

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 Figures 1 & 2 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.

Attached to this report is the Annual re-use worksheet that DEQ has supplied to other municipalities recently.

1) QUANTITIES OF RECLAIMED WATER APPLIED

During the 2016 irrigation period the City applied a total of 15.50 inches/acre of reclaimed water. The total rainfall during the irrigation period was 15.78 inches. The total water applied for the irrigation period was 31.28 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: 15.50 in/acre (see Table 1).
- g) Annual supplemental water application: None.
- h) Annual hydraulic loading including reclaimed water and rainfall: *City staff failed to collect NPDES required samples*
- i) Annual TN loading: *City staff failed to collect NPDES required samples*

2) SOIL TEST DATA

- a) Time of Sampling: Soil samples were collected from the irrigated area during October of 2016.
- b) Samples were taken at a depth of: 12-18 inches.
- c) Test procedures: Standard soil testing.
- d) Testing laboratory: A & L Western Agricultural Laboratories, Inc. Portland, Oregon
- 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 2016.

4) OTHER SOIL AMENDMENTS

No other soil amendments were applied during 2016.

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. Any damaged or distressed trees were removed for irrigation area. All 63 acres of the trees had suckers and low hanging branches removed and the grass strips were mowed several times during the growing season as needed to maintain a grass height of less than 12 inches.

6) SYSTEM FAILURES

There were no failures causing reclaimed water to be discharged into unauthorized areas. However, during the ice storm on or about December 20th 2016, some of the Poplar trees sustained heavy damage. These trees will be removed or pruned and new cuttings will be planting to take their place in 2017.

7) VIOLATIONS OF OREGON REUSE RULES

The system which historically has operated without violations, failed to collect all the required samples during 2016.