

CHARLOTTE-MECKLENBURG UTILITIES

# Wastewater Performance Report

## July 1, 2009 – June 30, 2010

**Charlotte-Mecklenburg Utilities** 

5100 Brookshire Blvd. Charlotte, NC 28216 Phone: (704) 399-2221 Fax: (704) 393-2219 www.cmutilities.com

#### I. General Information

#### Name of Regulated Entity and Responsible Person:

City of Charlotte Barry Gullet, Director Charlotte-Mecklenburg Utilities Administration Division 5100 Brookshire Blvd. Charlotte, NC 28216 (704) 399-2221

#### **Applicable Permits:**

There are five wastewater treatment facilities owned and operated by Charlotte-Mecklenburg Utilities. 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	Elliott E. Goins, Jr.	704-875-6443
Sugar Creek WWTP	NC0024937	Roy E. Purgason, Jr.	704-553-2124

In addition to those five plants, Utilities sends wastewater to the Rocky River Regional Wastewater Treatment Plant through an agreement with Cabarrus County. Utilities also accepts flow from Union County to McAlpine Creek WWMF.

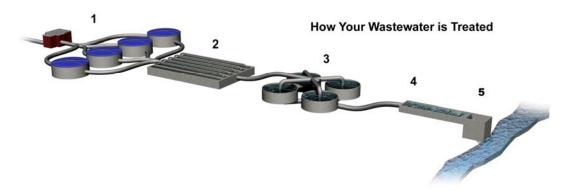
WW COLLECTION	NCDWQ Permit Number	ORC	Phone
4100 W. Tyvola Road	WQCS00001	Tony Dubois	704-432-2746

#### **Description of collection and treatment systems:**

Charlotte-Mecklenburg Utilities collects wastewater from an estimated 226,978 connections to households and businesses throughout the county. Wastewater is collected and directed (via gravity flow supported by sewage lift stations) to one of five wastewater treatment plants where it is treated. An average of 83 million gallons of wastewater is treated and discharged each day.

More than 150 employees work to maintain 4,047 miles of collection pipelines and 74 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 the wastewater treatment plants provides 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 sand filters to remove very small particles that may not have been removed through the settling process.



1. Primary Treatment

Solid particles & objects are captured in grit screens 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 sand filters to remove fine particles.
- 5. Disinfection

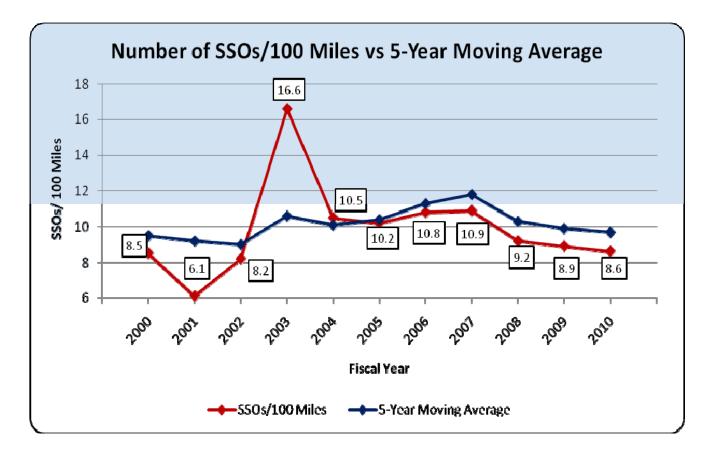
Water is disinfected to remove any remaining pathogens, and then the water is released back into creeks to flow downstream.

#### **II. Summary of System Performance**

#### How did we do?

We are meeting all reporting deadlines and requirements of the federal EPA Administrative Order to reduce spills, and the EPA approved two of our key reports regarding our *Sewer Capacity Assurance* and *Fats, Oils and Grease* prevention programs.

We successfully collected and treated 99.997 percent of the more than 30 billion gallons of wastewater the community produced last year. There were 349 sewer spills in our community, a decrease of nine spills compared to the year before. In fact, the number of spills per 100 miles continued to decline from 10.9 in 2007 to 8.6 spills in fiscal year 2010 as illustrated by the table on page 4.



Utilities works 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. Utilities has also increased its efforts to educate customers about properly disposing of oils and grease.

#### Performance Highlights

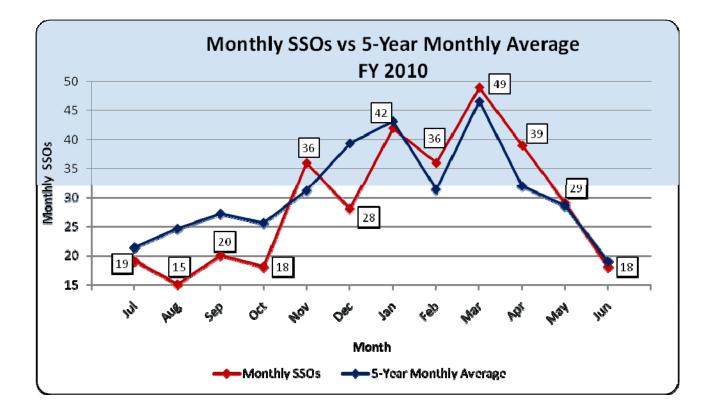
Charlotte-Mecklenburg Utilities celebrated some important milestones even as it took numerous actions to prevent overflows and protect water quality through effective wastewater treatment.

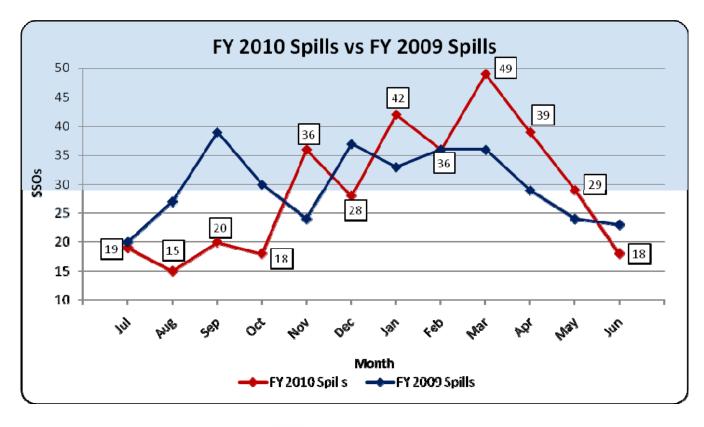
- Our wastewater treatment plants met 99.99 percent of all permitted discharge limits.
- All five wastewater treatment plants earned Peak Performance Awards from the National Association of Clean Water Agencies (NACWA) for the calendar year ending 2009. NACWA Peak Performance Awards recognize wastewater treatment professionals throughout the nation for protecting the environment and public health through outstanding treatment and discharge regulatory compliance. McDowell Creek Wastewater Treatment Plant earned a Platinum Award for a second year, which means six consecutive years of perfect compliance. Mallard Creek Wastewater Treatment Plant received a Platinum Award for five consecutive years of perfect compliance. Gold Awards were presented to McAlpine Creek and Irwin Creek Wastewater Treatment Plants for perfect compliance. Sugar Creek Wastewater Treatment Plant earned a Silver Award for five or fewer violations in a one-year period.
- 10.1 miles of sewer pipe and 722 manholes were rehabilitated, repaired or replaced.
- 249 miles of sewer pipe were treated with root control chemicals.

- 993 miles of sewer lines were cleaned (including some multiple cleanings in the same location) by Field Operations and 14.3 miles of pipe were cleaned by contractors. More than seven miles of large diameter pipe was also cleaned by contractors.
- 264 sewer service pipes were replaced.
- 380 cleanouts installed for customers that did not have them or had defective cleanouts.
- 150 miles of rights of way were cleared by Field Operations and contractors to maintain access to sanitary sewer pipes and to help prevent root intrusions.
- After replacing nine hydraulic jetting / vacuum combination machines during the last fiscal year, Utilities has further strengthened its collection system cleaning programs by developing a hydraulic jetting nozzle standard operation procedure (SOP). Nozzle sets, including nozzles for different applications, were purchased and assembled for all thirteen combination machines in our fleet. We are optimistic that the increased efficiency in cleaning will help prevent such SSOs as those that occurred this period from occurring in the future.
- Utilities is proceeding with the implementation of a Work and Asset Management (WAM) Program that includes deployment of Azteca Cityworks, as well as improved infrastructure management processes. Development environments for the software are currently operational and business process mapping workshops will be complete by November 2010. Utilities Field Operations Division will begin using the system in the first quarter of calendar year 2011. This implementation includes management components as well as field-deployed technology at the crew level.
- Utilities has contracted for a physical survey of the entire wastewater collection system, including inspection of manholes and any exposed piping. This multi-year project is estimated to cost more than \$5,000,000. The project is collecting data that will be used as part of the foundation of a new geographic information system (GIS) and for hydraulic modeling that is needed for planning and implementation of the capacity assurance program discussed earlier. The data being collected includes manhole locations, flowline elevations, pipe sizes, construction materials, and other information. This survey is approximately 95% complete.
- Utilities continued contracting for biological grease treatment in several selected areas of the collection system. Since treatment began in March 2007, only two grease related SSOs have been reported along 42,000 ft. of treated lines and the regular removal of grease from a downstream pump station wet well has been eliminated. Utilities recently renewed the biological grease treatment contract.
- Utilities continuous improvement and optimization efforts expanded again this year. Corporate ISO 14001:2004 certification was obtained in May 2010. This corporate certification currently covers Mallard Creek WRF, McDowell Creek WWTP, and the Biosolids program. The ISO 14000 international certification program focuses on sustainable optimized operations that first seek to minimize negative impacts on the environment. Obtaining the certification was a collaborative effort among many employees throughout Utilities led by Environmental Management System Protection. In 2007, Mallard Creek WRF was the first City of Charlotte government facility to earn this prestigious certification. This ongoing effort serves as a continuous improvement model as we move towards greater sustainability.
- Utilities continues to collaborate with UNC-Charlotte, Centralina Council of Governments, and CPCC to assess the feasibility of using problematic fats, oil and grease (FOG) as biodiesel feedstock. This feasibility study of alternative fuel has been awarded grant funds from the Biofuels Center of NC and the NC Green Fund. The study is investigating brown grease use as an alternative fuel product to

determine if it will save on fuel costs, avoid disposal costs, and reduce pollution for local governments. The economic analysis will consider conventional costs and total life cycle impact assessment. Final reporting is expected in early 2011.

- Utilities reclaimed water program continues to operate. Reclaimed water is highly treated wastewater effluent that is land applied, rather than being discharged into the creek. The Traditions Golf Course is using up to 500,000 gallons a day during spring and summer time. Mallard Creek Park is using up to 500,000 gallons each month.
- There were 74 Wastewater Lift Stations serving our low-lying areas. Staff performed 125 preventative maintenance tasks for a total of 1985 work hours. This does not include twice weekly station checks, wet well cleaning, emergency generator testing, or emergency/routine repairs.
- Griffith Street Lift Station was upgraded with new pumps, generator, electrical service, controls, and wet weather storage. Old Steele Creek Lift Station was removed from service due to new gravity line.
- Phase one of the Briar Creek Relief Sewer project is more than 98% complete. Construction of phase two will begin fall 2010.
- Phase one of the McAlpine Creek Relief Sewer project was completed and in service on December 21, 2009. Construction on phase two began in FY 2010 and was 75% as of June 30, 2010.
- Last year's frequency of sewer spills was below the 5-year average in seven of the twelve months.







- City staff inspected grease-handling facilities at 4,217 food service establishments and restaurants (not including follow-up inspections) to ensure proper grease disposal. The City continued its Grease Free education program to teach proper disposal of a pipe-blocking menace. Inspectors mailed information to more than 4,506 customers and handed out information to 9,582 customers in apartments / multi-family complexes.
- Staff conducted more than 159 presentations to more than 5,900 children and adults. Some of the key presentations were to ten apartment property managers and plumbers. Multiple Earth Day events also provided opportunities to distribute Grease Free scrapers, pens and other items.
- Utilities participated at the Greater Charlotte Apartment Association Trade Show in March 2010, which was very successful in talking with property managers, owners and maintenance staff about grease disposal methods and preventative maintenance. We continue to provide bilingual doorhangers and promotional items for property managers to give to new residents.
- Utilities employed a new doorhanger specifically for maintenance personnel or property manager of apartment or multi-family complexes. This reinforces best management practices for prevention.



- Advertised in a popular direct mail coupon book (above), WelcomeMat, that new single-family and multi-family residents receive monthly. The Utilities "coupon" explains proper disposal methods and offers a free grease lid. The ads ran from August 2009 through June 2010.
- Provided copies of our **30-second TV advertisement** to the Charlotte-Mecklenburg Schools and WTVI to run on their stations as inventory allows. Charlotte-Mecklenburg Schools runs CMS TV targeted to students and parents at home, while WTVI is the Charlotte region's PBS affiliate.
- Secured and provided two volunteers to speak on a **Spanish radio news talk show** in Charlotte named Punta Latina to describe the consequences of improper grease disposal and inform customers. One expert on the show was a bilingual Utilities employee, while another was a Latina apartment leasing agent in our community. The show aired October 22, 2009.
- Work continues on our statewide Urban Water Consortium-funded research project. UNC Charlotte is conducted focus groups and surveys this spring/summer to inform a strategic communications plan for better reaching multi-family and Latino customers with Grease Free messages.
- Utilities continues to distribute bilingual door hangers to apartment managers and at community presentations and events. We are also providing pan scrapers and jar openers with the bilingual Grease Free message.
- Along with ongoing media notifications about spills, customers within 1,000 feet of a grease-caused spill receive a letter alerting them of the spill and how to properly dispose of grease.
- Bill inserts in October, November and December mailed (example on next page) to nearly 250,000 customer account holders each month. These also were repurposed as messages on our web site, and extra inserts were made available at events during those months.

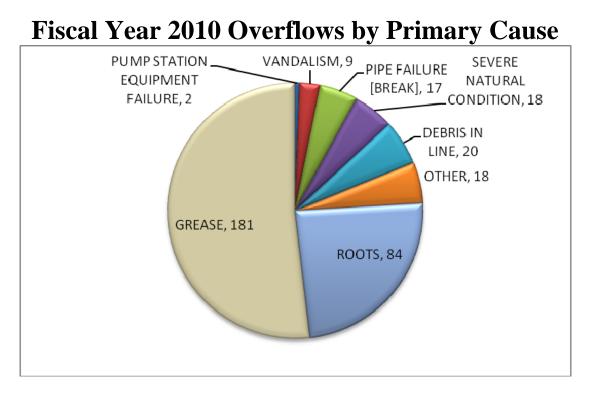


#### **Continuing Challenges**

#### Wastewater Collection Challenges

The volume of wastewater that overflowed increased from 383,859 gallons in fiscal year 2009 to 813,044 gallons in fiscal year 2010. The volume of wastewater that reached surface waters also increased from 303,287 gallons in fiscal year 2009 to 661,883 gallons in fiscal year 2010.

The greatest continuing wastewater challenge in this community – and in others across the U.S. – is sewage overflows. Of the 349 sewer spills that occurred, more than half were due to hardened grease clogging pipes. Other spill causes included the infiltration of tree roots into pipes, vandalism, general debris, and broken pipes.



Grease and other blockages that lead to sewer overflows are cleared by Utilities 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.

Inspection crews and our customers find overflows. Reports of overflows where 1,000 or more gallons reach surface waters are distributed to the media in an effort to notify the public. 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.

Charlotte-Mecklenburg Utilities continues its excellent sewage spill response record. Staff responded to more than 96 percent of the spills in less than 60 minutes. This compares to a state response standard of 120 minutes or less.

Utilities has continued to evaluate and refine sewer cleaning operation. A significant change of strategy was continued during this fiscal year relative to how cleaning resources are assigned. Utilities initiated a Consolidated Cleaning Project in January 2009. Under the direction of the Field Operations Senior Engineer, and using our SSO data base and GIS, sub-basins with high concentrations of system failures and SSOs are being identified. Resources from each of the Field Operation Zones are pooled or consolidated in these problematic sub-basins and deliberate and focused cleaning, inspection, and repair efforts are directed from the top to the bottom of the sub-basins.

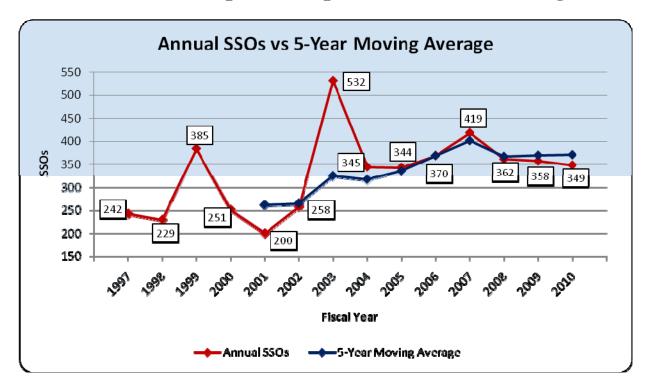
During this year, six sub-basins have been completed. Within these basins, approximately 310,010 linear feet, or 58 miles, were cleaned using hydraulic / vacuum combination machines, rodders, and off-street hydraulic equipment. The line segments were then inspected using CCTV. Main line deficiencies were identified and repaired.

Data is being collected during the Consolidated Cleaning Project to evaluate this approach, adjust from lessons learned, and to redeploy the process over the four geographic zones of our collection system in the future. The consolidated project approach also insures that preventative maintenance to reduce SSOs is not impacted by other service emergencies. This consolidated project approach; in addition to the ongoing preventative maintenance directed by each zone; is expected to reduce SSOs caused by grease, roots, debris, and system defects such as broken pipe and off-set joints. Utilities remains optimistic that this approach will deliver continuous improvements in spill reduction.

Several spills during this period were exceptional, unintentional, temporary, and caused by factors beyond the reasonable control of Utilities. Within this period, four severe rain events of several inches within a very few hours produced major flash flooding resulting in eighteen (18) SSOs. These events occurred November 11<sup>th</sup> and December 25<sup>th</sup> of 2009 and January 25<sup>th</sup> and February 5<sup>th</sup> of 2010.

Charlotte-Mecklenburg Utilities continues to deal with severe budget constraints during these recessive economic times. A hiring freeze has continued prompting Utilities to reallocate positions in order to reduce SSOs.

The five-year moving average now stands at 371.6 collection system spills per year (from fiscal year 2006 to present- fiscal year 2010).



### Number of Spills Compared to 5-Year Average

Utilities tracks, trends, and analyzes the effectiveness of its efforts in reducing SSOs. On a monthly basis Utilities studies SSOs trends, including: a comparison of the current month's SSO total and SSOs experienced the same month during the previous year, SSOs per 100 miles of pipe, SSOs versus the five year average number of SSOs, and SSO volume.

#### U.S. Environmental Protection Agency (EPA) Administrative Order Update

Charlotte-Mecklenburg Utilities performed a voluntary sewer system audit in 1999-2000 at the EPA's request. During 2003, frequent heavy rains contributed to Charlotte's worst year of wastewater overflows. At that point the EPA and Utilities met several times to review the audit and actions taken since 2000. Utilities also worked with North Carolina Department of Environment and Natural Resources (NCDENR) to receive a state collection system permit.

In March 2007, the U.S. EPA issued a formal Administrative Order for Charlotte-Mecklenburg Utilities. This Administrative Order is a regulatory enforcement action that includes a series of steps Utilities must take to reduce overflows in our community. These steps included paying a fine for past spills and assuring that certain construction projects would be completed on time. The administrative order will help guide our ongoing efforts to address a community problem we've been working on for many years. Utilities will continue to update the EPA on its progress.

Charlotte is the first major city in the Carolinas to face EPA enforcement as it relates to overflows. Quite a few other communities in the southeast, including Atlanta, Mobile and Knoxville have already received a much more severe EPA enforcement action known as a judicial Consent Decree.

Preventing sewer spills has been a high priority in Charlotte-Mecklenburg for more than a decade. The administrative order will help further guide our ongoing efforts to address a community problem. We have increased preventative line maintenance, capital improvements and other programs.

The EPA's and our goal for overflows is zero. Reality is that a system our size will always have some overflows, but we agree even one spill is too many. Zero spills continue to be our standard and goal in Charlotte-Mecklenburg.

#### Wastewater Treatment Plant Challenges

Charlotte-Mecklenburg Utilities five wastewater treatment plants met 99.93 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 was one permit limit violation out of a potential of 7,261 compliance tests.

Discharge of wastewater that had not completed all of the treatment processes occurred three times. On each occasion, the wastewater was treated with the exception of the final disinfection process. These bypasses can be caused by an electrical, mechanical, computer, or operator error. In each case, operators on-site quickly responded to the bypass and took appropriate cleanup/repair action. No dead fish were found associated with these bypasses.

On June 30, 2010, Heavy rains caused wastewater to overflow at the Sugar Creek Wastewater Treatment Plant. An estimated 83,000 gallons reached Sugar Creek. Operators responded immediately and diverted excess rain water to back-up basins and took appropriate cleanup/repair action.

Utilities operates a system protection program to help maintain our infrastructure. This Pretreatment program has identified, permitted, and regulated large industrial users and others to keep unsuitable discharges out of the wastewater system. While industrial compliance is extremely high in Charlotte-Mecklenburg, identifying potentially hazardous discharge sources is an ongoing challenge. In fiscal year 2010, the Trunkline Monitoring and Grease Free programs also continued, enabling Utilities System Protection and Water Quality staff to closely observe what industrial, institutional, and commercial customers discharge into the sewer network, identify potential problem areas, and protect the collection system, sewer line workers, and treatment plants.

#### 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. Two of the larger, near-term projects include an expansion at the Sugar Creek Wastewater Treatment Plant and a new regional wastewater treatment plant along the Catawba River, near its intersection with Long Creek. Both projects will take years and tens of millions of dollars to complete, and stakeholder input and sustainable design practices are critical components of each. Sugar Creek is in the design phase and on schedule. Long Creek is in the environmental permitting and planning phase. As we proceed with the wastewater master plan, we will remain challenged to address environmental and regulatory needs while designing sustainable facilities and staying within budget, given all the construction cost increases we are experiencing. On another note, lingering impacts from the drought, water conservation, and the economic downturn have resulted in lower-than-projected flow rates at our wastewater plants, and it is unclear yet whether these patterns will persist over time such that wastewater capacities may be extended further than we originally projected.

The sections following this page – Sections IIA and IIB -- detail all spills from the collection system and plants, along with plant permit limit violations and monitoring and reporting violations. Section IIA includes spills for the fiscal year ending June 30, 2010 and is separated by month. These include size of spills, their cause and descriptions of any known environmental impact.

The second section, Section IIB, represents NPDES reporting and monitoring violations and is separated by plant.

#### III. Notification

This report is available to the users or customers of this system by clicking on the 'Education' link of the Charlotte-Mecklenburg Utilities homepage at www.cmutilities.com. There are also printed copies available at the Charlotte-Mecklenburg Utilities Administration Building at 5100 Brookshire Blvd., Charlotte, NC 28216, and at the City/County Customer Service and Information Center at 600 East Fourth Street, Charlotte, NC 28202. The users or 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. We will also make this Spanish version available via our 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 Utilities

8-27-2010

Date

July	Total Estimate	Volume Reaching Surface Water	Surface Water Name	Fish Killed	Block	Street Name and Type		Cause of Spill / Bypass
	I			T			· · · · ·	
7/3/2009	60	0	Not Applicable	0	6401	High Creek	Ct	Grease
7/8/2009	3300	3300	Irwin Creek	0	2321	Wilkinson	Bv	Pipe Failure [Break]
7/8/2009	33	33	Little Hope Creek	0	1819	Tyvola	Rd	Roots
7/10/2009	100	100	Four Mile Creek	0	6413	Mock Orange	Dr	Grease
7/10/2009	100	100	Campbell Creek	0	5315	Farm Pond	Ln	Grease
7/11/2009	650	650	Tributary To Briar Creek	0	6411	Woody Glen	Pl	Grease
7/12/2009	1350	1350	Irwin Creek	0	1011	Andrill	Tr	Grease
7/12/2009	215	215	Mallard Creek	0	310	Highroad	Dr	Grease
7/15/2009	49	49	McAlpine Creek	0	5110	Mcalpine Farm	Rd	Roots
			Catawba River Tributary			•		
7/15/2009	1100	0	#2	0	11633	Northwoods Forest	Dr	Grease
7/15/2009	170	85	Little Sugar Creek	0	100	Craighead (East)	Rd	Grease
7/17/2009	565	282	McMullen Creek	0	4009	Craig	Av	Debris
7/19/2009	450	450	Irwin Creek	0	3600	Meredith	Av	Grease
7/21/2009	136	136	Briar Creek	0	3100	Grierton	Ct	Grease
7/22/2009	240	240	McAlpine Creek	0	8018	Princess Ann	Dr	Roots
7/25/2009	2200	1650	Mallard Creek	0	6815	Brachnell View	Dr	Grease
7/27/2009	4095	1023	Steele Creek	0	14523	Carowinds	Bv	Roots
7/28/2009	475	475	Long Creek	0	8849	Cavonnier	Ln	Grease
7/30/2009	1180	1180	Little Sugar Creek	0	5104	Reagan	Dr	Grease
19 Spills	16,468	11,318		0				

**IIA.** <u>Listing of Sewer Spills by Month</u> The following is a list of spills (in gallons) from the public wastewater system that occurred between July 1, 2009 and June 30, 2010.

August	Total Estimate	Volume Reaching Surface Water	Surface Water Name	Fish Killed	Block	Street Name and Type		Cause of Spill / Bypass
8/2/2009	465	465	Irwin Creek	0	3614	Crestridge	Dr	Grease
8/2/2009	50	50	Four Mile Creek	0	6347	Countryside	Dr	Grease
8/6/2009	44	44	Briar Creek	0	5424	Galway	Dr	Roots
8/7/2009	480	480	Little Sugar Creek	0	1919	South	Bv	Grease
8/8/2009	220	220	Mallard Creek Tributary	0	6201	Spanish Moss	Ln	Grease
8/10/2009	510	510	Stewart Creek	0	3820	Rozzelles Ferry	Rd	Grease
			Four Mile Creek					
8/13/2009	3100	2480	Tributary	0	6409	Sunbow	Ln	Roots
8/15/2009	450	450	Back Creek	0	9310	Oren Thompson	Rd	Grease
8/15/2009	220	220	Irwin Creek	0	1238	Moretz	Av	Grease
8/16/2009	4200	2100	Back Creek	0	1836	Jeffrey Bryan	Dr	Grease
8/20/2009	108909	0	Not Applicable	0	465	Griffith (Davidson)	St	Other
8/24/2009	120	120	Sugar Creek Tributary	0	648	Miller	St	Grease
8/25/2009	320	320	McMullen Creek	0	426	Chillingworth	Ln	Pipe Failure [Break]
8/26/2009	2502	2502	Crooked Creek	0	4426	Stallings (Matthews)	Rd	Other
8/30/2009	30	0	Not Applicable	0	1509	Wandering Way	Dr	Roots
15	121620	9961		0				

September	Total Estimate	Volume Reaching Surface Water	Surface Water Name	Fish Killed	Block	Street Name and Typ	be	Cause of Spill / Bypass
9/4/2009	720	0	Not Applicable	0	635	Beaty (Davidson)	St	Roots
9/5/2009	600	600	McMullen Creek	0	5918	Gate Post	Rd	Roots
9/8/2009	118	0	Not Applicable	0	11906	General	Dr	Roots
9/9/2009	650	650	Irwin Creek	0	308	Yeoman	Rd	Grease
9/11/2009	90	0	Not Applicable	0	341	Verbena	St	Grease
9/12/2009	135	0	Not Applicable	0	4951	Dayspring	Dr	Grease
9/13/2009	370	370	Paw Creek	0	2600	Dogwood	Cr	Grease
9/14/2009	1800	1800	Little Sugar Creek	0	5800	Rose Valley	Dr	Pipe Failure [Break]

			Tributary					
9/15/2009	44	44	King Branch	0	517	Sleepy Hollow	Rd	Grease
9/18/2009	180	180	McMullen Creek	0	2901	Coltsgate	Rd	Grease
9/18/2009	70	0	Not Applicable	0	2810	Barringer	Dr	Grease
9/21/2009	1200	1200	Briar Creek	0	5924	Eastbrook	Rd	Grease
9/22/2009	0	0	Not Applicable	0	3517	Johnny Cake	Ln	Other
9/23/2009	300	300	Briar Creek	0	1372	Carolyn	Dr	Grease
9/23/2009	450	360	Four Mile Creek	0	10981	Painted Tree	Rd	Roots
9/25/2009	309	0	Not Applicable	0	814	Aileen	Cr	Roots
9/25/2009	330	0	Not Applicable	0	2615	Heidleburg	Ln	Roots
9/26/2009	156	156	Briar Creek Tributary	0	1450	Academy	St	Debris In Line
9/30/2009	150	0	Not Applicable	0	302	Longbridge (Matthews)	Dr	Roots
9/30/2009	1470	1470	McMullen Creek	0	9607	Hanover South	Tl	Roots
20	9142	7130		0				

October	Total Estimate	Volume Reaching Surface Water	Surface Water Name	Fish Killed	Block	Street Name and Type		Cause of Spill / Bypass
10/1/2009	9600	9600	Kings Branch Tributary	0	739	Greenhill	Dr	Grease
10/1/2009	145	72	Briar Creek Tributary	0	5400	Great Wagon	Rd	Grease
10/2/2009	60	0	Not Applicable	0	1658	Sterling	Rd	Grease
10/4/2009	90	0	Not Applicable	0	4505	Meadowridge	Dr	Grease
10/8/2009	66	0	Not Applicable	0	4100	Tyvola (West)	Rd	Debris In Line
10/13/2009	360	360	Briar Creek	0	1425	Eastcrest	Dr	Grease
10/18/2009	850	850	Torrence Creek Tributary	0	9621	St Barts (Huntersville)	Ln	Grease
10/19/2009	78	78	Deer Creek	0	204	Demaree (Matthews)	Ln	Grease
10/19/2009	180	180	Reedy Creek Tributary	0	6431	Dougherty	Dr	Grease
10/19/2009	312	312	Briar Creek	0	2932	Edsel	Pl	Grease
10/20/2009	336	336	Coffey Creek	0	2908	Scarlet	Cr	Grease
10/20/2009	10	0	Not Applicable	0	2909	Goneaway	Rd	Pipe Failure [Break]
10/23/2009	225	0	Not Applicable	0	2357	Carmel	Rd	Grease

						Old Dowd		
10/23/2009	800	800	Paw Creek	0	8924	(Mecklenburg County)	Rd	Grease
10/24/2009	1420	1420	Irwin Creek	0	1201	Scottsdale	Rd	Roots
						Carolina Place		
10/24/2009	5000	5000	Little Sugar Creek	0	11235	(Pineville)	Ру	Other
10/27/2009	68	0	Not Applicable	0	16729	Spinnaker (Cornelius)	Ln	Roots
						Bellingham		
10/29/2009	5300	5300	McDowell Tributary	0	8312	(Huntersville)	Ct	Grease
18	24900	24308		0				

November	Total Estimate	Volume Reaching Surface Water	Surface Water Name	Fish Killed	Block	Street Name and Type		Cause of Spill / Bypass
11/2/2009	900	900	Briar Creek	0	4159	Sheridan	Dr	Grease
11/2/2009	650	325	McMullen Creek	0	7814	Fairview	Rd	Grease
11/2/2009	695	695	Little Sugar Creek	0	6500	Fairview	Rd	Grease
11/3/2009	1780	1780	Derita Branch	0	925	Craighead (West)	Rd	Roots
11/4/2009	165	0	Not Applicable	0	3837	Foxford	Pl	Grease
11/4/2009	815	407	McMullen Creek	0	5100	Sharon	Rd	Grease
11/4/2009	1800	1800	Mallard Creek Tributary	0	1712	J N Pease	Pl	Grease
11/5/2009	165	165	McAlpine Creek	0	7000	Windyrush	Rd	Grease
11/8/2009	156	78	Little Hope Creek	0	601	Kenlough	Dr	Grease
11/9/2009	1200	1200	Campbell Creek	0	5400	Albemarle	Rd	Grease
11/11/2009	2480	2480	Briar Creek	0	2919	Central	Av	Grease
11/11/2009	13300	13300	Briar Creek	0	516	Museum	Dr	Severe Natural Condition
11/11/2009	2400	2400	McAlpine Creek	0	7008	Lancer	Dr	Severe Natural Condition
11/11/2009	37800	37800	McAlpine Creek	0	8713	Monroe	Rd	Severe Natural Condition
11/11/2009	1200	1200	McAlpine Creek	0	9010	Monroe	Rd	Severe Natural Condition
11/11/2009	200000	200000	Campbell Creek	0	2312	Margaret Wallace	Rd	Severe Natural Condition
11/12/2009	60	60	McMullen Creek	0	5800	Sharon	Rd	Roots
11/13/2009	88	88	Large Sugar Creek	0	418	Worthington (West)	Av	Grease
11/14/2009	680	0	McAlpine Creek	0	513	Kelford	Ln	Roots
11/15/2009	300	300	Coffey Creek	0	701	Dunbrook	Ln	Roots

11/16/2009	775	0	Not Applicable	0	4100	Tyvola (West)	Rd	Debris In Line
11/16/2009	660	660	Little Sugar Creek	0	2001	Sherwood	Av	Pipe Failure [Break]
11/17/2009	265	265	Paw Creek	0	1200	Browns	Av	Roots
11/17/2009	470	235	Four Mile Creek	0	8520	Bella Reese	Rd	Grease
						Rust Wood		
11/18/2009	920	782	McAlpine Creek	0	8313	(Mecklenburg County)	Pl	Grease
11/19/2009	45	45	Long Creek	0	123	Chanticleer	Ct	Grease
11/21/2009	820	820	Kings Branch	0	440	Tyvola	Rd	Grease
11/21/2009	305	305	Little Sugar Creek	0	5433	Kildare	Dr	Grease
11/21/2009	425	425	McMullen Creek	0	3432	Champaign	St	Roots
11/23/2009	855	855	Little Hope Creek	0	926	Woodlawn (East)	Rd	Roots
11/24/2009	520	520	McAlpine Creek	0	9000	Monroe	Rd	Grease
11/24/2009	1950	1950	Rea Branch	0	7528	Windyrush	Rd	Roots
11/25/2009	80	0	Not Applicable	0	3405	Rogers	St	Grease
11/29/2009	3100	1550	McAlpine Creek	0	9200	Clifton Meadow	Dr	Grease
11/29/2009	52	5	Doby Creek	0	6123	Forest Pond	Dr	Grease
11/29/2009	600	600	Delta Lake	0	7615	Lisa	Cr	Grease
36	278476	273995		0				

December	Total Estimate	Volume Reaching Surface Water	Surface Water Name	Fish Killed	Block	Street Name and Type		Cause of Spill / Bypass
12/1/2009	244	0	Not Applicable	0	431	Kelford	Ln	Grease
12/3/2009	63	0	Not Applicable	0	4800	Ashley	Cr	Grease
12/4/2009	49	24	Four Mile	0	3917	Lakeside	Dr	Grease
12/6/2009	500	500	Briar Creek	0	2118	Kilborne	Dr	Grease
12/6/2009	622	0	Not Applicable	0	8221	Oakley	Ln	Roots
12/7/2009	1150	1035	Briar Creek	0	820	Villa	Ct	Grease
12/8/2009	345	345	McAlpine Creek	0	10981	Painted Tree	Rd	Roots
12/9/2009	204	102	McAlpine Creek	0	8420	Blockade	Ct	Other
12/9/2009	550	550	Campbell Creek	0	6401	Woodbend	Dr	Vandalism
12/10/2009	11000	11000	Crooked Creek	0	2100	Pineapple (Matthews)	Ct	Other

12/10/2009	790	790	McAlpine Creek	0	9346	New Towne (Matthews)	Dr	Grease
12/12/2009	90	90	Irwin Creek	0	2326	Olando	St	Grease
12/16/2009	113	0	Not Applicable	0	530	Wilby	Dr	Roots
12/16/2009	200	200	Little Sugar Creek	0	2607	Huntingtowne Farms	Ln	Roots
12/17/2009	275	275	Little Sugar Creek	0	5434	Viewmont	Dr	Grease
12/17/2009	230	230	Kings Branch	0	500	Arrowood (East)	Rd	Grease
12/17/2009	12800	12800	Mallard Creek	0	1712	J N Pease	Pl	Other
12/22/2009	230	230	Taggart Creek	0	3965	Carlyle	Dr	Grease
12/24/2009	136	136	Four Mile Creek	0	5621	Ballinard	Ln	Roots
12/25/2009	2140	2140	Campbell Creek	0	4535	Dawnwood	Dr	Severe Natural Condition
12/25/2009	30	0	Not Applicable	0	3027	Marney	Av	Roots
12/25/2009	3600	3600	McAlpine Creek	0	8711	Monroe	Rd	Severe Natural Condition
12/26/2009	456	456	McAlpine Creek	0	9010	Monroe	Rd	Other
12/26/2009	13	0	Not Applicable	0	136	Orange	St	Grease
12/27/2009	231	0	Not Applicable	0	3938	Tennessee	Av	Roots
12/27/2009	168	168	Campbell Creek	0	5909	Red Carriage	Ln	Roots
12/28/2009	150	150	Irwin Creek	0	1704	Burnette	Av	Grease
12/28/2009	1250	1250	Caldwell Station Creek	0	10308	Glenmeade (Cornelius)	Rd	Grease
28	37629	36071		0				

January	Total Estimate	Volume Reaching Surface Water	Surface Water Name	Fish Killed	Block	Street Name and Type		Cause of Spill / Bypass
1/1/2010	1400	1400	Steele Creek	0	2424	<b>Rice Planters</b>	Rd	Grease
1/1/2010	120	0	Not Applicable	0	4320	Oak Forest	Dr	Roots
1/2/2010	87	87	Campbell Creek	0	6820	Elm Forest	Dr	Roots
1/2/2010	155	155	Little Sugar Creek	0	3924	Riverbend	Rd	Roots
1/3/2010	650	650	Long Creek	0	11643	Northwoods Forest	Dr	Grease
1/3/2010	350	350	McAlpine Creek	0	1411	Mclaughlin	Dr	Grease
1/3/2010	1680	1512	Kennedy Branch	0	2501	Dellinger	Cr	Vandalism
1/3/2010	120	120	Irwins Creek	0	9601	Barkridge (Mint Hill)	Rd	Grease
1/4/2010	700	560	Little Sugar Creek	0	500	Davidson (North)	St	Grease

1/5/2010	360	0	Not Applicable	0	1620	Mt Isle Harbor	Dr	Debris In Line
1/6/2010	185	185	Taggart Creek	0	1019	Alleghany	St	Grease
1/6/2010	26	26	Stewart Creek	0	1338	Plumstead	Rd	Pipe Failure [Break]
1/7/2010	790	395	Irwin Creek	0	2324	Distribution	St	Debris In Line
1/8/2010	660	660	Upper Little Sugar Creek	0	429	Park (West)	Av	Grease
1/8/2010	102	102	Campbell Creek	0	5900	Powder Horn	Rd	Grease
1/9/2010	990	990	McMullen Creek Tributary	0	5310	Addison	Dr	Roots
1/9/2010	1760	1408	Taggart Creek	0	4412	Ashley	Cr	Roots
1/10/2010	1570	1570	Back Creek	0	2400	Wildburne	Ct	Grease
1/11/2010	61	30	Coffee Creek	0	1530	Center Park (Mecklenburg County)	Dr	Roots
1/11/2010	1020	1020	Campbell Creek	0	5716	Cedars East	Ct	Grease
1/11/2010	1020	1020	Campben Creek	0	5710	Shearwater Point	<u> </u>	Grease
1/11/2010	1095	0	Not Applicable	0	19900	(Cornelius)	Dr	Pipe Failure [Break]
1/12/2010	60	60	Upper Little Sugar Creek	0	746	Bilmark	Av	Vandalism
1/13/2010	2280	1710	Irvins Creek	0	6633	Paul Schadt (Mint Hill)	Ln	Grease
1/14/2010	1215	1215	Briar Creek	0	2800	Meadowcliff	Dr	Grease
1/14/2010	1	0	Not Applicable	0	2123	Emerywood	Dr	Pipe Failure [Break]
1/15/2010	2410	2410	Four Mile Creek	0	10406	Providence Arbours	Dr	Roots
1/17/2010	555	555	Little Sugar Creek	0	2032	Princeton	Av	Debris In Line
1/17/2010	226	226	Dairy Branch	0	508	Greystone	Rd	Grease
1/19/2010	115	0	Not Applicable	0	7036	Rothmore	St	Roots
1/21/2010	630	630	McAlpine Creek	0	6901	Candlewyck	Ln	Roots
1/22/2010	270	270	Little Hope Creek	0	920	Woodlawn (East)	Rd	Roots
1/23/2010	515	515	McAlpine Creek	0	8835	Idlewild	Rd	Debris In Line
1/23/2010	280	140	Rocky River Tributary	0	840	Blackwelder (Davidson)	Dr	Grease
1/24/2010	700	700	Four Mile Creek Tributary	0	3600	Sweetgrass	Ln	Grease
1/25/2010	190	190	Briar Creek	0	516	Museum	Dr	Severe Natural Condition
1/25/2010	450	0	Not Applicable	0	5701	Brookshire	Bv	Debris In Line
1/25/2010	1010	1010	McAlpine Creek	0	9010	Monroe	Rd	Severe Natural Condition
1/25/2010	900	900	McAlpine Creek	0	7521	Sardis	Rd	Severe Natural Condition
1/25/2010	9000	9000	McAlpine Creek	0	8711	Monroe	Rd	Severe Natural Condition
1/27/2010	315	0	Not Applicable	0	1811	Sardis (North)	Rd	Grease
1/30/2010	2200	2200	Rocky River Tributary	0	7028	Ravencrest	Dr	Vandalism

1/31/2010	100	0	0	3900	Gleneagles	Rd	Roots
42	37303	32951	0				

February	Total Estimate	Volume Reaching Surface Water	Surface Water Name	Fish Killed	Block	Street Name and Type		Cause of Spill / Bypass
2/1/2010	160	160	Kings Branch	0	5230	South	Bv	Grease
2/2/2010	92	92	Little Sugar Creek	0	6922	Park South	Dr	Roots
2/2/2010	174	174	Four Mile Creek	0	10411	Camelback	Cr	Roots
2/3/2010	71	35	McAlpine Creek	0	5115	Camilla	Dr	Roots
2/3/2010	340	170	Rea Branch	0	7427	Sheffingdell	Dr	Grease
2/3/2010	160	160	South Prong Rocky River	0	445	Pine (Davidson)	Rd	Grease
2/4/2010	450	450	Irwin Creek	0	337	Goff	St	Roots
2/5/2010	260	260	Little Hope Creek	0	409	Scaleybark	Rd	Roots
2/5/2010	22500	22500	McAlpine Creek	0	2121	Margaret Wallace	Rd	Severe Natural Condition
2/5/2010	24000	24000	McAlpine Creek	0	8711	Monroe	Rd	Severe Natural Condition
2/5/2010	2080	2080	Briar Creek	0	325	Meadowbrook	Rd	Severe Natural Condition
2/5/2010	970	970	Little Hope Creek	0	1026	Montford	Dr	Severe Natural Condition
2/5/2010	23200	23200	Taggart Creek	0	4642	Wilkinson	Bv	Severe Natural Condition
2/5/2010	18525	18525	Briar Creek	0	1663	Scotland	Av	Severe Natural Condition
2/5/2010	12350	12350	Briar Creek	0	516	Museum	Dr	Severe Natural Condition
2/6/2010	1550	1550	Kings Branch	0	700	Farmhurst	Dr	Roots
2/7/2010	72	72	McMullen Creek	0	810	Ashmore	Dr	Roots
2/8/2010	900	450	Doby Creek	0	8900	Research	Dr	Grease
2/10/2010	53	0	Not Applicable	0	1440	Carmel	Rd	Grease
2/12/2010	138	69	McAlpine Creek	0	801	Regency	Dr	Grease
2/13/2010	1300	1300	Briar Creek	0	1159	Phil Oneil	Dr	Grease
2/14/2010	735	735	Briar Creek	0	700	Briar Creek	Rd	Debris In Line
2/14/2010	125	125	Briar Creek	0	1729	Kensington	Dr	Grease
2/14/2010	500	500	Briar Creek Tributary	0	4220	Donnybrook	Pl	Grease
2/15/2010	750	0	Not Applicable	0	751	Ashmore	Dr	Grease
2/17/2010	4480	2240	Taggart Creek	0	4412	Ashley	Cr	Roots

2/18/2010	175	175	McMullen Creek	0	4615	Castleton	Rd	Grease
2/18/2010	34	17	McAlpine Creek	0	404	Hickok	Ct	Grease
2/19/2010	600	0	Not Applicable	0	115	Gilead (Huntersville)	Rd	Other
			Tributary Of West Branch			North Thompson		
2/21/2010	3957	3957	To Rocky River	0	109	(Davidson)	St	Pipe Failure [Break]
2/22/2010	255	255	McDowell Creek Tributary	0	19808	Floral (Cornelius)	Ln	Grease
2/22/2010	1710	1710	Taggart Creek	0	4642	Wilkinson	Bv	Roots
2/25/2010	35	17	Long Creek	0	9107	Eventine	Ct	Grease
2/25/2010	192	192	Upper Little Sugar Creek	0	3420	Park	Rd	Grease
2/26/2010	100	70	Briar Creek Tributary	0	916	Dudley	Dr	Grease
						Mt Holly-Huntersville		
2/28/2010	300	300	Torrence Creek	0	12801	(Huntersville)	Rd	Roots
36	123293	118860		0				

March	Total Estimate	Volume Reaching Surface Water	Surface Water Name	Fish Killed	Block	Street Name and Type		Cause of Spill / Bypass
3/1/2010	1520	1520	McAlpine Creek	0	1801	Carmel Ridge	Rd	Roots
3/3/2010	212	0	Not Applicable	0	4821	Polo Gate (Mecklenburg County)	Bv	Roots
3/3/2010	25	25	Four Mile Creek	0	1216	Golden Hill (Matthews)	Rd	Roots
3/3/2010	160	160	Irwin Creek Tributary	0	3100	Statesville	Av	Grease
3/4/2010	1500	1500	Coffey Creek Tributary	0	2828	Queen City	Dr	Grease
3/5/2010	1500	1500	Paw Creek	100	2926	Westerwood	Dr	Roots
3/5/2010	122	61	Kings Branch	0	7608	Thorncliff	Dr	Grease
3/7/2010	370	185	McMullen Creek	0	2434	Ainsdale	Rd	Debris In Line
3/8/2010	36	0	Not Applicable	0	2801	Dunlavin	Wy	Grease
3/8/2010	855	855	Lower Little Sugar Creek	0	6200	Netherwood	Dr	Vandalism
						Back Creek Church		
3/8/2010	110	110	Back Creek	0	1821	(Mecklenburg County)	Rd	Grease
3/8/2010	265	265	Irwin Creek	0	500	Fairwood	Av	Grease
3/8/2010	2080	0	Not Applicable	0	9340	Robinson Church	Rd	Other
3/9/2010	824	824	Four Mile Creek	0	11304	Nevermore	Wy	Grease

3/10/2010	126	126	Irvins Creek	0	13414	Wester Ross (Matthews)	Ct	Debris In Line
3/11/2010	1080	1080	Little Sugar Creek	0	1738	Sterling	Rd	Pipe Failure [Break]
3/12/2010	365	365	Little Sugar Creek	0	201	Providence	Rd	Grease
3/12/2010	180	180	Briar Creek	0	2906	Central	Av	Grease
3/13/2010	32	0	Not Applicable	0	2401	Ringwood	St	Roots
3/13/2010	450	450	Four Mile Creek	0	10525	Lady Grace	Ln	Grease
3/14/2010	0	0	Not Applicable	0	3445	Windsor	Dr	Grease
3/15/2010	300	300	Briar Creek	0	916	Dudley	Dr	Roots
3/16/2010	120	120	Toby Creek	0	8800	University City	Bv	Grease
3/18/2010	127	127	McMullen Creek	0	6100	Monroe	Rd	Grease
3/18/2010	20	20	Briar Creek	0	3722	Duffin	Dr	Other
3/19/2010	515	515	Dairy Branch	0	1500	Clayton	Dr	Debris In Line
3/19/2010	28400	28400	Upper Little Sugar Creek	0	512	West	Bv	Pipe Failure [Break]
3/20/2010	900	450	Stewart Creek	0	318	Cromer	St	Grease
3/21/2010	860	860	Little Sugar Creek	0	503	Scottsbrook	Dr	Grease
3/22/2010	100	100	Rocky River Tributary	0	228	Pat Stough (Davidson)	Ln	Grease
3/23/2010	114	57	McAlpine Creek	0	8429	Barncliff	Rd	Grease
3/23/2010	680	0	Not Applicable	0	5601	Wilkinson	Bv	Grease
3/23/2010	1500	1500	Coffey Creek Tributary	0	2828	Queen City	Dr	Grease
3/24/2010	675	675	Sugar Creek	0	500	Queens	Rd	Roots
3/25/2010	150	150	McMullen Creek	0	4612	Simsbury	Rd	Roots
3/25/2010	2400	2400	Paw Creek	0	7429	Honey Flower	Pl	Roots
3/25/2010	42	42	Mallard Creek	0	2626	Century Oaks	Ln	Roots
						Smith Corners		
3/26/2010	125	125	Long Creek	0	7325	(Mecklenburg County)	Bv	Grease
3/27/2010	350	350	McAlpine Creek	0	3837	Foxford	Pl	Grease
3/28/2010	660	0	Not Applicable	0	1018	Glenfiddich	Dr	Vandalism
3/28/2010	6280	6280	Flat Branch	0	7621	Reavencrest Park	Dr	Grease
2/20/2010	<b>5000</b>	<b>5000</b>		0	0024		ЪÌ	Pump Station Equipment
3/28/2010	5800	5800	Paw Creek	0	8924	Old Dowd	Rd	Failure
3/29/2010	1280	1280	Rea Branch	0	4606	Bournewood	Ln	Roots
3/29/2010	2110	2110	McAlpine Creek	0	8323	Cliffside	Dr	Roots
3/29/2010	290	290	Paw Creek	0	2923	Westerwood	Dr	Grease
3/30/2010	362	362	Briar Creek	0	2415	Eastway	Dr	Grease

3/30/2010	375	375	Long Creek	0	8325	Old Statesville	Rd	Grease
3/31/2010	141	141	Irwin Creek	0	3609	Crestridge	Dr	Debris In Line
3/31/2010	890	890	Upper Little Sugar Creek	0	300	8 <sup>th</sup> (East)	St	Grease
49	67378	62925		100				

April	Total Estimate	Volume Reaching Surface Water	Surface Water Name	Fish Killed	Block	Street Name and Type		Cause of Spill / Bypass
	·	· · · ·						
4/1/2010	180	180	Briar Creek	0	3130	Monroe	Rd	Grease
4/1/2010	580	0	Not Applicable	0	2915	Greenland	Av	Grease
4/2/2010	515	515	McMullen Creek	0	4606	Bournewood	Ln	Debris In Line
4/2/2010	1105	1105	Sardis Branch	0	9224	Hunting (Matthews)	Ct	Roots
4/2/2010	260	260	Irwin Creek	0	1421	Pressley	Rd	Roots
4/4/2010	75	0	Not Applicable	0	7000	Idlewild	Rd	Grease
4/5/2010	85	85	McMullen Creek	0	8018	Prince George	Rd	Grease
4/7/2010	114	28	Sardis Branch	0	7800	Sardis	Rd	Roots
4/7/2010	310	310	Upper Sugar Creek	0	1913	Terrybrook	Ln	Grease
4/8/2010	80	80	Erving Tributary	0	5000	Hoover	Dr	Grease
4/8/2010	360	360	Irvins Creek	0	2704	Cross Point	Cr	Grease
4/8/2010	36	18	McAlpine Creek	0	10801	Megwood	Dr	Roots
4/9/2010	205	102	McMullen Creek	0	2700	Valencia	Tr	Grease
4/12/2010	204	204	Lower Little Sugar Creek	0	8300	Riverbirch	Dr	Roots
4/12/2010	1500	1500	McAlpine Creek Tributary	0	6600	Providence	Rd	Grease
4/13/2010	600	600	Little Sugar Creek	0	500	Queens	Rd	Pipe Failure [Break]
4/13/2010	70	70	McMullen Creek	0	4201	Tottenham	Rd	Pipe Failure [Break]
4/16/2010	1650	1650	Irwin Creek	0	1800	West	Bv	Grease
4/16/2010	900	900	Long Creek	0	221	Fielding	Rd	Roots
4/16/2010	47	47	Lower Little Sugar Creek	0	5908	Sharon	Rd	Roots
4/19/2010	220	220	Irwin Creek	0	2428	Crestview	Dr	Grease
4/19/2010	725	725	McAlpine Creek	0	8920	Lawyers (Mint Hill)	Rd	Grease
4/19/2010	120	60	Briar Creek Tributary	0	4140	Briarhill	Dr	Grease

4/20/2010	320	320	Campbell Creek Tributary	0	6321	Albemarle	Rd	Grease
4/20/2010	750	750	Doby Creek	0	8116	Pike	Rd	Debris In Line
4/21/2010	500	375	Crooked Creek	0	2100	Pineapple (Matthews)	Ct	Other
4/22/2010	325	325	McMullen Creek	0	4824	Coronado	Dr	Grease
4/22/2010	175	175	Toby Creek	0	9136	University City	Bv	Grease
4/22/2010	835	83	Mallard Creek Tributary	0	4300	Enoch	Dr	Vandalism
4/24/2010	1200	1200	McAlpine Creek	0	3021	Windsor Chase (Matthews)	Dr	Grease
4/24/2010	120	120	Briar Creek	0	6411	Woody Glen	Pl	Grease
4/25/2010	860	860	Paw Creek	0	8701	Moores Chapel	Rd	Grease
4/26/2010	640	640	McAlpine Creek	0	5821	Reddman	Rd	Grease
4/26/2010	184	184	Little Sugar Creek	0	627	Cooper	Dr	Other
4/29/2010	288	288	Campbell Creek	0	5706	Justins Forest	Dr	Grease
4/29/2010	1200	1200	Briar Creek	0	2000	Vernon	Dr	Grease
4/30/2010	310	310	Paw Creek	0	906	Carrington	Dr	Grease
4/30/2010	720	720	McAlpine Creek	0	509	Sardis	Ln	Debris In Line
						Lawyers		
4/30/2010	330	330	McAlpine Tributary	0	8900	(Mecklenburg County)	Rd	Pipe Failure [Break]
39	18698	16899		0				

Мау	Total Estimate	Volume Reaching Surface Water	Surface Water Name	Fish Killed	Block	Street Name and Type		Cause of Spill / Bypass
5/1/2010	3250	3250	McAlpine Creek	0	2618	Cedarwild	Rd	Pipe Failure [Break]
5/2/2010	130	130	McAlpine Creek	0	7006	Heatherford	Dr	Grease
5/2/2010	60	0	Not Applicable	0	2653	Laburnum	Av	Grease
5/4/2010	477	0	Not Applicable	0	1337	Crandon	Dr	Grease
5/4/2010	1043	1043	Little Sugar Creek	0	624	Gentry	Pl	Pipe Failure [Break]
5/4/2010	405	405	Kings Banch	0	722	Wilbrown	Cr	Grease
5/6/2010	27395	27395	Stewart Creek	0	609	Pennsylvania	Av	Grease
5/8/2010	375	375	Back Creek	0	9300	Oren Thompson	Rd	Grease
5/10/2010	75	0	Not Applicable	0	6333	McIntyre Ridge	Dr	Grease

5/11/2010	96	96	Four Mile Creek	0	8300	Providence	Rd	Debris In Line
5/11/2010	504	504	Kings Branch	0	624	Echodale	Dr	Roots
5/11/2010	174	174	McAlpine Creek Tributary	0	6200	Martin Lake	Rd	Grease
5/12/2010	1500	1500	Clarks Creek Tributary # 1	0	11501	Allen A Brown	Rd	Grease
5/14/2010	4035	4035	Sugar Creek	0	5845	Tryon (South)	St	Roots
5/15/2010	112	112	Lower Little Sugar	0	943	Archdale	Dr	Other
5/19/2010	9	9	Irwin Creek	0	2732	Watson	Dr	Other
5/20/2010	870	783	Little Sugar Creek	0	200	College (North)	St	Grease
5/20/2010	114	0	Not Applicable	0	1401	Chelveston	Dr	Roots
5/21/2010	3840	3840	McAlpine Creek	0	6454	Albemarle	Rd	Vandalism
5/22/2010	380	380	Mallard Creek	0	2522	Hemby Woods	Dr	Grease
5/25/2010	300	150	Mallard Creek Tributary	0	604	Doug Mayes	Pl	Grease
5/26/2010	172	86	Campbell Creek Tributary	0	5124	Carriage Drive	Cr	Grease
5/26/2010	190	190	Stewart Creek	0	3015	Wilkinson	Bv	Pipe Failure [Break]
5/27/2010	1560	780	Rocky River Tributary	0	261	Ashby (Davidson)	Dr	Grease
5/27/2010	300	0	Not Applicable	0	8207	Nations Ford	Rd	Grease
5/27/2010	280	280	Taggart Creek	0	4518	Denver	Av	Debris In Line
5/28/2010	1200	600	McAlpine Creek	0	203	Mattridge (Matthews)	Rd	Roots
5/28/2010	6000	0	Not Applicable	0	5800	Executive Center	Dr	Other
5/30/2010	240	0	Not Applicable	0	3300	Winterfield	Pl	Roots
29	55086	46117		0				

June	Total Estimate	Volume Reaching Surface Water	Surface Water Name	Fish Killed	Block	Street Name and Ty	ре	Cause of Spill / Bypass
			Γ			Γ	[	1
6/1/2010	400	320	McMullen Creek	0	3008	Champaign	St	Roots
6/2/2010	60	30	Upper Little Sugar Creek	0	4200	Firwood	Ln	Grease
						Camden Woods		Pump Station Equipment
6/2/2010	15151	15151	Clems Branch	0	26251	(York County)	Rd	Failure
6/6/2010	37	0	Not Applicable	0	6617	Wenda	Pl	Roots
6/7/2010	120	60	Little Sugar Creek	0	3700	Tryon (North)	St	Grease
6/7/2010	460	230	Four Mile Creek	0	500	Main (Matthews)	St	Roots

6/11/2010	46	0	Not Applicable	0	5324	Collins	St	Roots
6/12/2010	53	26	Mallard Creek	0	12509	Genoa	Ln	Grease
6/16/2010	2200	2200	Little Sugar Creek	0	314	8 <sup>th</sup> (East)	St	Debris In Line
6/17/2010	410	410	Irwin Creek	0	3400	Trade Park	Ct	Grease
6/19/2010	19	0	Not Applicable	0	112	Sardis View	Rd	Roots
6/20/2010	96	0	Not Applicable	0	6900	Wyndbend (Mint Hill)	Ln	Roots
6/23/2010	96	48	Upper Little Sugar Creek	0	4237	Firwood	Ln	Vandalism
6/25/2010	1800	900	Back Creek	0	2242	Pimpernel	Rd	Grease
6/28/2010	75	75	Briar Creek	0	2965	Dunlavin	Wy	Other
6/28/2010	608	608	Irwin Creek	0	1401	Morehead (West)	St	Grease
6/29/2010	1300	1170	Four Mile Creek	0	204	Demaree (Matthews)	Ln	Grease
6/29/2010	120	120	Upper Little Sugar Creek	0	4200	Firwood	Ln	Other
18 spills	23,051	21,348		0				

#### **TOTAL NUMBER OF FY2010 COLLECTION SYSTEM SPILLS: 349**

Volume Safely Collected, Treated & Discharged During Fiscal Year 2010:	30,305,099,110 Gallons
Volume Spilled:	813,044 Gallons
Volume That Reached Surface Waters:	661,883 Gallons

#### PERCENTAGE OF WASTWATER SAFELY COLLECTED, TREATED AND RELEASED DURING

FY10: more than 99.9973% FY09: more than 99.9987% FY08: more than 99.9982% FY07: more than 99.9948% FY06: more than 99.9988%

#### SECTION IIB. Permit Compliance and Reporting Violations, by plant

	INI DES I EIIIII #INC0024945	
MONTH	PERMIT LIMIT COMPLIANCE	REPORTING REQUIREMENT COMPLIANCE
July, 2009	None	None
August, 2009	None	None
September, 2009	None	None
October, 2009	None	None
November, 2009	None	None
December, 2009	None	None
January, 2010	None	None
February, 2010	None	None
March, 2010	None	None
	There was a fecal coliform daily maximum limit violation on 4/9/10 at 1,100	
	cfu/100ml. The daily maximum limit is 1,000 cfu/100ml. The cause of this	
April, 2010	permit limit violation is unknown.	None
May, 2010	None	None
June, 2010	None	None

#### Irwin Creek WWTP -- NPDES Permit #NC0024945

#### Mallard Creek WRF -- NPDES Permit #NC0030210

MONTH	PERMIT LIMIT COMPLIANCE	REPORTING REQUIREMENT COMPLIANCE
July, 2009	None	None
August, 2009	None	None
September, 2009	None	None
October, 2009	None	None
November, 2009	None	None
December, 2009	None	None
January, 2010	None	None
February, 2010	None	None
March, 2010	None	None
April, 2010	None	None
May, 2010	None	None

June, 2010 None	None
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#### McAlpine Creek WWTF -- NPDES Permit #NC0024970

MONTH	PERMIT LIMIT COMPLIANCE	REPORTING REQUIREMENT COMPLIANCE
July, 2009	None	None
August, 2009	None	None
September, 2009	None	None
October, 2009	None	None
November, 2009	None	None
December, 2009	None	None
January, 2010	None	None
February, 2010	None	None
March, 2010	None	None
April, 2010	None	None
May, 2010	None	None
June, 2010	None	None

#### McDowell Creek WWTP -- NPDES Permit #NC0036277

MONTH	PERMIT LIMIT COMPLIANCE	REPORTING REQUIREMENT COMPLIANCE
July, 2009	None	None
August, 2009	None	None
September, 2009	None	None
October, 2009	None	None
November, 2009	None	None
December, 2009	None	None
January, 2010	None	None
February, 2010	None	None
March, 2010	None	None
April, 2010	None	None
May, 2010	None	None
June, 2010	None	None

MONTH	PERMIT LIMIT COMPLIANCE	REPORTING REQUIREMENT COMPLIANCE
July, 2009	None	None
August, 2009	None	None
September, 2009	None	None
October, 2009	None	None
November, 2009	None	None
December, 2009	None	None
January, 2010	None	None
February, 2010	None	None
March, 2010	None	None
April, 2010	None	None
May, 2010	None	None
June, 2010	None	None