF permitted for 23 mgd.

Note: WW flow (mgd) based on domestic (MWRF + DWRF) and Anheuser-Busch contract loading of 1.8 mgd. BOD based on total lbs. /day (MWRF + DWRF) and Anheuser-Busch contract loading of 11,360 lbs./day.

Biosolids treatment and disposal: Sludge from MWRF is transferred to DWRF and mixed with influent. The primary sludge and scum are cleaned by the sludge strain press and then conveyed to the three anaerobic digesters for stabilization. Intermediate sludge and waste activated sludge are thickened in the dissolved air floatation thickener (DAFT) before being sent to the digesters. Digested solids are dewatered via centrifuge and the remaining biosolids are trucked to the Meadow Springs Ranch biosolids facility where they are land applied. A Class B biosolids product is produced from the solids treatment process.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-26425 for the Mulberry WRF and Permit #CO-0047627 for the Drake WRF.

Estimated 5-year construction needs: In 2009 the City received Site Location Approval for modifications to the MWRF which include the conversion of the secondary treatment process from trickling filter/activated sludge process to a 3-stage activated sludge process with anaerobic, anoxic, and aeration zones. The City had also previously received approval for the installation of an odor control system at the facility. At the direction of CDPHE, 3-stage activated sludge process is under design for DWRF's north process trains to provide additional redundancy for MWRF. Construction is anticipated for 2012. In addition, 3-stage improvements are scheduled for DWRF's south process train in 2015 to comply with CDPHE's redundancy requirements.