

**NFRWQPA 2011 WATER QUALITY PLAN UPDATE**  
**Major Point Source Inventory Data**

Operating Agency: *St. Vrain Sanitation District*      Utility Plan Approved: 3/2009 and Amended 6/2010

CDPS Permit #: CO-0041700

Permit Expires: 6/30/2010

Description of Treatment Facilities: Headworks trash removal, two 1.5 mgd extended aeration lagoon and clarifier modules, ultra violet disinfection, and solids storage and handling facilities utilizing two lagoons from the original plant.

Treatment Facility Location: NW ¼, SE ¼, Section 31, T3N, R67W

Discharge Location: Oxbow Lake then to St. Vrain Creek, NW ¼, SE ¼, Section 31, T3N, R67W.

Stream Segment Classification: Oxbow Lake: St. Vrain Segment 06 – COSPSC06, Use Protected, Class 2 Warm Water Aquatic Life, Recreation Class E, and Agriculture. St. Vrain Sub-basin Segment 03 – COSPSV03, Class 1 Warm Water Aquatic Life, Recreation Class E, and Agriculture

Service Area Population: estimated population equivalents

Existing	2012	2017	2022	2027	2032
24,598	28,896	37,780	51,479	64,175	76,601

Capacities:

	Design Capacity	Design Capacity Under Construction	Existing	2017	2022	2027	2032	Year at 80% Design	Year at 95% Design
Flow (mgd)									
AADF	2.4	4.80	2.40	3.40	4.80	5.80	6.90	2019	2022
MMDF	3.00	6.00	3.00	4.25	6.00	7.25	8.63		
Organic (lbs./day BOD <sub>5</sub> )									
Ave. Ann.		8,500	4,023	6,650	9,232	11,357	13,481	2019	2022
Max. Month	5,755	11,540		8,312	11,540	14,196	16,852		

Note: 2010 PEL document based on 10 year “Maximum Month” design flow of 6.0 MGD.

Biosolids treatment and disposal: Biosolids treatment consists of a 1.2 MG aerobic digester. Biosolids are digested for a minimum of 60 days in the digester and are transferred to a storage lagoon where the solids are aerobically digested further. Once the solids are digested and concentrated to at least 3% solids, they are land applied by an independent contract hauler.

Treatment level: The degree of treatment required and effluent limitations are outlined in Permit #CO-0041700.

Estimated 5-year construction needs: The District has begun construction of an expansion to 6.0 mgd that will include:

- improvements to the headworks
- construction of two new 3 mgd capacity deep-basin oxidation ditches
- construction of two new secondary clarifies
- expansion of the ultraviolet light disinfection system
- installation of a new outfall pipe with direct discharge to St. Vrain Creek
- construction of a new biosolids treatment system
- renovation of the operations building.

Construction on this expansion is expected to be complete in 2012. Future collection system improvements and future plant expansions are outlined in the Utility Plan approved in March 2009 and amended in June 2010.