

INTRODUCTION

The original City of Harrisburg Wastewater Treatment Facility began operating in 1992 (Waste Discharge Permit No. 101626). The discharge permit allows an irrigation period from May through October. The Reclaimed Water Use Program for the original facility consisted of wheel line irrigation of 70 acres planted in white clover and perennial pasture grass. The land was leased to a farmer who grazed sheep on the area.

During 2004 the wastewater treatment facility was expanded to double its capacity. The irrigation crop was changed to Poplar trees and a new Reclaimed Water Use Plan was completed in December 2004. The city currently irrigates 63 acres of Poplar trees with reclaimed water. Refer to Figure 1 for a site plan of the wastewater treatment and reuse facilities.

A condition of the Discharge Permit requires that the City annually, at the end of each calendar year, no later than January 15, provide DEQ with a summary of the previous 12 months of reclaimed water activities. This report has been prepared to satisfy that requirement. The report follows each previous year's submitted format and the recommended format and guidelines provided by DEQ.

1) QUANTITIES OF RECLAIMED WATER APPLIED

During the 2014 irrigation period the City applied a total of 9.73 inches/acre of reclaimed water. The total rainfall during the irrigation period was 8.28 inches. The total water applied for the irrigation period was 17.98 inches/acre. Following is a summary of data and information regarding the reclaimed water applied:

- a) Total crop area that received reclaimed water: 63 acres (see Figure 1).
- b) Monthly reclaimed water application amounts: See Table 1.
- c) Monthly supplemental water application: None
- d) Monthly rainfall amounts: See Table 1.
- e) Monthly TN loading: See Table 2.
- f) Total annual reclaimed water application: 9.73 In/acre (see Table 1).
- g) Annual supplemental water application: None.
- h) Annual hydraulic loading including reclaimed water and rainfall: 17.98 inches/acre (see Table 1). The hydraulic loading rate is less than the estimated crop demand of 28.30 inches/acre.
- i) Annual TN loading: 47.64 lbs./acre (see Table 2).

2) SOIL TEST DATA

- a) Time of Sampling: Soil samples were collected from the irrigated areas in July and October of 2014.
- b) Samples were taken at depths of: 0-6, 6-12, 12-24, and 24-36 inches.
- c) Test procedures: Standard soil testing.
- d) Testing laboratory: Oregon State University, Department of Crop Soil Science, Central Analytical Laboratory.
- e) Test results: See Appendix B. The results show no excess of fertilizer on the site.

3) FERTILIZERS APPLIED

The irrigation area was not fertilized during 2014.

4) OTHER SOIL AMENDMENTS

No other soil amendments were applied during 2014.

5) TYPE OF EFFLUENT REUSE

The entire 63 acre irrigation area is planted in Poplar trees at 12 foot spacing with a 5-foot wide grass cover strip between the rows of trees. The grass strips were mowed several times during the growing season as needed to maintain the grass height less than 12 inches.

6) SYSTEM FAILURES

There were no failures causing reclaimed water to be discharged into unauthorized areas.

7) VIOLATIONS OF OREGON REUSE RULES

The system was operated without any violations of the Oregon Reuse Rules. Appendix C contains analysis reports for well water samples taken during June and September of 2014 from a well adjacent to the irrigation area.