



CITY OF OXFORD

WASTEWATER TREATMENT FACILITY

ANNUAL PERFORMANCE REPORT

FOR THE CALENDAR YEAR OF 2012

PREPARED: January 2013

**2012 ANNUAL PERFORMANCE REPORT
FOR THE
CITY OF OXFORD
WASTEWATER TREATMENT FACILITY**

I. General Information

Facility/System Name: City Of Oxford Wastewater Treatment Plant

Responsible Entity: City Of Oxford

PERSON IN CHARGE/ CONTACT: DENNIS WILSON

CITY OF OXFORD

PO BOX 506

OXFORD NC 27565

(919) 693-8783

Description of Collection System or Treatment Process:

The City Of Oxford's wastewater Treatment Plant is a 3.5 MGD design facility that treats a combination of industrial, commercial and domestic wastewater. The unit processes in the flow scheme include mechanical screening, influent pumps, aerated grit chambers, a three stage oxidation ditch featuring anaerobic, anoxic and aerobic zones to facilitate the removal of nutrients from the treated discharge waters, three secondary clarifiers that operate in parallel, a traveling bridge tertiary filter to meet total suspended solids and BOD limits, UV disinfection chambers for the removal of disease causing organisms, and mechanical aeration before final discharge to Fishing Creek.

Excess biological sludge is batched and aerated in diffused air digesters for 30 days and then pumped to storage lagoons where it is later removed by a contracted sludge hauler. The sludge is then land applied in a liquid form to permitted agricultural sites.

II. Compliance Performance

The North Carolina Department of Environment and Natural Resources (NCDENR) regulates the City Of Oxford's effluent discharge under the National Discharge and Pollution System (NPDES). The NCDENR issued to the City a NPDES Permit that includes water quality limits and sampling and monitoring requirements. The NPDES Permit requires the City to test more than 22 different constituents in the treated water. The monitoring frequency for these constituents are set at various intervals such as continuous, daily, weekly, monthly, twice per month, and quarterly. For this reporting period the City of Oxford was required to analyze 2836 samples of the treated water before it was discharged to the creek, of that number 2836 were analyzed. The WWTP achieved a 100% compliance Level with its NPDES requirements regarding monitoring. The following is a summary of the testing for the parameters that are assigned Water Quality Standards by the NPDES Permit. Please note the summary does not include parameters that only incorporate a monitoring requirement, nor does it include daily process control testing.

Constituent	Number Of Test Required	Number Of Test Conducted
Flow	365	365
Biochemical Oxygen Demand	260	260
TOTAL SUSPENDED SOLIDS	260	260
Ammonia	260	260
Fecal Coliform	260	260
Toxicity	4	4
Lead	4	4
Cyanide	52	52
Nickel	4	4
Selenium	52	52
Mercury	52	52
Copper	24	24
Zinc	24	24

***Testing is not required during holidays or inclement weather.**

In addition to the required testing, the City Of Oxford conducted over 2,300 in- house tests to ensure the proper operation of the treatment facility.

The following is a summary of Permit violations, which occurred during the year:
2012

No Violations For 2012

Date Of Violation	Parameter Violated	Parameter limit	Parameter Analysis Result	Corrective Action Taken

City Of Oxford
Wastewater Treatment Plant
Effluent

Data Summary Table

Month	BOD (mg/l)	TSS (mg/l)	NH3-N (mg/l)
January	1.8	3.1	.04
February	1.3	0	.02
March	1.8	.2	.23
April	.5	0	0
May	.3	.3	0
June	1	0	.01
July	.8	.5	.48
August	0	0	.01
September	1.6	.2	.31
October	.6	0	.21
November	.9	.2	.02
December	.5	.2	0
Yearly Average	.92	.4	.15

NPDES PERMIT LIMITS

Parameter	Weekly	Monthly
BOD	25.0 mg/l (winter) 7.5 mg/l (Summer)	10.0 mg/l (winter) 5.0 mg/l (summer)
TSS	45.0 mg/l	30.0 mg/l

Total Gallons of Water Treated: 402.41 MG (million gallons)

Average Yearly Plant Flow Rate: 1.099 MGD (million gallons per day)

Sludge Application Summary

Land Application Dates	Number of Gallons Land Applied	Contracted Sludge Hauler
May 2012	2,287,800	Synagro
September 2012	1,258,600	
October 2012	142,600	
Yearly Total	3,689,000	

All Sludge Residuals were Land Applied by SYNAGRO to various Granville County Permitted Farm Sites

City Of Oxford
Wastewater Treatment Plant
INFLUENT DATA SUMMARY

Month	BOD (mg/l)	TSS (mg/l)
January	276	399
February	362	443
March	329	502
April	282	475
May	310	445
June	313	424
July	341	403
August	274	371
September	402	586
October	402	586
November	351	471
December	305	410
Yearly Average	329	460

Average Pounds of BOD Removed per day = 3,016

Average Pounds of TSS Removed per day = 4,216

City Of Oxford Wastewater Report **Certification Statement**

Part III - Certification

I have personally examined and am familiar with the information submitted in this document and attachments. Based upon my inquiry of those individuals immediately responsible for obtaining the information reported herein, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Signed this **16th** day of **January** 2013.

Dennis Wilson

WWTP Superintendent

Name

Title

Summary:

During the past year the City Of Oxford's wastewater plant analyzed 2836 samples in order to meet compliance criteria for its current wastewater permit.

Of these 2,836, no samples were out of compliance guidelines. This means that for the year of 2012 the City Of Oxford's wastewater plant was found to be 100 % compliant.

Wastewater Spills (No Spills Occurred For 2012)

Date of Spill	Volume Of Spill	Was Spill Reported	To What Enforcement Agency *
			DWQ
Total			

*** NC Division of Water Quality**