

SECTION 1 EXECUTIVE SUMMARY

Table 1-1. Basic Information

Facility Name:	Columbia Boulevard Wastewater Treatment Plant (CBWTP) - Principal Plant
Address:	5001 N. Columbia Blvd., Portland, OR 97203
NPDES Number:	101505 (exp. 10/31/2002-pending renewal) EPA Ref. OR-002690-5
Facility Name:	Tryon Creek Wastewater Treatment Plant (TCWTP)
Address:	195 Foothills Road, Lake Oswego, OR 97034
NPDES Number:	101614 (renewed November 4, 2004) EPA Ref. OR-002689-1
Contact:	Mark P. Ronayne, Biosolids/Reuse Program Manager, 503-823-2437
Reporting Period:	January 1, 2005 through December 31, 2005
Biosolids Production-05:	13,710.9 dry tons (12,436.8 tonnes) bulk Class B-Land Applied at Madison Farms
Contract Hauler:	Gresham Transfer, Inc. 503-255-7900
Land Applier:	K&S Madison, Inc. (Kent Madison) 541-376-8107-Madison Farms

INTRODUCTION

The City of Portland recycled bulk Class B biosolids as a valuable soil amendment at Madison Farms in 2005. This report describes solids quality and indicates how the City beneficially recycled biosolids produced in 2005 in compliance with Oregon DEQ and U.S. EPA regulations.

BULK CLASS B BIOSOLIDS LAND APPLICATION

During 2005, 13,710.9 dry tons (12,436.8 tonnes) of dewatered biosolids cake (bulk Class B) produced at the Columbia Boulevard Wastewater Treatment Plant (CBWTP) were transported and land applied on 3,345.6 acres of permanent dry land pasture and Conservation Reserve Program (CRP) lands which will be converted to pasture at Madison Farms in north central Oregon (approximately 200 miles east of the CBWTP; Section 13). In addition, biosolids were applied to 554.32 acres of dryland wheat. Biosolids were dewatered to approximately a 19.72%

total solids cake via belt filter press prior to their transport under contract by Gresham Transfer, Inc. (GTI) and land application under contract by K&S Madison, Inc.¹

Biosolids met 503.13(b)(2) trace inorganics pollutant limits during all months in 2005 (Section 12). If solids inorganic pollutant concentrations remain similar to levels found in biosolids land applied during 2005, under 503.13(b)(2), at a rate of 3.78 dry tons per acre (8.47 Mg/ha) per year, biosolids could be land applied annually on permanent pasture for 137 more years based on molybdenum (Section 13). During 2005, biosolids will be applied at a rate of approximately 4 dry tons per acre (8.96 Mg/ha). If contemporary digested biosolids (i.e., new biosolids only) were applied at that rate, site life would be decreased to 129 years, based on molybdenum content.

During 2005, biosolids were applied at Madison Farms within agronomic rates (based on plant available nitrogen) to 3,900 acres (1,579 hectares) of 5,064.75 acres (2,051 hectares) lands authorized by the Oregon Department of Environmental Quality (DEQ) for Portland biosolids application (Section 13 and Appendix A). Land applied biosolids were stabilized via anaerobic digestion to the extent that they met Class B pathogen reduction and vector attraction reduction criteria (Section 8). Management practices required under 503.14(a) thru (d) [agronomic application rates; no adverse affect on threatened or endangered species; no application on frozen or snow covered ground which results in runoff; and no application closer than 10 meters to surface water] were observed by K&S Madison, Inc. (Appendix B). Site restrictions required under 503.32(b)(5) [livestock and public access; crop and grazing restrictions] were followed in biosolids amended areas.

SUMMARY AND CONCLUSIONS

During 2005, the City of Portland met EPA and Oregon DEQ regulations and recycled biosolids as a valuable commodity. The City's biosolids quality has improved dramatically over the last 23 years. The City's monitoring program strives to demonstrate regulatory compliance and assure product quality.

Land application of the City's biosolids at Madison Farms provides both environmental and economic benefits. Biosolids application has improved soil quality, increased forage value and production, and stabilized sandy unvegetated areas at Madison Farms.

Biosolids recycling via land application at Madison Farms will continue to be the major focus of the City's biosolids management program in 2006. Other opportunities for land application (e.g., small grain production on sites closer to Portland than Madison Farms) will also be considered in the future. Although, the City terminated its composting operation in 1999, a portion of its within-vessel composting system could be used for producing Class A biosolids compost should Portland elect to resume the production of this product.

¹ Value (19.72%) represents the mean between belt press cake microwave data (20.06% average-2005) and laboratory muffle furnace data (19.38% average-2005).