



WASTEWATER JOB DESCRIPTION

Our general duties are as follows: 1) to maintain collection mains so as to minimize property damage and/or environmental hazards relating to the transportation of wastes from their source to the treatment plant; 2) treat and land apply biosolids waste so their disposal meets State and Federal regulations; 3) treat and discharge water to the Yampa River that meets State and Federal regulations; 4) maintain the treatment plant, grounds, and all related equipment.

	2015	2014	2013	2012	Percent Change Per Year		
					14-15	13-14	12-13
Effluent flow (million gallons)	307	304	312	318	+0.98	-2.6	-1.9
Effluent flow (Avg. Daily MGD)	0.840	0.832	0.854	0.869	+0.95	-2.6	-1.7
Biosolids Produced (dry metric tons)	236	264	279	263	-10.6	-5.4	+5.7
Biosolids Land Applied (dry metric tons)	47	59	223	123	-20.3	-73.5	+44.8
Septage Received (gallons)	333,880	579,050	847,605	1,208,396	-42.3	-31.7	-29.9

There were four (4) new sewer tap permits issued in 2015 compared to one (1) in 2014.

A. Treatment - Safety, regulatory, and preventative:

1. **Biosolids:** During the 2014-2015 seasons, wastewater employees successfully treated, dried, and land applied 47 dry metric tons of biosolids. Of the 236 dry metric tons of biosolids pumped from the treatment plant, 189 dry metric tons were volatilized. Working with Jerry Thompson, who used his tractor and manure spreader, the City land applied the 47 dry metric tons of biosolids on the north half of the City's wheat field. The Hard White Winter Wheat harvest yield from the previous year was 85 bushels/acre.
2. **Safety:** Held quarterly safety meetings for wastewater employees. Presented extensive safety training for summer workers. Our annual CIRSA safety inspection turned up three minor infractions. All three infractions were immediately resolved. Wastewater personnel also completed all required CIRSA safety training.
3. **Permit:** We continued monitoring for nutrients in our Effluent, as well as up river and down river from the plant. This additional monitoring includes Total Phosphorus, Nitrate + Nitrite, Ammonia, and Total Kjeldahl Nitrogen (Organic Nitrogen). Our new permit goes into effect March 01, 2016, and even though nutrient limits aren't in the new permit, the monitoring of nutrients (through testing) is still required.
4. **Education:** One operator received his "D" Level Operator Certification and his Level "1" Wastewater Collection Systems Certification; and one operator received his Level "4" Wastewater Collection Systems Certification.

B. Collection - Preventative:

1. Line locates in 2015 consumed 116 man hours, up from 104.5 in 2014.
2. Cleaning trouble spots, siphon lines, and one, two, and three year hydraulic cleaning projects of the City mains in 2015 consumed 610 man hours for an approximate 116,511 ft. of pipe (22.1 miles).
3. Gathering information on sewer mains for the Master Plan consumed 24 man hours.

C. Collection - Corrective

1. The plan to video-inspect all sewer lines in the City is an on-going project.
2. The wastewater department received 21 back up complaints, down from 23 in 2014. 76.5 man hours were used to investigate these complaints, up from 30 used in 2014.
3. Of the 21 complaints, 19 were determined to be the homeowner's issue while two of them were our responsibility. Both of those were handled by City personnel.

D. Miscellaneous:

1. Assisted other City departments, local plumbers, local utility companies, and the Town of Maybell as needed. Analyzed samples for Maybell each month.
2. Installation of the solar array at the lagoons was finalized in early 2015.

Recap of 2015 Goals

1. Hook up loss of vacuum alarms for the CL2 and SO2 injectors. *Postponed to 2016*
2. Replace upper sections of recycle headers on south aeration ditch. *Postponed to 2016*
3. Install new RTU at wastewater treatment plant. *In progress*
4. Install new RTU at Ranney Lift Station. *Postponed until 2016*
5. Complete wiring of new PLC's. *In progress*
6. Write additional software for new PLC's. *In progress*
7. Set up hydraulic sewer cleaning and herbicide application documentation on GIS. *Complete*
8. Video inspection of all root prone areas. *Complete*

2016 Goals

1. Finish ongoing projects.
2. Perform video inspection of Shadow Mountain Village.
3. Complete Wastewater Master Plan.

Summary for 2015

We continue to meet permit discharge requirements with no trouble. We are continuing additional monitoring for nutrients not only in our Effluent but also up river and down river from the Wastewater Plant. A Master Plan is being developed to determine which treatment additions will need to be added to the wastewater treatment plant when the nutrient monitoring becomes nutrient limits in our permit.

The City wastewater infrastructure was maintained and in many cases improved. In 2015, 307 million gallons of sewage was treated and very high quality effluent was returned to the Yampa River. 47 dry tons of biosolids were land applied. The crop yield from the previous year's application was 85 bushels/acre of Hard White Winter Wheat.

Having great cooperation from all departments within the City, and having a competent staff contributed to the success of the wastewater group in 2015.