

## 2011-2012 System Performance Annual Report

(Submitted as required by NC General Assembly House Bill 1160 Clean Water Act of 1999)

Reporting Period: FY 2011-2012: July 1, 2011 – June 30, 2012

### I. General Information

Name of regulated entity: Town of Waynesville

Responsible entity/person/contact: Frederick L. Baker, PE Director of Public Works

Mailing address: P.O. Box 100 Waynesville, NC 28786

Phone number: 828-456-4410

Facility located at: WWTP located at 556 Walnut Trail

County: Haywood

DWQ Regional Office: Asheville

Listing of applicable permits and description of system components:

**Collection System WQCS00039** consists of approximately 69 miles of gravity sewer pipeline ranging in diameter from 6 inches to 30 inches. The Town has no sewage pump stations. High priority lines requiring inspections once per every six month period of time consist largely of aerial stream crossings and interceptor lines in easement areas not normally in public view.

**Wastewater Treatment Plant NC 0025321** is a 6.0 MGD conventional activated sludge WWTP consisting of: 24-inch Palmer Bowlus flume; Isco 4210 ultrasonic instrumented flow measurement with circular chart recorder and totalizer; influent composite sampler; Parkson Aquaguard AG-MN-A automatic influent bar screen with 0.56" screen opening; 17,160 gallon (16 ft l x 13 ft w x 11 ft d) aerated grit chamber with 7.5 HP air lift blower, 3 HP aerator blower, 400 gpm Combs grit separator; dual 0.3 Mgal each (80 ft. dia. X 8 ft. d) circular primary clarifiers with oil skimmers, 1500 gallon grease collection tank, dual Dorr Oliver primary sludge withdrawal pumps with 33,120 gpd maximum capacity; primary effluent lift station with three 2500 gpm Gorman Rupp suction pumps; four 0.5 Mgal each (189 ft l x 29 ft w x 8 ft d) rectangular aeration basins with coarse air diffusion provided by four (3500 gpm each) Hoffman Centrifugal compressors; dual 0.48 M gal each (148 ft l x 55 ft w x 8 ft d) rectangular secondary clarifiers with floating bridge continuous vacuum siphon, dual 10-in. centrifugal return sludge pumps; 4-in. centrifugal waste activated sludge (WAS) pump to secondary gravity thickener; 6 MGD chlorine mixer; 130,000 gallon (74 ft l x 48 ft w x 5 ft d) chlorine contact chamber dual gaseous chlorine injectors (200 lbs/day capacity); dual 5 ft rectangular weirs; dual feed gaseous sulfur dioxide dechlorination equipment; effluent composite sampler; 180 KW emergency generator (serves prim eff p/s, RAS pumps, secondary clarifiers & laboratory); 28,495 gal (22 ft dia x 1 ft d) circular primary sludge gravity thickener with 3-inch Dorr Oliver air diaphragm pump and 3-inch progressive cavity pump to anaerobic digester; 46,158 gal (28 ft dia x 10 ft d) circular secondary sludge gravity thickener, with 3-inch progressive cavity pump to anaerobic digester; 487,485 gal (60 ft dia x 23 ft d) gas-mixed floating-cover circular anaerobic digester with 50,000 BTU sludge heater, 4-inch centrifugal recirculation pump and 4-inch progressive cavity withdrawal pump; 1.5 meter (upgraded in 2001) belt filter press; lime stabilization with kiln dust & agricultural lime (24 ton lime silo); RDP Technologies (sludge & lime) Thermoblender with external heat source; lime volume control screw conveyor; agricultural lime volume control screw conveyor; sludge screw conveyor; 30 minute detention time in-vessel pasteurization with external heat source; finished product conveyor; and covered biosolids storage area.

WWTP serves	Population	Ownership
Town of Waynesville	9500	municipal
Junaluska Sanitary District	3880	sanitary district
Lake Junaluska Assembly	1150	private
Town of Clyde	1500	municipal
Town of Maggie Valley	100	municipal
Total Population Served	16,030	

**Blend Processing and Distribution of Residuals Facility WQ 0013116** consists of lime stabilization equipment manufactured by RDP Technologies, Inc. Anaerobic digested sludge is dewatered then blended with quick lime and agricultural lime. This mixture is then passed through a pasteurization vessel at a temperature of 158 degrees Fahrenheit or greater for 30 minutes.

## II. Collection System WQCS00039 System Performance Annual Summary

### A. Description of overall 12-month performance noting highlights and deficiencies:

July 2011	
August 2011	
September 2011	
October 2011	Replaced sanitary sewer & manholes on Overbrook Drive and Chestnut Walk
November 2011	
December 2011	December 7 <sup>th</sup> SSOs on Walnut Trail and Brown and Georgia Avenue
January 2012	
February 2012	
March 2012	
April 2012	
May 2012	Replaced sanitary sewer & manholes Camelot Drive/Carolina Ave. & Georgia Ave.
June 2012	

- B. By month, list of the number and type of any violations of permit conditions, environmental regulations or environmental laws, including (but not limited to):
1. Permit Limit Violations (NOVs and Civil Assessments):

July 2011	
August 2011	
September 2011	
October 2011	
November 2011	
December 2011	
January 2012	NOV-2012-DV 0003, self reported SSOs
February 2012	
March 2012	
April 2012	
May 2012	
June 2012	

2. Monitoring and Reporting Violations (NOVs and Civil Assessments) (illegal) bypass of treatment facilities\*

July 2011			
August 2011			
September 2011			
October 2011			
November 2011			
December 2011			
January 2012			
February 2012			
March 2012			
April 2012			
May 2012			
June 2012			

3. Sanitary Sewer Overflows\* (NOVs and Civil Assessments)

\*Note estimated total monthly volumes and locations of events in which more than 1,000 gallons of waste reached surface waters.

July 2011	
August 2011	
September 2011	
October 2011	
November 2011	
December 2011	3 manholes at intersection of Brown Avenue and Georgia Ave. estimated 3,000 gallons; 3 manholes on Walnut Trail, estimated 20,000 gallons
January 2012	
February 2012	
March 2012	
April 2012	
May 2012	
June 2012	

C. Description of any known environmental impact of violations:

July 2011	
August 2011	
September 2011	
October 2011	
November 2011	
December 2011	No known impact. Very heavy rains, high stream flows and dilute wastewater.
January 2012	
February 2012	
March 2012	
April 2012	
May 2012	
June 2012	

D. Description of corrective measures taken to address violations and deficiencies:

July 2011	Repair bar screen wall, seal Plott Creek manhole tops
August 2011	TV inspect Pigeon Street sewer and Chestnut Walk sewer
September 2011	Root treat Chestnut Walk, Shell Station/South Main Street sewer line replacement, Smoke South Main & Strand Theater, Dye test Brown Avenue
October 2011	Overbrook/East Marshall sewer replacement, Chestnut Walk sewer replacement
November 2011	
December 2011	Point repairs to 24" on Walnut Trail, replace two manhole frames and covers with sealed covers, packed lead oakum joint, TV inspection, cleaning on 24" Walnut Trail
January 2012	
February 2012	
March 2012	
April 2012	Replace sanitary sewer & manholes on Camelot/Georgia Ave. & Riverbend, heavy cleaning on Hazelwood Avenue
May 2012	Replace sanitary sewer & manholes on Hazelwood Avenue
June 2012	

II. **Wastewater Treatment Plant NC0025321** System Performance Annual Summary:

E. Description of overall 12 month performance, noting highlights and deficiencies:

July 2011	96% / 99% removal, 4.75 mg/l effluent BOD
August 2011	96% / 97%
September 2011	95% / 96%
October 2011	Monthly average flow 2.46 MGD
November 2011	95% / 97%
December 2011	Average 3.92 MGD, wet weather
January 2012	Average 3.93 MGD (90% / 95%)
February 2012	Average 3.02 MGD
March 2012	93%/97%
April 2012	94%/96%
May 2012	94%/97%
June 2012	

- F. By month, list of the number and type of any violations of permit conditions, environmental regulations or environmental laws, including (but not limited to):
4. Permit Limit Violations (NOVs and Civil Assessments):

July 2011		Fully compliant for twelve-month period	
August 2011			
September 2011			
October 2011			
November 2011			
December 2011			
January 2012			
February 2012			
March 2012			
April 2012			
May 2012			
June 2012			

5. Monitoring and Reporting Violations (NOVs and Civil Assessments) (illegal) bypass of treatment facilities\*

July 2011		Fully compliant for twelve-month period	
August 2011			
September 2011			
October 2011			
November 2011			
December 2011			
January 2012			
February 2012			
March 2012			
April 2012			
May 2012			
June 2012			

6. Sanitary Sewer Overflows\* (NOVs and Civil Assessments)

\*Note estimated total monthly volumes and locations of events in which more than 1,000 gallons of waste reached surface waters.

July 2011		See collection System, no overflows from WWTP	
August 2011			
September 2011			
October 2011			
November 2011			
December 2011			
January 2012			
February 2012			
March 2012			
April 2012			
May 2012			
June 2012			

G. Description of any known environmental impact of violations:

July 2011		None	
August 2011			
September 2011			
October 2011			
November 2011			
December 2011			
January 2012			
February 2012			
March 2012			
April 2012			
May 2012			
June 2012			

H. Description of corrective measures taken to address violations or deficiencies

July 2011		n/a	
August 2011			
September 2011			
October 2011			
November 2011			
December 2011			
January 2012			
February 2012			
March 2012			
April 2012			
May 2012			
June 2012			

III. Notification

A copy of this report is posted on the bulletin board at the Municipal Building and published on the Town's website.

IV. Certification

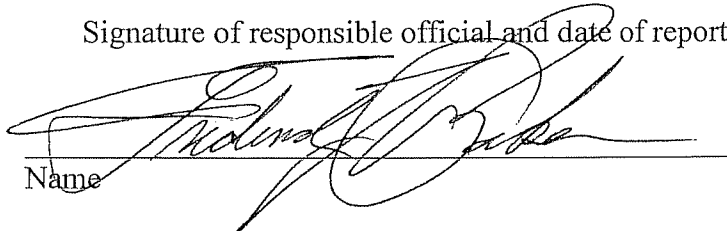
A. Certified Operators in Responsible Charge:

WWTP ORC:	David Smith	Cert. # 7478	WW IV
WWTP back-up ORC:	Ronnie D. Norris	Cert. # 11444	WW IV
Collection System ORC:	Wentfard Henson	Cert. # 24712	CS 3
	Wentfard Henson	Cert. # 8289	WW II
Collection System back-up ORC:	Jeff Stines	Cert. # 987994	CS 4

B. Statement by a responsible official certifying the report is accurate and complete:

I, Frederick L. Baker, certify that this report is accurate and complete, to the best of my knowledge.

Signature of responsible official and date of report:

  
Name

7/30/12  
Date



# **Annual Sewer Report**

**July 1, 2011  
Thru  
June 30, 2012**

# **SEWER DEPARTMENT**

## **Sewer Spill Log**

**July 1, 2011 -----June 30, 2012**

**December 7, 2011**

**Brown Avenue and Georgia Avenue – 3 manholes at intersection**

**December 7, 2012**

**Walnut Trail – 3 manholes**



Form CS-SSC  
Collection System Sanitary Sewer Overflow Reporting Form

PART I

This form shall be submitted to the appropriate DWQ Regional Office within five days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS 00039 (WQCS# if active, otherwise use treatment plant NC/WQ#)

Facility: Town of Waynesville  
Owner: Town of Waynesville  
City: Waynesville

Incident # \_\_\_\_\_  
Region: Western  
County: Haywood

Source of SSO (check applicable): ☒ Sanitary Sewer ☐ Pump Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc.): 3 manholes at Intersection of Brown Ave. and Georgia Ave.

Latitude (degrees/minute/second): \_\_\_\_\_ Longitude (degrees/minute/second): \_\_\_\_\_

Incident Started Dt: 12-7-11 Time: 3:00 PM Incident End Dt: 12-8-11 Time: 7:00 A  
(mm-dd-yyyy) hh:mm AM/PM (mm-dd-yyyy) hh:mm AM/PM

Estimated volume of the SSO: unknown gallons Estimated Duration (Round to nearest hour): 16 HR.

Describe how the volume was determined: There were 3 manholes overflowing and the creek w  
out of its banks.

Weather conditions during SSO event: Very Heavy Rain

Did SSO reach surface waters? ☒ Yes ☐ No ☐ Unknown Volume reaching surface waters (gallons): unknown

Surface water name: Richland creek

Did the SSO result in a fish kill? ☐ Yes ☒ No ☐ Unknown If Yes, what is the estimated number of fish killed? \_\_\_\_\_

SPECIFIC cause(s) of the SSO:

- |  |   |  |
|--|---|--|
| <input checked="" type="checkbox"/> Severe Natural Condition | <input type="checkbox"/> Grease                         | <input type="checkbox"/> Roots                             |
| <input type="checkbox"/> Inflow and Infiltration             | <input type="checkbox"/> Pump Station Equipment Failure | <input type="checkbox"/> Power outage                      |
| <input type="checkbox"/> Vandalism                           | <input type="checkbox"/> Debris in line                 | <input type="checkbox"/> Other (Please explain in Part II) |

Immediate 24-hour verbal notification reported to: \_\_\_\_\_

☐ DWQ ☐ Emergency Mgmt. Date (mm-dd-yyyy): \_\_\_\_\_ Time (hh:mm AM/PM): \_\_\_\_\_

If an SSO is ongoing, please notify Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 gallons or more of untreated wastewater to surface waters shall issue a press release within 48-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the referenced statute for further detail.

The Director, Division of Water Quality, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

- 1) the discharge was caused by severe natural conditions and there were no feasible alternatives to the discharge; or
- 2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

Part II must be completed to provide a justification claim for either of the above situations. This information will be the basis for the determination of any enforcement action. Therefore, it is important to be as complete as possible.

WHETHER OR NOT PART II IS COMPLETED, A SIGNATURE IS REQUIRED AT THE END OF THIS FORM.



ANSWER THE FOLLOWING QUESTIONS FOR EACH RELATED CAUSE CHECKED IN PART I OF THIS FORM AND INCLUDE THE APPROPRIATE DOCUMENTATION AS REQUIRED OR DESIRED

COMPLETE ONLY THOSE SECTIONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I

In the check boxes below, NA = Not Applicable and NE = Not Evaluated

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWQ REGIONAL OFFICE UNLESS IT HAS BEEN SUBMITTED ELECTRONICALLY THROUGH THE ONLINE REPORTING SYSTEM

Severe Natural Condition (hurricane, tornado, etc.)

Describe the "severe natural condition" in detail.

We recieved 2+ inches of Rain in 2 Days and the creek came ou  
How much advance warning did you have and what actions were taken in preparation for the event? of its Banks & The same Inter

None.  
Comments: THIS line has been bid out and is going to be replaced. & line is going to be upsized to accomidate the flow.

Grease (Documentation such as cleaning, inspections, enforcement actions, past overflow reports, educational material and distribution date, etc. should be available upon request.)

When was the last time this specific line (or wet well) was cleaned?

Do you have an enforceable grease ordinance that requires new or retrofit of grease traps/interceptors? ☐ Yes ☐ No ☐ NA ☐

Have there been recent inspections and/or enforcement actions taken on nearby restaurants or other nonresidential grease contributors? ☐ Yes ☐ No ☐ NA ☐

Explain.

Have there been other SSOs or blockages in this area that were also caused by grease? ☐ Yes ☐ No ☐ NA ☐

When?

If yes, describe them:

Have cleaning and inspections ever been increased at this location? ☐ Yes ☐ No ☐ NA ☐

Explain.

When was the area last checked/cleaned? within the last month for  
bidding purposes.

Have cleaning and inspections ever been increased at this location due to previous problems with debris? ☒ Yes ☐ No ☐ NA ☐

Explain: We have had trouble here before. This is the reason for  
the replacement.

Are appropriate educational materials being developed and distributed to prevent future similar occurrences? ☐ Yes ☒ No ☐ NA ☐

Comments:

Other (Pictures and a police report should be available upon request.)

Describe:

Were adequate equipment and resources available to fix the problem? ☐ Yes ☐ No ☐ NA ☐

If Yes, explain:

If the problem could not be immediately repaired, what actions were taken to lessen the impact of the SSO?

Comments:

For DWQ Use Only:

DWQ Requested an Additional Written Report: ☐ Yes ☐ No ☐ NA ☐ NE

If Yes, What Additional Information is Needed:

Comments:

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: Wentford Henson

Date: 12-8-11

Signature: Wentford Henson

Title: Line Maint. crew leader  
ORC. Town of Waynesv

Telephone Number: 828-456-3706

Any additional information desired to be submitted should be sent to the appropriate Division Regional Office within five days of first knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of this form is completed, if used).



Form CS-SSO  
Collection System Sanitary Sewer Overflow Reporting Form  
PART I

This form shall be submitted to the appropriate DWQ Regional Office within five days of the first knowledge of the sanitary sewer overflow (SSO).

Permit Number: WQCS 00039 (WQCS# if active, otherwise use treatment plant NCWQ#)

Facility: Town of Waynesville

Owner: Town of Waynesville

City: Waynesville

Incident # \_\_\_\_\_

Region: Western

County: Haywood

Source of SSO (check applicable): ☒ Sanitary Sewer ☐ Pump Station

SPECIFIC location of the SSO (be consistent in description from past reports or documentation - i.e. Pump Station 6, Manhole at Westall & Bragg Street, etc.): First 2 Manholes on Walnut Trail Through Vertical Holes in 1

Latitude (degrees/minute/second): \_\_\_\_\_

Longitude (degrees/minute/second): \_\_\_\_\_

Incident Started Dt: 12-7-11 Time: 3:00 PM  
(mm-dd-yyyy) hh:mm AM/PM

Incident End Dt: 12-8-11 Time: 7:00 AM  
(mm-dd-yyyy) hh:mm AM/PM

Estimated volume of the SSO: Unknown gallons Estimated Duration (Round to nearest hour): 16 HR

Describe how the volume was determined: There were 3 manholes overflowing.

Weather conditions during SSO event: Very Heavy Rain For 2 Days.

Did SSO reach surface waters? ☒ Yes ☐ No ☐ Unknown

Volume reaching surface waters (gallons): Unknown

Surface water name: Richland Creek

Did the SSO result in a fish kill? ☐ Yes ☒ No ☐ Unknown

If Yes, what is the estimated number of fish killed? \_\_\_\_\_

SPECIFIC cause(s) of the SSO:

☒ Severe Natural Condition

☐ Grease

☐ Roots

☐ Inflow and Infiltration

☐ Pump Station Equipment Failure

☐ Power outage

☐ Vandalism

☐ Debris in line

☐ Other (Please explain in Part II)

Immediate 24-hour verbal notification reported to: \_\_\_\_\_

☐ DWQ ☐ Emergency Mgmt.

Date (mm-dd-yyyy): \_\_\_\_\_ Time (hh:mm AM/PM): \_\_\_\_\_

If an SSO is ongoing, please notify Regional Office on a daily basis until SSO can be stopped.

Per G.S. 143-215.1C(b), the responsible party of a discharge of 1,000 gallons or more of untreated wastewater to surface waters shall issue a press release within 48-hours of first knowledge to all print and electronic news media providing general coverage in the county where the discharge occurred. When 15,000 gallons or more of untreated wastewater enters surface waters, a public notice shall be published within 10 days and proof of publication shall be provided to the Division within 30 days. Refer to the referenced statute for further detail.

The Director, Division of Water Quality, may take enforcement action for SSOs that are required to be reported to Division unless it is demonstrated that:

- 1) the discharge was caused by severe natural conditions and there were no feasible alternatives to the discharge; or
- 2) the discharge was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee and/or owner, and the discharge could not have been prevented by the exercise of reasonable control.

Part II must be completed to provide a justification claim for either of the above situations. This information will be the basis for the determination of any enforcement action. Therefore, it is important to be as complete as possible.

WHETHER OR NOT PART II IS COMPLETED, A SIGNATURE IS REQUIRED AT THE END OF THIS FORM.



ANSWER THE FOLLOWING QUESTIONS FOR EACH RELATED CAUSE CHECKED IN PART I OF THIS FORM AND INCLUDE THE APPROPRIATE DOCUMENTATION AS REQUIRED OR DESIRED

COMPLETE ONLY THOSE SECTIONS PERTAINING TO THE CAUSE OF THE SSO AS CHECKED IN PART I

In the check boxes below, NA = Not Applicable and NE = Not Evaluated

A HARDCOPY OF THIS FORM SHOULD BE SUBMITTED TO THE APPROPRIATE DWQ REGIONAL OFFICE UNLESS IT HAS BEEN SUBMITTED ELECTRONICALLY THROUGH THE ONLINE REPORTING SYSTEM

Severe Natural Condition (hurricane, tornado, etc.)

Describe the "severe natural condition" in detail.

We Received 2+ Inches of Rain in 2 Days

How much advance warning did you have and what actions were taken in preparation for the event?

None - This has never happened here before

Comments:

We are going to Jet wash This line and camera between these manholes

Grease (Documentation such as cleaning, inspections, enforcement actions, past overflow reports, educational material and distribution date, etc. should be available upon request.)

When was the last time this specific line (or wet well) was cleaned?

Do you have an enforceable grease ordinance that requires new or retrofit of grease traps/interceptors?

☐ Yes ☐ No ☐ NA ☐ N

Have there been recent inspections and/or enforcement actions taken on nearby restaurants or other nonresidential grease contributors?

☐ Yes ☐ No ☐ NA ☐ N

Explain.

Have there been other SSOs or blockages in this area that were also caused by grease?

☐ Yes ☐ No ☐ NA ☐ N

When?

If yes, describe them:

Have cleaning and inspections ever been increased at this location?

☐ Yes ☐ No ☐ NA ☐ N

Explain.



When was the area last checked/cleaned? We try to inspect these line at least 1st a year. March 2011

Have cleaning and inspections ever been increased at this location due to previous problems with debris? ☐ Yes ☒ No ☐ NA ☐

Explain: No. They will be now. we are going to add this to our monthly cleaning. for awhile.

Are appropriate educational materials being developed and distributed to prevent future similar occurrences? ☐ Yes ☐ No ☐ NA ☐

Comments:

Other (Pictures and a police report should be available upon request.)

Describe:

Were adequate equipment and resources available to fix the problem? ☐ Yes ☐ No ☐ NA ☐

If Yes, explain:

If the problem could not be immediately repaired, what actions were taken to lessen the impact of the SSO?

Comments:

For DWQ Use Only:

DWQ Requested an Additional Written Report: ☐ Yes ☐ No ☐ NA ☐

If Yes, What Additional Information is Needed:

Comments:

As a representative for the responsible party, I certify that the information contained in this report is true and accurate to the best of my knowledge.

Person submitting claim: Wentford Henson

Date: 12-8-11

Signature: Wentford Henson

Title: Line Maint. crew leader  
ORC - Town of Waynesville

Telephone Number: 828-456-3706

Any additional information desired to be submitted should be sent to the appropriate Division Regional Office within five days of first knowledge of the SSO with reference to the incident number (the incident number is only generated when electronic entry of this form is completed, if used).



## Town of Waynesville

PRESS RELEASE

December 12, 2011

CONTACT: Fred Baker (828) 456-4410

 **COPY**

### NOTIFICATION OF WASTEWATER SPILL IN HAYWOOD COUNTY

The Town of Waynesville had a discharge of untreated wastewater from a sanitary sewer line located at Walnut Trail. The spill is estimated at 20,000 gallons. The sanitary sewer overflow was discovered around 3:00 pm December 7, 2011 during very heavy rainfall. Its duration was approximately sixteen hours. Diluted but untreated wastewaters entered Richland Creek. The discharge ended when rainfalls and stream flows subsided. The stream bank area affected was raked, cleaned and limed. Maintenance activities and sewer rehabilitation are being performed to identify and correct infiltration and inflow sources connected to the sewer system to prevent overflows. This notice was required by North Carolina General Statutes 143-215. For more information contact Fred Baker, Director of Public Works at (828) 456-4410.



## Town of Waynesville

January 26, 2012

Mr. Chuck Cranford, Supervisor  
North Carolina Department of Environment and Natural Resources  
Surface Water Protection Section—ARO  
2090 US Hwy 70  
Swannanoa, NC 28778

Re: NOV-2012-DV 0003  
WQCS 00039  
Town of Waynesville

Dear Mr. Cranford:

I apologize for the incomplete SSO reports submitted for the 12/07/2011 sanitary sewer overflows. As shown in the subsequent press release, the volume of the spill to Richland Creek is estimated at 20,000 gallons and at Georgia Avenue to Farmers Branch, a tributary to Richland Creek, is estimated at 3,000 gallons. Heavy rainfall began on Tuesday, December 6<sup>th</sup> at 9 AM and ended at 4 PM on Wednesday, December 7<sup>th</sup>. A total of 2.98 inches were recorded at the Mountain Research Station in Waynesville with peak intensities of 0.26 inches per hour at 1:00 AM December 7<sup>th</sup> and again at 9 AM December 7<sup>th</sup>. The system handled the intense precipitation well during low nighttime flows but with higher wastewater flows during the day the sanitary sewer overflows appeared by 3 PM that afternoon.

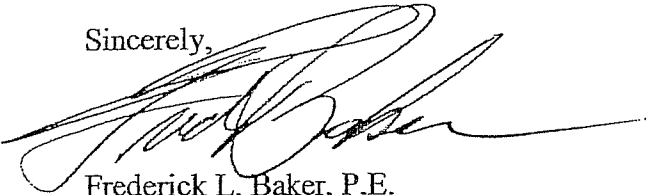
The last SSO before this one occurred March 6, 2011 at the Howell Mill bar screen when rainfall intensities also peaked at 0.26 inches/hour. The good news is that work at the bar screen location increasing the orifice plate size to allow the 24" gravity trunk sewer to accept more flow and building up the wall around the bar screen channel prevented an overflow at that location which would have entered Richland Creek above Lake Junaluska. However the additional wet weather inflow & infiltration sent into the gravity trunk sewer exceeded the downstream sewer capacity. This SSO occurred at a new location below Lake Junaluska with no history of overflows. On Walnut Trail it was discovered that the telephone company had trenched across the top of the 24" CIP sewer and left a 6 inch gash in the crown of the pipe. This was repaired on 12/29/11. Sewer maintenance activities have washed and inspected the line. The line is in very good condition with only minor amounts of grease or depositions and no roots. On Wednesday, January 25<sup>th</sup> the Town replaced two manhole frame and covers with sealed covers, packed a joint on the 24" C.I.P. with oakum and lead and performed internal inspection with a t.v. camera. One to two inches of silt and sand deposits were observed in the pipe invert. On Thursday, January 26<sup>th</sup> the sewer jetter and sweeper truck were washing and vacuuming these deposits from the line.

The Town continues to pursue rehabilitation of the collection system to eliminate wet weather I & I sources. During 2011, the Town abandoned 4,000 LF of old 24" VCP sewer above the Howell Mill bar screen up to Waynesville Plaza. This involved plugging pipe at each manhole location and demolishing manholes to two feet below grade. Some sewer services had to be relocated to the newer 30 inch relief sewer. An additional 2,684 LF of eight inch collector lines were replaced during 2011 where old VCP lines were deteriorating. The Town uses smoke testing, dye testing and TV inspections to locate defects in the collection system. Vented manhole tops were sealed or replaced with new frame and covers with solid lids and concealed pick holes.

As noted in the SSO reporting form, the Town has issued a purchase order to replace that section of sewer on Georgia Avenue that experienced trouble. This Hazelwood minisystem has had a lot of sewer replacement over the last several years. It is characterized by flat grades and high seasonal groundwater levels.

Do not hesitate to contact me if further questions or comments arise.

Sincerely,



Frederick L. Baker, P.E.  
Director of Public Works

cc: A. Lee Galloway, Town Manager  
Wentfard Henson/ORC  
Robert Hyatt  
Janet Cantwell, ARO

## **Sewer Department**

### **Line Replacements 07/01/2011----06/30/2012**

#### **October 2011**

##### **Overbrook Drive / East Marshall Street**

##### **Apt's (Burgin's property line)**

8" - 195 LF SDR 35 (Main line)

Installed 1 new manhole at property line

#### **October 27, 2011**

##### **Chestnut Walk**

8" - 158 LF SDR 35 (Main line)

Installed 2 new manholes

4" - 2 laterals approx. 30 ft. average

#### **May 10, 2012**

##### **Camelot Drive / Carolina Avenue**

8" - 1052 LF PVC SDR 35 (Main line)

6" - 58 LF SDR 35 (Main line)

Installed 9 new manholes

4" - 22 laterals approx. 30 ft average

#### **May 25, 2012**

##### **Georgia Avenue / Carolina Avenue / Camelot Drive**

10" - 131 LF PVC SDR 35 (Main line)

Installed 1 new manhole

4" - 1 lateral approx. 30 ft.

**Total LF replaced = 1635**

**Total lateral LF replaced = 690**

*down from 4315*

**Sewer Inspection Report**  
**07/01/2011----06/30/2012**

**July 2011**

6" – 16,800 ft.

**August 2011**

6" – 16,000 ft.

**September 2011**

6" – 15,600 ft.

**October 2011**

6" – 6000 ft.

**November 2011**

6" – 15,400 ft.

**December 2011**

6" – 14,200 ft.

**December 2011**

*Aerial Creek Crossing*

**Richland Creek**

- 1) 16" Golf Course Road collector at US19 bridge
- 2) 24" South Lakeshore trunk at US19
- 3) 12" Raccoon Creek interceptor at Blue Ridge Paper
- 4) 24" South Lakeshore trunk at Blue Ridge Paper
- 5) 30" trunk at Blue Ridge Paper
- 6) 18" trunk at Lea Industries
- 7) 8" Dayco control manhole

**Raccoon Creek**

- 8) 10" Industrial Park collector at Blue Ridge paper
- 9) 10" Raccoon Creek interceptor at Howell Mill Road
- 10) 10" Health Department collector at Junaluska Elementary
- 11) 10" Raccoon Creek interceptor at Francis Farm Road

## **Sewer Inspection Report continued...**

### **Factory Branch**

- 12) 12" Dellwood interceptor at Lake Junaluska entrance
- 13) 12" Dellwood interceptor at US19

### **Shelton Branch**

- 14) 18" Shelton Branch interceptor at US276, Pigeon Street
- 15) 10" Shelton Branch interceptor at Conley Street near Broad Street
- 16) 10" Shelton Branch interceptor at Jarvis Street near Broad Street
- 17) 6" collector, end of Ross Street (aerial)
- 18) 6" collector, end of Prevost Street (aerial)
- 19) 8" collector, between Prevost and Oakdale Road
- 20) 18" Shelton Branch interceptor, Vance Street and Parkview Drive

### **Eagle Nest Creek**

- 21) Corner of Eagle Nest Road/Sulphur Springs Road at BP Station

### **Browning Branch**

- 22) Allens Creek Road at Gas Light Mobile Home Park (ditch crossing)
- 23) SR 1140, Lickstone Road at Hunters Crossing
- 24) Riverbend Street behind Cline-Bradley's

### **Chestnut Park**

- 25) Chestnut Park Drive, above rest home, 6" collector from Dolan Road

- Raccoon Road Line—(Hillside Terrace Junction to US276 at Crymes Cove Road)
- Little Blue Ridge—(Howell Mill Road to US19 bridge at Junaluska Assembly)
- Raccoon Creek—(Hillside Terrace past Junaluska School on to Waynesville Industrial Park)
- Howell Mill Road—(Little Blue Ridge thru Schulhofers, Recreation Center, Abel's etc. to Russ Avenue)
- Richland Creek—(209 area, Junaluska dam thru Fairgrounds to Sewer Plant)
- Dellwood Road (us190—((From Junaluska Assembly Junction thru Dayton Drive, Ivey Hill etc., to Queens Farm)
- Fitzgerald field—(Oakdale Road bridge to Country Club Drive)
- Richland Creek—(End of Tarheel Street to Hyatt Creek Road)
- Chestnut Walk—(Browning Branch Road at Pump House to end)
- Will Hyatt Road—(Eagles Nest Road to Will Hyatt Road thru Sand Trap Drive on to Cardinal Drive and Wren Way)



## **Sewer Inspection Report continued...**

### **January 2012**

8" - 3950 ft.

### **February 2012**

8" - 350 ft.

6" - 2,950 ft.

### **March 2012**

8" - 7200 ft.

6" - 775 ft.

4" - 175 ft.

### **March 2012**

*Priority Line/Aerial Creek Crossing*

*Aerial Creek Crossing*

#### **Richland Creek**

25) 16" Golf Course Road collector at US19 bridge

26) 24" South Lakeshore trunk at US19

27) 12" Raccoon Creek interceptor at Blue Ridge Paper

28) 24" South Lakeshore trunk at Blue Ridge Paper

29) 30" trunk at Blue Ridge Paper

30) 18" trunk at Lea Industries

31) 8" Dayco control manhole

#### **Raccoon Creek**

32) 10" Industrial Park collector at Blue Ridge paper

33) 10" Raccoon Creek interceptor at Howell Mill Road

34) 10" Health Department collector at Junaluska Elementary

35) 10" Raccoon Creek interceptor at Francis Farm Road

## **Sewer Inspection Report continued...**

### **Factory Branch**

- 36) 12" Dellwood interceptor at Lake Junaluska entrance
- 37) 12" Dellwood interceptor at US19

### **Shelton Branch**

- 38) 18" Shelton Branch interceptor at US276, Pigeon Street
- 39) 10" Shelton Branch interceptor at Conley Street near Broad Street
- 40) 10" Shelton Branch interceptor at Jarvis Street near Broad Street
- 41) 6" collector, end of Ross Street (aerial)
- 42) 6" collector, end of Prevost Street (aerial)
- 43) 8" collector, between Prevost and Oakdale Road
- 44) 18" Shelton Branch interceptor, Vance Street and Parkview Drive

### **Eagle Nest Creek**

- 45) Corner of Eagle Nest Road/Sulphur Springs Road at BP Station

### **Browning Branch**

- 46) Allens Creek Road at Gas Light Mobile Home Park (ditch crossing)
- 47) SR 1140, Lickstone Road at Hunters Crossing
- 48) Riverbend Street behind Cline-Bradley's

### **Chestnut Park**

- 25) Chestnut Park Drive, above rest home, 6" collector from Dolan Road

- Raccoon Road Line—(Hillside Terrace Junction to US276 at Crymes Cove Road)
- Little Blue Ridge—(Howell Mill Road to US19 bridge at Junaluska Assembly)
- Raccoon Creek—(Hillside Terrace past Junaluska School on to Waynesville Industrial Park)
- Howell Mill Road—(Little Blue Ridge thru Schulhofers, Recreation Center, Abel's etc. to Russ Avenue)
- Richland Creek—(209 area, Junaluska dam thru Fairgrounds to Sewer Plant)
- Dellwood Road (us190—(From Junaluska Assembly Junction thru Dayton Drive, Ivey Hill etc., to Queens Farm)
- Fitzgerald field—(Oakdale Road bridge to Country Club Drive)
- Richland Creek—(End of Tarheel Street to Hyatt Creek Road)
- Chestnut Walk—(Browning Branch Road at Pump House to end)
- Will Hyatt Road—(Eagles Nest Road to Will Hyatt Road thru Sand Trap Drive on to Cardinal Drive and Wren Way)

**Sewer Inspection Report continued...**

**April 2012**

8" - 2,925 ft.  
6" - 1,125 ft.  
4" - 100 ft.

**May 2012**

6" - 15,500 ft.

**June 2012**

6" - 16,800 ft.

**Total Year by Line Size:**

8" - 14,425 ft.  
6" - 121,150 ft.  
4" - 275 ft.

**Total Footage Inspected for Year: 135,850 ft.**

*down from 199,000*

**CAMERA ----- LINE INSPECTION**

**JULY 2011 – JUNE 2012**

**AUGUST 2011** – Chestnut Walk – 8" – 725 ft.  
US 276 / Pigeon Street – 6" – 350 ft.

**SEPTEMBER 2011** – Chestnut Walk / Lickstone Road – 8" – 500 ft.  
South Main Street / Allens Creek Road - 8" – 180 ft.

**NOVEMBER 2011** – Pigeon Street - 6" – 200 ft.

**JANUARY 2012** – Walnut Trail / Sewer Treatment Plant - 30" – 900 ft.

**FEBRUARY 2012** - 162 Hendrix Street - 4" – 50 ft.

**MARCH 2012** - Locust Drive - 6" - 120 ft.  
East Street - 6" - 45 ft.  
Dellwood Road - 8" - 140 ft.  
385 Tarheel Drive - 4" - 20 ft.

**APRIL 2012** - Shelton Street - 6" - 320 ft.

**TOTAL CAMERA LINE INSPECTION FOOTAGE:**

**30" – 900 FT.**  
**8" – 1545 FT.**  
**6" - 1035 FT.**  
**4" - 70 FT.**

up

**Sewer Preventative Maintenance Report  
07/01/2011----06/30/2012**

**Non-Breakdown Line Washing By Month**

**July 2011**

6" - 46,400 ft.

**August 2011**

6" - 46,200 ft.

**September 2011**

6" - 48,400 ft.

**October 2011**

6" - 30,800 ft.

**November 2011**

6" - 31,300 ft.

**December 2011**

6" - 7,385 ft.

**January 2012**

6" - 15,400 ft.

**February 2012**

6" - 17,200 ft.

**March 2012**

8" - 4,000 ft.

**Sewer Maintenance Report continued...**

**April 2012**

8" - 1,266 ft.

6" - 5,518 ft.

4" - 75 ft.

**May 2012**

10" - 320 ft.

8" - 13,983 ft.

6" - 1,222 ft.

4" - 180 ft.

**June 2012**

10" - 1,325 ft.

8" - 6,339 ft.

6" - 2,923 ft.

4" - 98 ft.

**Total Year by Line Size:**

10" - 1,645 ft.

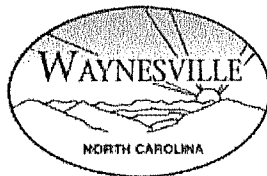
8" - 25,588 ft.

6" - 252,748 ft.

4" - 353 ft.

**Total Footage Washed for Year: 280,334 ft.**

53 miles 76%



July 28, 2012

System Performance Annual Report  
North Carolina Division of Water Quality  
1617 Mail Service Center  
Raleigh, NC 27699-1617

Re: Performance Annual Report

Enclosed are three copies of the referenced report. A copy of this report is posted at the Municipal Building for public availability and is posted on the Town's website at [www.townofwaynesville.org](http://www.townofwaynesville.org).

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 Waynesville and that those users have been notified of its availability.

Sincerely,

A handwritten signature in black ink, appearing to read "Frederick L. Baker", is written over a large, stylized, looping flourish.

Frederick L. Baker, P.E.  
Director of Public Works

FLB:gb