

Wastewater Performance Report

July 1, 2013 – June 30, 2014

Charlotte-Mecklenburg Utility Department

Phone: 704-336-4407

Website: www.cmutilities.com

4222 Westmont Drive Charlotte, NC 28217

I. General Information

Name of Regulated Entity and Responsible Person:

City of Charlotte
Barry Gullet, Director
Charlotte-Mecklenburg Utility Department (CMUD)
Administration Division
4222 Westmont Drive
Charlotte, NC 28217
704-336-4407

Applicable Permits:

There are five wastewater treatment facilities (WWTF) owned and operated by Charlotte-Mecklenburg Utility Department (CMUD). Below is a list of these facilities and their applicable NPDES (National Pollutant Discharge Elimination System) permit number. Included with the list of facilities is the name of the Operator in Responsible Charge (ORC) at the facilities and the site telephone numbers.

WWTF	NPDES Permit Number	ORC	Phone
Irwin Creek WWTP	NC0024945	Michael Lingerfelt	704-357-1344
Mallard Creek WRF	NC0030210	Darrell DeWitt	704-547-0680
McAlpine Creek WWMF	NC0024970	Sandy Kim Neely	704-542-0736
McDowell Creek WWTP	NC0036277	Joseph Lockler	704-875-6443
Sugar Creek WWTP	NC0024937	Billy Allen	704-553-2124

In addition to those five plants, CMUD sends wastewater to the Rocky River Regional Wastewater Treatment Plant through an agreement with The Water and Sewer Authority of Cabarrus County (WSACC). CMUD also accepts flow from Union County to McAlpine Creek WWMF.

WW COLLECTION	NCDWQ Permit Number	ORC	Phone
4100 W. Tyvola Road	WQCS00001	Stuart Rosenberger	704-432-4376

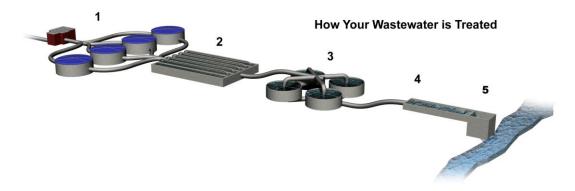
Description of collection and treatment systems:

Charlotte-Mecklenburg Utility Department (CMUD) collects wastewater from approximately 242,959 households and businesses throughout the county. Wastewater is collected and directed (via gravity flow supported by sewage lift stations) to one of five CMUD wastewater treatment plants or the Rocky River Regional Plant (owned and operated by the Water and Sewer Authority of Cabarrus County) where it is treated. An average of 83.3 million gallons of wastewater is treated and discharged each day from CMUD plants. CMUD contributes an average of 3.72 million gallons a day (MGD) to the Rocky River Plant. CMUD also treats roughly 2.28 million gallons from Union County at CMUD's McAlpine Creek Plant.

More than 200 of CMUD's 761.5 employees work to maintain 4,189 miles of collection pipelines and 76 sewage lift stations throughout the county. The gravity sewer pipes in this system range in size from 8 inches in diameter to 78 inches in diameter.

Each of CMUD's wastewater treatment plants applies primary, secondary and advanced treatment to the waste stream. Large solid particles and inorganic materials are removed by screening and settling. The wastewater is treated biologically to remove dissolved pollutants. Disinfection reduces bacterial and pathogenic materials. Finally, the waste stream passes through granular filters to remove very small

particles that may not have been removed through the settling process. The treated water is released to the stream.



1. Primary Treatment

Solid particles & objects are captured by screens, grit chambers, and primary clarifiers.

2. Aeration/Secondary Treatment

Wastewater is aerated to support growth of microorganisms that remove harmful pollutants.

3. Clarification

Solids and microorganisms settle out in large basins.

4. Advanced Treatment

Wastewater flows through granular filters to remove fine particles. Nutrient levels are reduced at McDowell and McAlpine Creek Wastewater Treatment Plants.

5. Disinfection

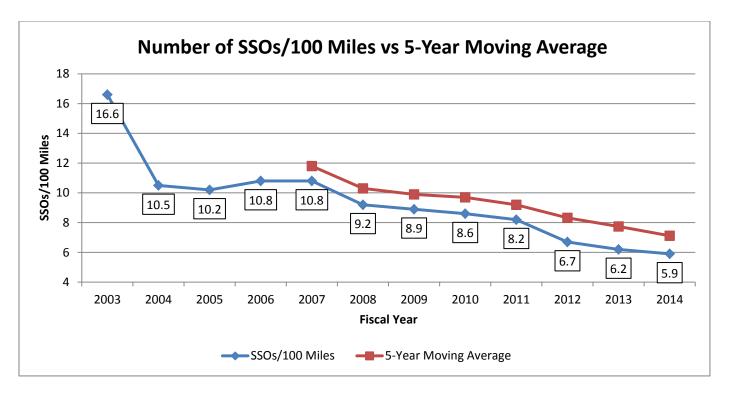
Water is disinfected to remove any remaining pathogens, and then the treated water is released into creeks.

II. Summary of System Performance

How did we do?

We successfully collected and treated 99.9981 percent of the more than 30.4 billion gallons of wastewater the community produced in the past fiscal year. There were 247 sanitary sewer overflows (SSOs) in our community, a decrease of 13 spills compared to the year before. This is the lowest number of spills since 2001 (213), even though our miles of pipe have increased substantially since that time. In fact, the number of spills per 100 miles of pipe continued to decline from 10.9 in 2007 to 5.9 spills in fiscal year 2014 as illustrated by the table on page 3. An estimated 554,442.75 gallons spilled.

Inspection crews and our customers find overflows. Any time a sanitary sewer overflow has 1,000 gallons or more reach surface waters or reach recreational waters CMUD notifies media. A legal notice is posted when overflows of 15,000 gallons or more reach surface waters. Crews also use door hangers to notify customers when appropriate. This annual report includes all incidents where wastewater escaped out of a manhole or pipe before reaching proper treatment, including spills less than required reporting thresholds.



CMUD employees work 24 hours a day, 365 days per year, to prevent and respond to overflows. Crews prevent overflows by clearing pipes of tree roots and grease, as well as replacing broken and aging pipes. CMUD has increased its efforts to educate customers about properly disposing of fats, oils and grease (FOG).

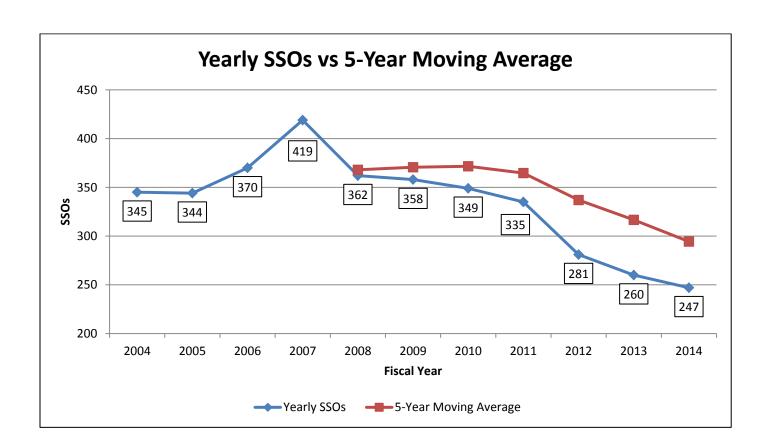
Performance Highlights

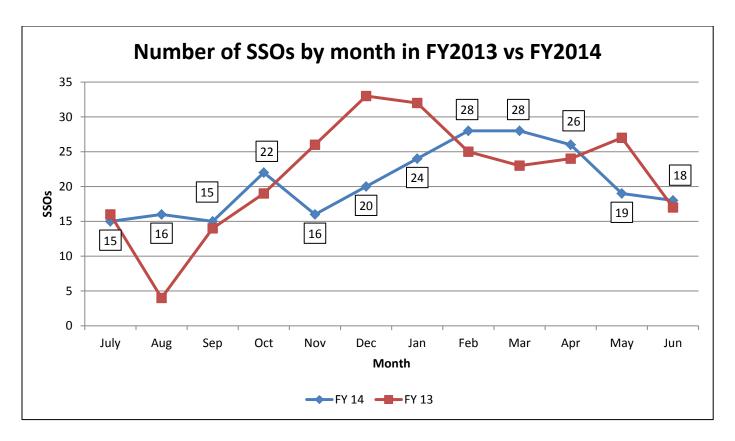
CMUD celebrated some important milestones even as it took numerous actions to prevent overflows and protect water quality through effective wastewater treatment.

- Our wastewater treatment plants met 99.91 percent of all permitted discharge limits.
- Four of our five wastewater treatment plants earned Peak Performance Awards from the National Association of Clean Water Agencies (NACWA) for the calendar year ending 2013. NACWA Peak Performance Awards recognize wastewater treatment professionals throughout the nation for protecting the environment and public health through outstanding treatment and discharge regulatory compliance. McAlpine Creek Wastewater Treatment Plant was awarded its second Platinum Award for six consecutive years of perfect compliance. McDowell Creek Wastewater Treatment Plant earned a Gold Award for zero permit violations in a one year period. Sugar Creek Wastewater Treatment Plant and Mallard Creek Water Reclamation Facility both earned Silver Awards for five or fewer violations in a one year period. Over 5,400 compliance tests were conducted during the 2013 calendar year.
- 7.83 miles of sewer pipe and 128 manholes were rehabilitated, repaired or replaced.
- 275.7 miles of sewer pipe were treated with root control chemicals.
- 1,155 miles of sewer lines were cleaned (including some multiple cleanings in the same location) by CMUD Field Operations Staff and an additional 37.26 miles of pipe were cleaned by contractors.
- 236 sewer service connections were replaced.
- More than 148.05 miles of rights of way were cleared by Field Operations and contractors to maintain access to off-street sanitary sewer pipes and to help prevent root intrusions.
- CMUD deployed software upgrades, hardware upgrades, and process/data reliability improvements to Field Operations' Work & Asset Management (WAM) program. Field crews in the CMUD Field Operations Division use their Azteca Cityworks system to perform day-to-day reactive maintenance as well as to plan and execute preventative maintenance and repair/overhaul activities across Mecklenburg County. The WAM team deployed Cityworks

- to McAlpine Wastewater Treatment Plant in 2014 and is completing the validation of comprehensive asset registries for all water and wastewater treatment plants managed by the Water Treatment and Environmental Management operations and maintenance groups. As new plants come on-line in the WAM program, the team will continue to conduct classroom, as well as one-on-one training and mentoring, for new Cityworks users and will deliver updated training to existing users as new functionality is deployed.
- CMUD continued the use of continuous improvement and organizational optimization efforts utility wide in FY2014. CMUD has increased performance levels using continuous improvement processes and techniques coordinated at the department level and implemented at the division level. Continuous improvement is used to achieve and maintain operational and economic competitiveness and is coordinated with the Balanced Scorecard/Business Planning process. These processes encourage and support operations and management of the Utility in accordance with recognized best practice standards such as ISO, AWWA, NELAP, and others as appropriate. Compliance with recognized standards are measured and confirmed by the establishment and implementation of periodic and recurring audit procedures, accompanied by monitoring key performance indicators (KPI) and metrics. In 2007, Mallard Creek WRF was the first City of Charlotte government facility to earn the prestigious ISO 14001:2004 certification. The ISO 14001 EMS international certification program focuses on sustainable optimized operations that first seek to minimize negative impacts on the environment. This first initiative has helped to launch a refocused effort on instituting best practice standards with ongoing audits to all CMUD operations. Corporate ISO 14001:2004 certification was obtained for CMUD in May 2010. This corporate certification currently covers Mallard Creek WRF, McDowell Creek WWTP, the Biosolids program, and Sugar Creek WWTP. This certification was upheld by external audit for FY2014. CMUD is also participating in the AWWA Partnership for Safe Water certification process for our water treatment facilities and distribution system, including Vest WTP and Lee Duke's WTP at Phase II and the Distribution System and Franklin WTP entering Phase III of the four phases certification. On the wastewater collection side of our operations, CMUD has begun instituting reliability centered maintenance (RCM) practices modeled on ISO55000 using our work and asset management system for sewer collection service data monitoring and management. Likewise, CMUD is implementing quality assurance metrics and processes based on ISO9000 in our customer service division. Obtaining and maintaining certifications is a collaborative effort among many employees throughout CMUD. This effort helps to ensure that CMUD is efficient, effective, and transparent in our stewardship of valuable community resources. This ongoing optimization work serves as a continuous improvement model for increased citywide efforts as we move towards greater sustainability. In fact, the City of Charlotte has also engaged a team focused on EMS efforts utilizing staff from multiple departments including CMUD.
- CMUD continues to strive to be good stewards in all parts of operations, including fuel consumption. In FY2013, CMUD participated in a new study called the Alternative Fuels Feasibility Study for the City of Charlotte fleet operations via UNC-Charlotte. This effort was expanded in FY2014 by the completion of a Request for Information process that included vendor concept demonstrations for possible public private partnerships to increase the availability of alternative fueling options citywide such as CNG filling stations. This effort is an exploration step towards a potential citywide RFP for infrastructure associated with alternative fuels and technology for city fleet. Additionally, several other energy management and air quality initiatives began in FY2013, such as the installation of an electric vehicle charging station at one CMUD facility and the purchase of electric vehicles, are all steps in the ongoing evolution towards greater sustainability within clean, efficient, cost effective utility operation.

- There are 76 Wastewater Lift Stations serving portions of the CMUD service area. Staff performed 158 preventive maintenance/electrical tasks for a total of 2,792.50 work hours. This does not include twice weekly station checks, wet well cleaning, emergency generator testing, or emergency/routine repairs. In fiscal year 2014, one station (Heathers) was removed from service and two (Crooked Creek and Rhyne) were put in service.
- Construction of the Briar Creek Relief Sewer Project (Phase Two) began in Spring 2012. The project is 85% complete. Phase Three is being designed and will begin after Phase Two is complete.
- Construction of the McAlpine Creek Relief Sewer Project (Phase Three) began in October 2012 and is 60% complete.
- Construction of the McAlpine Creek Wastewater Treatment Plant Design Build Project began in FY2013 and it is 90% complete. It will add filters to improve reliability and provide redundancy. This project will not increase treatment capacities or permits. This is the first CMUD Design Build Project.







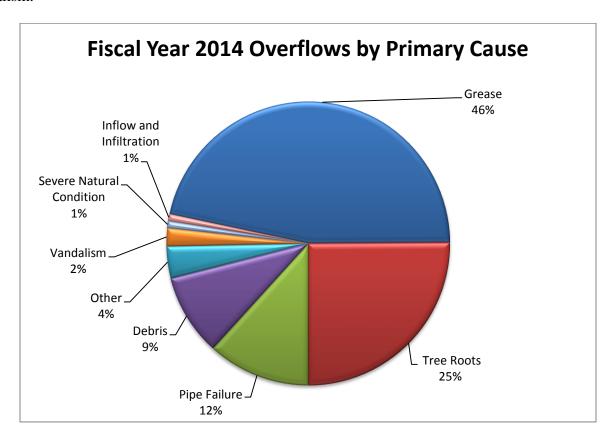
- City staff inspected grease-handling facilities at 4,228 food service establishments and restaurants (not including follow-up inspections) to ensure proper grease disposal.
- Staff issued 108 Notice of Deficiencies (NOD) of which 76 returned to compliance and 32 are still under investigation.
- In total, 17 grease traps were installed by businesses to fulfill NOD requirements.
- The City continued its Grease Free education program to teach proper disposal of this pipe-blocking menace. Inspectors mailed information to 2,266 customers near spill sites and handed out information to 6,141 customers in apartments / multi-family complexes.
- Staff conducted presentations to more than 1,245 children and adults. Multiple Earth Day events also provided opportunities to distribute Grease Free scrapers, pens and other items.
- CMUD continues to use door-hangers specifically for maintenance personnel or property managers of apartment or multi-family complexes. This reinforces best management practices for prevention.
- Staff continues to provide bilingual door hangers and promotional items for property managers to give to new residents.

Continuing Challenges

Wastewater Collection Challenges

The greatest continuing wastewater challenge in this community – and in others across the U.S. – is sewage overflows. Of the 247 sewer spills that occurred grease (fats, oils, grease, and other food leftovers) accounted for most of the sanitary sewer overflows. While still the leading cause of overflows, grease was less than 50% for the second straight year. Grease has traditionally been the primary cause of 50-60% of

spills. Other spill causes included the infiltration of tree roots into pipes, broken pipes, debris, and vandalism.



Grease and other blockages that lead to sewer overflows are cleared by CMUD crews, using various cleaning methods, including mechanical rodders and truck-mounted water jets. If damaged pipe or other infrastructure is discovered it is repaired. The spilled sewage can sometimes be captured and pumped back into the sewer system.

There were four rain related spills in the past fiscal year (see below). Three of the four spills were along Taggart Creek and the remaining one was along Stewart Creek. Both areas (Taggart and Stewart) are at high risk for flooding during severe natural conditions (heavy rains); causing creeks to overflow into roads and streets. Field Operations began studying the areas shortly after the rain events to identify the Inflow & Infiltration source of the spills. Efforts were coordinated with a contractor to complete deeper cleaning of the lines. Several manholes were raised upstream of the location and inflow trays were placed in other manholes. Ongoing monitoring found that flow in the affected areas has improved. The Stewart Creek area is currently under construction to rehabilitate sewer pipes. The Taggart Creek area was evaluated (pipe condition inspected) and will begin rehabilitation construction after the work in Stewart Creek is complete.

Spill Date	Spill Address	Surface Water Name
7/11/2013	515 Blackmon Street	Stewart Creek
2/19/2014	4400 Golf Acres Drive	Taggart Creek
3/7/2014	4409 Denver Avenue	Taggart Creek
3/7/2014	4425 Golf Acres Drive	Taggart Creek

CMUD Rapid Response Crews are quick to respond when notified of a possible spill. Crews responded to more than 91.1 percent of the spills within 60 minutes and more than 98.4 percent of the spills within 120 minutes. The state standard for response is 120 minutes or less. There were four spills out of 247 where crews could not respond within 120 minutes. These spills occurred after hours on the weekend, and on-duty crews were already dispatched to high priority calls. The average response time for these four instances was 196 minutes.

Wastewater Treatment Plant Challenges

Charlotte-Mecklenburg Utility Department's five wastewater treatment plants met 99.91 percent of all discharge limit tests set forth by our NPDES permits but our commitment is 100 percent compliance. Staff continues to improve maintenance capabilities and overall performance. Major rehabilitation and improvement projects help maintain compliance. Future upgrades and expansions are being added.

During this fiscal year there were six (6) permit limit violations out of a potential of 5,579 compliance tests. All violations were due to toxicity test results that did not meet permit requirements. The toxicity results are very unusual and have raised questions about potential sampling or testing errors that could have contributed to these failures. As a result, CMUD has formed an investigative team that is comprised of operations and laboratory staff to resolve the toxicity failures at Irwin Creek WWTP. An outside consultant was hired and CMUD has worked with outside laboratories for specialized testing services specific to toxicity investigation. CMUD's toxicity team has tentatively identified the type of compound that could be the possible cause of the failures and is now looking for potential sources of these compounds. No adverse effects have been noted on the aquatics communities in the receiving stream and fish, turtles, and other wildlife can be observed daily at our effluent. The team will continue with its investigation until the toxicity failures are resolved. Please see Section IIB of this report for additional details of these violations.

There were 11 incidents where wastewater inside treatment plants did not receive full treatment before reaching a creek. These are typically called a bypass instead of a spill. In all cases the wastewater was at least partially treated.

- Seven incidents were during the final stage of treatment, ultra-violet disinfection process.
 - o Five of the seven incidents occurred at Sugar Creek Wastewater Treatment Plant and were due to brief power outages and equipment malfunctions. Altogether, these incidents consisted of less than 0.28% of the plant's flow on the days they occurred.
- Four of the 11 incidents were earlier in the treatment process where partially treated wastewater escaped due to mechanical malfunctions.
 - Three of four incidents were at Irwin Creek Wastewater Treatment Plant. Irwin Creek Wastewater Treatment Plant recently completed the first phase of upgrades. Altogether, these incidents consisted of less than 0.00758% of the plant's flow on the days they occurred.

In each situation, operators quickly found and fixed the problem and notified North Carolina Department of Environmental Resources. After the initial response was complete, staff evaluated potential causes and solutions for each incident. Quick solutions were implemented and more in-depth / extensive solutions are identified as capital needs. No dead fish were found associated with these bypasses. In each case the amount that did not receive full treatment is a small percentage of the daily amount that is treated and safely returned to area creeks.

CMUD Environmental Management Division operates the System Protection Section to protect workers and treatment processes from pollutants harmful to people or the environment. System Protection includes the Industrial Pretreatment Program and the Commercial Source Program.

The Pretreatment Program identifies, permits, and regulates Industrial Users and others to keep unsuitable discharges out of the Publicly Owned Treatment Works (POTW). The Commercial Source Program inspects and regulates Commercial Users, such as food service establishments, to keep unsuitable discharges such as fats oils and grease out of the POTW.

While industrial and commercial compliance is extremely high in Charlotte-Mecklenburg, identifying sources of potentially harmful discharges is an ongoing challenge. In fiscal year 2014, the Trunkline Monitoring and Grease Free programs also continued, enabling CMUD's System Protection and Water Quality staff to closely observe what industrial, institutional, and commercial customers discharge into the POTW, identify potential problem areas, and protect the collection system, sewer line workers, treatment plants and the Environment.

- There were over 200 annual inspections and site visits in the past fiscal year.
- CMUD honored 31 local companies with Environmental Excellence Awards for FY14
 - o Two Platinum recipients for five consecutive years of Gold level compliance and reporting
 - o Six Gold recipients for 100% compliance with permit limits and reporting
 - Twenty-three Silver recipients for 90% compliance with permit limits and 100% compliance with reporting
- There were 125 permit limit violations, which resulted in a Notice of Violation, Notice of Non-Compliance, Administrative Order, or similar assessments given to Significant Industrial Users in the past fiscal year.
- Of the 125 mentioned, 28 Civil or Criminal penalties were assessed.

Union County Wastewater Treatment Agreement

Union County recently decided to seek outside assistance in the operation and maintenance of its five wastewater treatment plants. Charlotte-Mecklenburg Utility Department (CMUD) reached an agreement with Union County to provide contracted operation of the wastewater plants. An agreement was approved by both and contract operations began on June 1, 2014. CMUD is providing operation and maintenance of the five Union County wastewater treatment plants. Union County will continue to own the wastewater treatment plants, own and operate the wastewater collection system (separate from the wastewater treatment plants), set rates, and collect user fees for their customers.

Illegal Dumping Incident

On February 6, 2014 an unusual substance flowed into Mallard Creek Treatment Plant. The plant operator recognized the abnormal substance right away and immediately transferred flow to the equalization basin (storage). These substances were later determined to contain materials including polychlorinated biphenyls (PCBs) and triclorobenzene (TCB). Recovery efforts included proper isolation, clean-up and disposal of the PCB and TCB contaminated wastewater. Efforts have proven that the plant has been able to efficiently remove the contaminants from the wastewater and collect them in solids. Additionally, numerous tests of the Mallard Creek Treatment Plant and of Mallard Creek were conducted during the incident in order to analyze water quality. Effluent discharges have been closely monitored with results exceeding the EPA limit of 3 ppb in 8 tests. Testing and recovery efforts are still ongoing, especially related to contaminated biosolids.

On February 8, 2014 an unusual substance flowed into Sugar Creek Treatment Plant. The plant operator recognized the abnormal substance right away and immediately transferred flow to the equalization basin (storage). This substance was later determined to contain ethanol and toluene, which is typical of a fuel

spill. There were no PCBs or TCB associated with this incident. The Sugar Creek Treatment Plant was able to successfully treat the contaminated material and is currently operating normally.

Some, but not all, samples of biosolids produced at McAlpine Creek Wastewater Treatment Plant between September 2013 and February 2014 indicated very low levels of PCB. Samples from biosolids produced since February contained higher levels of PCB. Concentrations and the specific types of PCB have varied, but CMUD concludes that at some time between November and early March, the McAlpine Creek plant did receive PCB contaminated wastewater. Appropriate steps are being taken to dispose of the contaminated biosolids.

Wastewater Capacity Needs

In 2007 a study of the McAlpine, Irwin and Sugar creek basins was completed to help identify our community's future wastewater treatment capacity needs through the year 2030. Construction activity resulting from the study includes extensive rehabilitation and upgrades to Irwin and Sugar Creek Wastewater Treatment Plants. Irwin Creek Phase one upgrades are complete (\$20 million). These activities will improve overall efficiency at the plant. Phase two at Irwin Creek Wastewater Treatment Plant is in design and projected to cost \$25 million. At McAlpine Creek Wastewater Treatment Plant effluent filtration capacity is being expanded and nearing completion. This is the first CMUD Design Build Project. This project will improve reliability and provide redundancy. These projects will not increase treatment permitted capacities.

In recent years CMUD, Mount Holly, and Belmont entered into memorandums of understanding to create the partnership needed for a new, regional wastewater plant. Based on these agreements, CMUD purchased 180 acres of land at a former Clariant industrial treatment plant along with the phosphorus and nitrogen discharge allocation associated with the industrial plant. The agreements and nutrient allocation purchase will facilitate compliance with the Lake Wylie nutrient TMDL while planning and construction of the regional plant progresses. An Environmental Impact Statement is being completed with N.C. DENR. Once the E.I.S. is successfully completed and the NPDES permit is obtained, wastewater capacity requirements will be monitored and construction timed and sequenced to meet those needs.

III. Notification

Sanitary sewer overflow and wastewater treatment plant details are included in Sections IIA and IIB.

This report is available to the users or customers of this system by clicking on the 'Education' link of the CMUD homepage at www.cmutilities.com. Printed copies are available at the Charlotte-Mecklenburg Government Center at 600 E. Fourth Street, Charlotte, NC 28202, Charlotte-Mecklenburg Utility Department buildings at 4222 Westmont Drive, Charlotte, NC 28217 and at 5100 Brookshire Boulevard, Charlotte, NC 28216. Customers of this system will receive a summary version of this report and will be notified of the availability of this comprehensive version via a bill insert in the September water/sewer bill. A news release will be issued before September 1 about this report. In addition, the summary version will be translated into Spanish and advertised during the month of September in a regional Spanish-speaking newspaper. The Spanish version will also be on the website.

IV. Certification

I certify under penalty of law that this report is complete and accurate to the best of my knowledge. I further certify that this report has been made available to the users or customers of the named system and that those users have been notified of its availability.

Barry Gullet, Director

Charlotte-Mecklenburg Utility Department

8-22-2014

Date

IIA. <u>Listing of Sewer Spills</u>
The following is a list of spills (in gallons) from the public wastewater system that occurred between July 1, 2013 and June 30, 2014.

Date	Volume (Gallons)	Volume to Surface Water	Surface Water Name	Fish Kill?	Address	Primary Cause
7/5/2013	740	0	Campbell Creek	No	5719 Cedars East Ct	Pipe Failure
7/5/2013	1270	1270	McMullen Creek	Yes	3247 Seven Eagles	Grease
7/9/2013	470	470	Irwin Creek	No	1248 West Bv	Debris In Line
7/9/2013	1400	700	McAlpine Creek	No	4610 Drifter Dr	Grease
7/10/2013	67	0	Briar Creek	No	829 Louise Av	Debris In Line
7/12/2013	7150	7150	Stewart Creek	No	515 Blackmon St.	Severe Natural Condition
7/15/2013	15	15	Mallard Creek	No	9601 Runswyck Ct	Grease
7/15/2013	102	102	McMullen Creek	No	4440 Town & Country Dr	Roots
7/20/2013	54	54	Irwin Creek Tributary# 1	No	500 Fence Post Ln (Matthews)	Grease
7/21/2013	260	260	Briar Creek	No	4223 Winfield Dr	Grease
7/22/2013	2660	1830	Briar Creek	No	200 Emerson Av	Pipe Failure
7/22/2013	5.25	0	N/A	No	366 N Caswell Rd	Pipe Failure
7/24/2013	200	200	Irwin Creek	No	5046 Elizabeth Rd	Grease
7/25/2013	19200	1920	Paw Creek	No	8924 Old Dowd Rd (Mecklenburg County)	Debris In Line
7/26/2013	3136	3136	McAlpine Creek	No	1201 Maple Shade Ln	Pipe Failure
8/2/2013	2415	2415	Irwin Creek	No	634 Miller St	Pipe Failure
8/6/2013	310	0	Irwin Creek	No	518 Beatties Ford Rd	Debris In Line
8/8/2013	7980	3990	Kings Branch	No	6035 Nations Ford Rd	Roots

8/9/2013	57	0	Long Creek	No	1700 Bianca Ct	Roots
8/10/2013	3960	3960	Mallard Creek	No	3107 Osceola Ln	Debris In Line
8/12/2013	630	630	Little Sugar Creek	No	902 W 4th St Ex	Debris In Line
8/13/2013	880	880	Mallard Creek Tributary	No	575 E Mallard Creek Church Rd	Debris In Line
8/14/2013	290	290	McAlpine Creek	No	5501 Albemarle Rd	Pipe Failure
8/14/2013	90	0	McAlpine Creek	No	7333 Thermal Rd	Grease
8/18/2013	1500	1500	Clarke Creek Tributary	No	5803 Graburn's Ford Dr	Grease
8/23/2013	189	189	Irwin Creek	No	1538 Chelveston Dr	Pipe Failure
8/23/2013	1015	1015	Little Sugar Creek	No	601 Bilmark Av	Grease
8/23/2013	1610	1610	McAlpine Creek	No	7609 Sharpthorne Pl	Roots
8/26/2013	825	0	Irwin Creek	No	5100 Brookshire Bv	Pipe Failure
8/30/2013	1065	1065	Dairy Branch	No	1933 South Bv	Grease
9/1/2013	96	0	McAlpine Creek	No	225 Sardis View Ln	Roots
9/5/2013	100	100	McMullen Creek	No	6601 Monroe Rd	Roots
9/6/2013	86	86	Swan Run Branch	No	7124 Carosan Ln	Grease
9/7/2013	60	0	N/A	No	17034 Freshwater Ln (Cornelius)	Other
9/8/2013	192	192	McAlpine Creek	No	9220 Myrtle Garden Ct	Grease
9/11/2013	114	0	Briar Creek	No	5015 Highlake Dr	Pipe Failure
9/11/2013	770	770	Paw Creek	No	700 Toddville Rd	Roots
9/11/2013	276	0	N/A	No	9801 S Tryon St	Roots
9/12/2013	318	0	N/A	No	10148 Orchard Grass Ct	Grease
9/13/2013	87400	87400	Irwin Creek	No	2339 Barringer Dr	Pipe Failure
9/17/2013	860	860	Taggart Creek Tributary	No	3140 Piper Ln	Roots
9/17/2013	35	0	Mt Island Lake	No	2205 Sun	Other

					Meadow Ln	
9/18/2013	44	0	Torrence Creek	No	300 Hunters Rd (Huntersville)	Grease
9/18/2013	265	265	McAlpine Creek	No	5321 Providence Rd	Roots
9/22/2013	111	111	Briar Creek	No	422 Ashworth Rd	Roots
9/28/2013	2070	2070	Walker Branch	No	13105 S Tryon St	Grease
10/2/2013	2760	2760	Crooked Creek Tributary	No	13905 Colt Ct (Matthews)	Pipe Failure
10/3/2013	61	61	Little Sugar Creek	No	2500 Park Rd	Grease
10/7/2013	100	0	N/A	No	923 S Kings Dr	Grease
10/9/2013	50	0	Davis Lake	No	4907 Foxbriar TI	Roots
10/11/2013	35	0	Little Sugar Creek	No	400 N Davidson St	Grease
10/12/2013	1220	1220	Kings Branch	No	636 Archdale Dr	Grease
10/13/2013	120	0	Lake Norman	No	20117 River Chase Dr (Cornelius)	Other
10/17/2013	415	415	Stewart Creek Tributary	No	4517 Ridgeley Dr.	Pipe Failure
10/18/2013	60	60	Paw Creek Tributary	No	500 Glasgow Rd	Grease
10/18/2013	58	58	Taggart Creek	No	3210 CPCC Harris Campus Dr	Pipe Failure
10/21/2013	276	276	Paw Creek	No	1230 Ranch Rd	Grease
10/22/2013	485	485	Stoney Creek	No	13929 Mallard Lake Rd (Mecklenburg County)	Vandalism
10/25/2013	300	300	Little Sugar Creek	No	630 Herrin Av	Debris In Line
10/26/2013	940	940	Little Sugar Creek	No	4851 Eaves Ln	Grease
10/26/2013	148	0	McMullen Creek Tributary	No	1028 Nancy Dr	Roots
10/26/2013	150	0	Irwin Creek	No	10342 Ashley Farm Dr	Grease
10/27/2013	174	0	Irwin Creek	No	6622 Horace	Grease

			Tributary		Mann Rd	
10/28/2013	633	75	McAlpine Creek	No	5205 Whisperwood Pl	Grease
10/30/2013	570	570	Little Sugar	No	923 S. Kings Dr	Grease
10/31/2013	680	0	Briar Creek	No	2420 Runnymede Ln	Vandalism
10/31/2013	90	0	Irwin Creek	No	1930 Camden Rd	Grease
10/31/2013	53	0	N/A	No	1227 Fordham Dr	Pipe Failure
11/1/2013	150	150	McMullen Creek	No	1100 Archdale Dr	Roots
11/5/2013	142	0	McAlpine Creek	No	618 Main St (Pineville)	Grease
11/5/2013	375	375	Briar Creek	No	3007 Robin Rd	Grease
11/6/2013	2235	2235	Sugar Creek	No	700 Yorkdale Dr	Grease
11/10/2013	345	0	McMullen Creek	No	8428 Tifton Rd	Grease
11/15/2013	675	340	Coffey Creek	No	3380 Green Park Cr	Grease
11/19/2013	39	0	Little Hope Creek	No	801 Mill Creek Ln	Roots
11/20/2013	390	390	Four Miles Creek	No	701 E John St (Matthews)	Debris In Line
11/21/2013	136	136	Briar Creek Tributary	No	6809 Highbrook Dr	Roots
11/22/2013	15	0	Briar Creek	No	2928 Springway Dr	Grease
11/25/2013	2500	2500	Lower Little Sugar Creek	No	6516 Tensbury Ct	Roots
11/25/2013	336	336	Little Sugar Creek	No	1601 E 7th St	Grease
11/25/2013	83	83	Irwin Creek	No	3321 Matthews- Mint Hill Rd (Matthews)	Roots
11/25/2013	500	0	N/A	No	300 S Graham St	Pipe Failure
11/29/2013	975	975	McMullen Creek	No	454 Hunter Ln	Grease
12/1/2013	29	0	Four Mile Creek	No	7200 Mark Pl	Grease
12/1/2013	755	350	Kings Branch	No	901 Greenhill Dr	Grease
12/2/2013	138	138	Stewart Creek	No	1552 Berryhill Rd	Roots

					1600	
12/3/2013	8530	2132	Sugar Creek	No	Westinghouse Bv	Roots
12/6/2013	255	255	McMullen Creek	No	4201 Tottenham Rd	Grease
12/9/2013	1350	1350	Irwin Creek	No	2324 Distribution St	Grease
12/12/2013	149	149	Irwin Creek	No	3820 Bristol Dr	Other
12/15/2013	82	82	Walker Branch	No	15331 Dehavilland Dr	Roots
12/16/2013	2685	2685	Crooked Creek	No	312 Demaree Ln (Matthews)	Debris In Line
12/18/2013	104	0	N/A	No	3918 Ashton Dr	Debris In Line
12/18/2013	100	100	Stewart Creek	No	3110 Southwest Blvd	Grease
12/18/2013	80	80	Rea Branch	No	10500 Park Crossing Dr	Roots
12/19/2013	390	320	Coffey Creek	No	8315 Byrum Dr	Debris In Line
12/23/2013	1860	1860	Little Sugar Creek	No	2132 Shadyview Dr	Roots
12/23/2013	295	295	Briar Creek	No	2135 Brookwood Rd	Grease
12/24/2013	117	0	Reedy Creek	No	8312 Saddlehorse Ln	Roots
12/26/2013	300	300	Clems Branch	No	11409 Mcginn's Trace Ct	Grease
12/28/2013	456	0	McAlpine Creek	No	6722 Wannamaker Ln	Grease
12/30/2013	480	240	Sugar Creek	No	4601 Charlotte Park Dr	Grease
12/31/2013	350	350	Lake Davidson	No	800 Beaty St (Davidson)	Grease
12/31/2013	1440	1440	Flat Branch	No	7810 Spindletop Pl	Roots
1/2/2014	130	0	Lake Norman	No	19731 Bustle Rd (Cornelius)	Pipe Failure
1/3/2014	210	210	Lake Davidson	No	800 Beaty St (Davidson)	Grease
1/4/2014	390	300	McAlpine	No	5335 Parview Dr	Roots

			Tributary		S	
1/6/2014	140	140	McAlpine Creek	No	8342 Runaway Bay Dr	Roots
1/6/2014	740	740	Paw Creek Tributary	No	1300 Lundy Ln	Grease
1/8/2014	240	240	Campbell Creek	No	2201 Maplecrest Dr	Roots
1/9/2014	1200	1200	McMullen Creek	No	4723 Stafford Cr	Roots
1/10/2014	180	180	Brier Creek	No	2126 Laburnum Av	Grease
1/11/2014	500	500	Stewart Creek	No	2401 Morton St	Roots
1/12/2014	3070	3070	McAlpine Creek	No	632 Trail Ridge Rd (Matthews)	Roots
1/14/2014	850	850	Briar Creek	No	6414 Mcbride St	Roots
1/15/2014	255	255	Little Hope Creek Tributary	No	916 Brookrun Dr	Roots
1/16/2014	130	65	Steele Creek	No	11945 Goodrich Dr	Roots
1/17/2014	30	30	Taggart Creek	No	5040 Airport Center Py	Roots
1/18/2014	264	264	Branch To Clark Creek	No	4722 Bridle Ridge Ln	Grease
1/19/2014	112	112	McMullen Creek	No	101 Amrita Ct	Debris In Line
1/22/2014	2597	2597	Irwin Creek	No	3101 Barringer Dr	Grease
1/23/2014	211	0	Kings Branch	No	201 Archdale Dr	Grease
1/24/2014	48	48	Crooked Creek	No	400 Shrewsbury Ln (Matthews)	Roots
1/24/2014	700	700	Toby Creek.	No	1001 Chancellor Park Dr	Grease
1/25/2014	1305	1305	Rocky Branch	No	10045 Providence Church Ln	Grease
1/26/2014	61	61	Sugar Creek	No	6045 Kingstree Dr	Grease
1/28/2014	261	0	Irwin Creek	No	2745 Freedom Dr	Grease
1/31/2014	85	0	Four Mile Creek	No	3908 Woodfox Dr	Grease
1/31/2014	183500	183500	Kings Branch	No	9545 Hebron Commerce Dr.	Pipe Failure

2/1/2014	850	850	Big Sugar Creek	No	511 N Main St (Pineville)	Debris In Line
2/2/2014	450	450	Reedy Creek Tributary	No	7324 Linda Lake Dr	Grease
2/2/2014	1550	1550	Stony Creek	No	11132 Greenhead View Rd	Grease
2/3/2014	790	790	Porter Branch	No	12022 Swallow Ln	Grease
2/5/2014	100	0	Kings Branch	No	516 Farmhurst Dr	Grease
2/7/2014	430	430	McMullen Creek	No	2818 Hinsdale St	Grease
2/7/2014	25	0	N/A	No	1516 Longleaf Dr	Roots
2/8/2014	850	850	Little Sugar Creek Tributary	No	414 Faison Av	Grease
2/9/2014	860	860	Little Sugar Creek	No	907 Bannister Pl	Grease
2/9/2014	739	0	Little Sugar Creek	No	7520 Quail Meadow Ln	Roots
2/14/2014	550	550	McMullen Creek	No	2205 Sedley Rd	Roots
2/15/2014	91	0	N/A	No	4224 Columbine Cr	Roots
2/15/2014	166	166	Dairy Branch	No	2620 South Bv	Grease
2/15/2014	116	0	Stewart Creek	No	4008 Tennessee Ave	Grease
2/16/2014	200	200	Lake Norman	No	19116 Peninsula Point Dr (Cornelius)	Pipe Failure
2/18/2014	100	100	Lake Norman	No	18019 Harbor Light Bv (Cornelius)	Pipe Failure
2/19/2014	300	300	Taggart Creek	No	4400 Golf Acres Dr	Severe Natural Condition
2/20/2014	600	600	McAlpine Creek	No	700 Sardis Ln	Grease
2/20/2014	106	106	Lake Norman	No	19116 Peninsula Point Dr	Pipe Failure
2/22/2014	98	0	McAlpine Creek	No	1926 Sardis Rd North	Grease
2/23/2014	89	0	Kennedy Branch	No	5310 Abner Ln	Grease

2/25/2014	130	0	Mallard Creek	No	9140 Research Dr	Roots
2/25/2014	1060	1060	Little Sugar Creek	No	3101 Sunnybrook Dr	Grease
2/25/2014	61855	61855	McAlpine Creek Tributary #1	No	11715 North Community House Rd	Debris In Line
2/27/2014	1545	1545	Six Mile Creek	No	17418 Westmill Ln	Grease
2/28/2014	114	114	Little Hope Creek	No	4124 Firwood Ln	Grease
2/28/2014	219	219	McAlpine Creek Tributary	No	8940 Tree Haven Dr	Grease
3/2/2014	1980	1980	Six Mile Creek	No	9517 Oswald Ln	Grease
3/5/2014	160	80	Reedy Creek	No	5333 Bradenbury Ct	Grease
3/7/2014	60	60	Taggart Creek	No	4409 Denver Ave	Inflow and Infiltration
3/7/2014	300	300	Taggart Creek	No	4425 Golf Acres Dr	Inflow and Infiltration
3/9/2014	156	156	Little Sugar Creek	No	3801 Ashton Dr	Grease
3/9/2014	142	142	McMullen Creek	No	4423 Emory Ln	Debris In Line
3/9/2014	27	0	N/A	No	7419 Pine Bluff Cr	Roots
3/9/2014	231	231	Campbell Creek	No	5027 Craigwood Dr	Grease
3/10/2014	166	83	Toby Creek Tributary	No	6220 Dougherty Dr	Roots
3/11/2014	117.5	88	McAlpine Creek	No	726 Trail Ridge Rd (Matthews)	Roots
3/11/2014	120	120	Four Mile Creek	No	9935 Ballantyne Commons Py	Grease
3/11/2014	86	0	N/A	No	9428 Copper Hill Ln	Roots
3/12/2014	15	0	N/A	No	1118 Belrose Ln	Roots
3/14/2014	114	0	N/A	No	388 Gum Branch Rd	Debris In Line
3/15/2014	1580	1580	Briar Creek	No	3500 Burkland Dr	Grease

			Tributary			
3/17/2014	5700	5700	Irwin Creek	No	100 Beatties Ford Rd	Grease
3/19/2014	495	495	Four Mile Creek	No	1829 Cloudburst Dr (Matthews)	Roots
3/19/2014	510	255	Kings Branch Tributary	No	467 Sharview Cr	Roots
3/20/2014	4320	4320	Briar Creek	No	3801 Sheridan Dr	Pipe Failure
3/22/2014	31	31	McMullen Creek Tributary.	No	2016 Valencia Tr	Grease
3/22/2014	95	0	Reedy Creek	No	11543 Gelding Dr	Roots
3/22/2014	135	135	McAlpine Creek	No	6611 Lancer Dr	Grease
3/23/2014	845	845	McAlpine Creek Tributary	No	7101 Chameroy Ct	Grease
3/24/2014	93	0	Lake Norman	No	19200 Meta Rd (Cornelius)	Grease
3/24/2014	1200	1200	McMullen Creek	No	4600 Colony Rd	Grease
3/26/2014	79	79	Paw Creek	No	5115 Freedom Dr	Debris In Line
3/27/2014	75	0	Mallard Creek	No	6621 Brenock Ln	Roots
3/30/2014	480	400	McMullen Creek Tributary	No	3100 Mill Pond Rd.	Roots
4/1/2014	795	795	Campbell Creek	No	5812 Cedars East Ct	Grease
4/1/2014	64	0	McAlpine Creek	No	401 Old Bell Rd	Grease
4/2/2014	195	195	Stewart Creek	No	2301 W Morehead St	Debris In Line
4/4/2014	2600	2600	McCullough Creek Tributary	Yes	4605 Colony Rd	Vandalism
4/5/2014	1710	1710	McAlpine Creek	No	7025 Morganford Rd	Roots
4/5/2014	1245	1245	Torrence Creek	No	9002 Old Barnette PI (Huntersville)	Roots
4/6/2014	710	335	McAlpine Creek	No	5719 Cedars East Ct	Pipe Failure
4/7/2014	1025	1025	Little Sugar Creek	No	8400 Park Rd Suite A	Pipe Failure

4/9/2014	1740	870	Rocky Branch	No	11109 Oak Pond Cr	Roots
4/9/2014	48	0	Coffey Creek	No	2440 Whitehall Park Dr	Grease
4/10/2014	500	500	Campbell Creek Tributary	No	5723 Cedars East Ct	Vandalism
4/11/2014	1160	1160	Taggart Creek Tributary	No	4041 Plato Cr	Pipe Failure
4/11/2014	260	260	Dairy Branch	No	673 Ideal Wy	Grease
4/11/2014	770	0	Gum Branch	No	6900 Pleasant Grove Rd	Grease
4/13/2014	825	200	Briar Creek	No	4851 Eaves Ln	Other
4/14/2014	290	290	Irwin Creek	No	1425 Clanton Rd	Grease
4/21/2014	134	134	Edward Branch	No	5312 Unaka Av	Roots
4/23/2014	1280	0	N/A	No	222 S Caldwell St	Other
4/23/2014	6940	6940	Stewart Creek	No	1817 Mcallister Dr	Pipe Failure
4/23/2014	2745	2745	Edwards Branch	No	3746 E Dresden Dr	Pipe Failure
4/24/2014	41	0	Sugar Creek	No	5101 S Tryon St	Roots
4/24/2014	158	0	Sugar Creek	No	5227 Queen Anne Rd	Roots
4/28/2014	1025	1025	Sugar Creek	No	405 Forsyth Hall Dr	Grease
4/28/2014	1380	1380	Paw Creek	No	2301 Wildlife Rd	Other
4/28/2014	990	990	Taggert Creek	No	2745 Freedom Dr	Grease
4/29/2014	1310	1310	Paw Creek	No	1025 Lewiston Av	Debris In Line
5/3/2014	9110	911	Ticer Branch	No	6900 Wilkinson Bv	Roots
5/4/2014	450	400	Reedy Creek Tributary	No	9320 Atlas Cedar Dr	Debris In Line
5/4/2014	48	48	Four Mile Creek	No	8501 Golf Ridge Dr	Debris In Line
5/5/2014	2950	2950	Dairy Branch	No	229 Poindexter Dr	Grease
5/6/2014	55	55	Taggart Creek	No	4712 Havelock Av	Pipe Failure
5/6/2014	5500	5500	Mountain Island	No	9820 Callabridge	Roots

			Lake		Ct	
5/7/2014	105	105	Lake Norman	No	18408 Peninsula Club Dr (Cornelius)	Pipe Failure
5/7/2014	4400	2200	Torrence Creek	No	10519 Remembrance TI (Huntersville)	Grease
5/7/2014	80	80	Ticer Branch	No	7425 Tuckaseegee Rd	Grease
5/9/2014	360	0	Reedy Creek	No	8744 Sam Dee Rd	Grease
5/10/2014	114	114	Campbell Creek	No	6023 Albemarle Rd	Grease
5/12/2014	355	0	Lake Norman	No	18948 Casual Cay Ln (Cornelius)	Pipe Failure
5/13/2014	164	0	Sugar Creek	No	814 Aileen Cr	Grease
5/21/2014	240	0	McAlpine Creek	No	5712 Brittany Ct	Grease
5/22/2014	600	600	Four Mile Creek	No	2609 Houston Branch Rd	Grease
5/27/2014	217	217	Campbell Creek Tributary	No	4914 Lawrence Orr Rd	Other
5/30/2014	2100	1000	Upper Little Sugar	No	3600 Philemon Av	Grease
5/30/2014	1340	1340	Briar Creek	Yes	5319 Dolphin Ln	Grease
5/31/2014	226	0	McMullen Creek	No	3400 Tinkerbell Ln	Roots
6/1/2014	201	201	Briar Creek	No	651 Museum Dr	Grease
6/2/2014	18	0	Mallard Creek	No	11236 Shandon Way Ln	Vandalism
6/3/2014	310	310	Mallard Creek	No	570 W Rocky River Rd	Roots
6/4/2014	90	0	Irwin Creek	No	301 Mcninch St	Other
6/5/2014	300	0	King Branch	No	5940 South Bv	Grease
6/6/2014	450	0	N/A	No	1000 Thomasboro Dr	Grease
6/6/2014	126	126	Four Mile Creek	No	13320 Ballantyne	Grease

					Corporate PI	
6/8/2014	97	0	N/A	No	5809 Preston Ln	Debris In Line
6/10/2014	275	275	McMullen Creek	No	6211 Sardis Rd	Grease
6/12/2014	176	176	Irwin Creek Tributary	No	2527 Woodshire Dr	Grease
6/15/2014	324	162	Gum Branch	No	1529 Majestic Meadow Dr	Grease
6/15/2014	3340	2000	Paw Creek	No	6532 Pennacook Dr	Grease
6/16/2014	370	370	McAlpine Creek	No	4420 Forest Hills Dr	Grease
6/20/2014	600	600	Torrence Creek	No	13235 Toka Ct (Huntersville)	Roots
6/20/2014	226	0	Stewart Creek	No	2701 Dundeen St	Grease
6/22/2014	6160	6160	Doby Creek	Yes	7047 Rumple Rd	Grease
6/23/2014	1150	1150	Irwin Creek	No	492 Remount Rd	Grease
6/30/2014	810	0	Four Mile Creek	No	4717 Coburn Ct	Grease

TOTAL NUMBER OF FY2013 COLLECTION SYSTEM SPILLS: 247

Volume Safely Collected, Treated & Discharged During Fiscal Year 2014: 30,348,000,000 Gallons Volume Spilled: 554,442.75 Gallons

PERCENTAGE OF WASTWATER SAFELY COLLECTED, TREATED AND RELEASED DURING

FY14: more than 99.9981% FY13: more than 99.9992% FY12: more than 99.9977% FY11: more than 99.9986% FY10: more than 99.9973% FY09: more than 99.9987%

SECTION IIB. Permit Compliance and Reporting Violations, by plant

Irwin Creek WWTP -- NPDES Permit #NC0024945

MONTH	PERMIT LIMIT COMPLIANCE	REPORTING REQUIREMENT COMPLIANCE
	Irwin Creek failed toxicity. CMUD-SPS is continuing with their	
July, 2013	investigation into the cause of the failure.	None
August, 2013	None	None
September, 2013	None	None
	Irwin Creek failed toxicity. CMUD-SPS is continuing with their	
October, 2013	investigation into the cause of the failure.	None
	Irwin Creek failed toxicity. CMUD-SPS is continuing with their	
November, 2013	investigation into the cause of the failure.	None
December, 2013	None	None
January, 2014	Irwin Creek failed toxicity. CMUD-SPS is continuing with their	
	investigation into the cause of the failure.	None
February, 2014	None	None
March, 2014	None	None
April, 2014	None	None
May, 2014	None	None
June, 2014	None	None

Mallard Creek WRF -- NPDES Permit #NC0030210

MONTH	PERMIT LIMIT COMPLIANCE	REPORTING REQUIREMENT COMPLIANCE
July, 2013	None	None
August, 2013	Mallard Creek failed toxicity	None
September, 2013	None	None
October, 2013	None	None
November, 2013	None	None
December, 2013	None	None
January, 2014	None	None
February, 2014	None	None
March, 2014	None	None
April, 2014	None	None
May, 2014	None	None

June, 2014	None	None
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McAlpine Creek WWTF -- NPDES Permit #NC0024970

MONTH	PERMIT LIMIT COMPLIANCE	REPORTING REQUIREMENT COMPLIANCE
July, 2013	None	None
August, 2013	None	None
September, 2013	None	None
October, 2013	None	None
November, 2013	None	None
December, 2013	None	None
January, 2014	None	None
February, 2014	None	None
March, 2014	None	None
April, 2014	None	None
May, 2014	None	None
June, 2014	None	None

McDowell Creek WWTP -- NPDES Permit #NC0036277

MONTH	PERMIT LIMIT COMPLIANCE	REPORTING REQUIREMENT COMPLIANCE
July, 2013	None	None
August, 2013	None	None
September, 2013	None	None
October, 2013	None	None
November, 2013	None	None
December, 2013	None	None
January, 2014	None	None
February, 2014	None	None
March, 2014	None	None
April, 2014	None	None
May, 2014	None	None
June, 2014	None	None

Sugar Creek WWTP -- NPDES Permit #NC0024937

MONTH	PERMIT LIMIT COMPLIANCE	REPORTING REQUIREMENT COMPLIANCE
July, 2013	None	None
August, 2013	None	None
September, 2013	None	None
October, 2013	None	None
November, 2013	Sugar Creek Failed Toxicity	None
December, 2013	None	None
January, 2014	None	None
February, 2014	None	None
March, 2014	None	None
April, 2014	None	None
May, 2014	None	None
June, 2014	None	None