

2013-2014 System Performance Annual Report

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

Reporting Period: FY 2013-2014: July 1, 2013 – June 30, 2014

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	9800	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	16,330	

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 2012	
August 2012	Point repair 18" trunk crossing Boyd Avenue
September 2012	Clean and tv 24" trunk on 209 Start Edwards Street sanitary sewer replacement
October 2012	Duke's Root retreatment on 209 trunk sewer Edwards Street sewer replacement complete
November 2012	
December 2012	Replace 255 LF 24" trunk sewer at 209 fairgrounds SSO on 209 fairgrounds trunk sewer—NOV-2014-DV-0009 Root treat Chestnut Walk
January 2013	Walk sewer lines Lickstone Road lateral replacement Clean and tv Lickstone Road sanitary sewer interceptor
February 2013	SSO on 209 fairgrounds trunk sewer—NOV-2014-DV-0070
March 2013	Start Riverbend Street sewer replacement
April 2013	Smoke testing
May 2013	Finish Riverbend Street sewer replacement Begin Lickstone Road sewer replacements and point repairs
June 2013	Finish Lickstone Road sewer replacements and point repairs

- 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 2013		None	
August 2013			
September 2013			
October 2013			
November 2013			
December 2013			
January 2014			
February 2014			
March 2014			
April 2014			
May 2014			
June 2014			

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

July 2013		None	
August 2013			
September 2013			
October 2013			
November 2013			
December 2013			
January 2014			
February 2014			
March 2014			
April 2014			
May 2014			
June 2014			

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 2013	
August 2013	
September 2013	
October 2013	
November 2013	
December 2013	12/22/13 SSO on 209 (Crabtree Rd.) at County Fairgrounds estimated at 200,000 gallons NOV-2014-DV-0009
January 2014	
February 2014	2/3/14 SSO on 209 (Crabtree Rd.) at County Fairgrounds estimated @ 20,000 gallons NOV-2014-DV-0070
March 2014	
April 2014	
May 2014	
June 2014	

C. Description of any known environmental impact of violations:

July 2013	
August 2013	
September 2013	
October 2013	
November 2013	
December 2013	No known impact, 4.24 inches rain. Area affected was cleaned and limed.
January 2014	
February 2014	No known impact, intense rainfall event of 2.42 inches. Area affected was cleaned and limed.
March 2014	
April 2014	
May 2014	
June 2014	

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

July 2013	
August 2013	Point repair 18" sanitary sewer Boyd Ave @ storm drain crossing Bid sewer repairs/Allen Creek to Lickstone Road
September 2013	P&L clean Hv 24" trunk on 209. Blink Bonny manhole top rehabilitation Start Edwards Street sanitary sewer replacement
October 2013	Retreat 209 trunk sewer with Duke's Root Complete Edwards Street 960 LF 8" clay to PVC; 5 p/cast mhs, 21 lateral replacements
November 2013	
December 2013	Replace 255 LF 24" clay to PVC @ 209 fairgrounds, rebuild 2 manhole tops Root treat Chestnut Walk
January 2014	Walk sewer lines Lickstone sanitary sewer lateral replacement P&L on Lickstone sanitary sewer, clean & tv
February 2014	
March 2014	Start Riverbend Street water/sewer rehabilitation
April 2014	Riverbend Street sewer replacement Smoke testing; McGill Associates Waynesville Plaza, Wall St., Montgomery St., Dolan Road
May 2014	Finish Riverbend Street—replace 1100 LF clay to PVC 8", 5 new p/cast manholes, 19 laterals replaced Begin Lickstone Road sewer replacements and point repairs
June 2014	Lickstone sanitary sewer 1,092 LF clay to PVC 8", 1 manhole, 34 laterals replaced to cleanout.

II. Wastewater Treatment Plant NC0025321 System Performance Annual Summary:

E. Description of overall 12 month performance, noting highlights and deficiencies:
Percent removal BOD/TSS, Average daily flow, comments

July 2013	93% / 97% 4.25 MGD
August 2013	96% / 97% 2.98 MGD
September 2013	97% / 97% 2.70 MGD
October 2013	96% / 96% 2.50 MGD
November 2013	97% / 97% 2.65 MGD
December 2013	90% / 93% 4.29 MGD
January 2014	93% / 95% 3.78 MGD
February 2014	90% / 93% 4.07 MGD 41/49 mg/l influent concentrations
March 2014	93% / 95% 3.09 MGD
April 2014	94% / 95% 3.46 MGD
May 2014	92% / 96% 3.22 MGD
June 2014	95% / 98% 2.78 MGD

- 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 2013		Fully compliant for twelve-month period	
August 2013			
September 2013			
October 2013			
November 2013			
December 2013			
January 2014			
February 2014			
March 2014			
April 2014			
May 2014			
June 2014			

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

July 2013		Fully compliant for twelve-month period	
August 2013			
September 2013			
October 2013			
November 2013			
December 2013			
January 2014			
February 2014			
March 2014			
April 2014			
May 2014			
June 2014			

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 2013		See collection System, no overflows from WWTP	
August 2013			
September 2013			
October 2013			
November 2013			
December 2013			
January 2014			
February 2014			
March 2014			
April 2014			
May 2014			
June 2014			

G. Description of any known environmental impact of violations:

July 2013		None	
August 2013			
September 2013			
October 2013			
November 2013			
December 2013			
January 2014			
February 2014			
March 2014			
April 2014			
May 2014			
June 2014			

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

July 2013			
August 2013			
September 2013			
October 2013			
November 2013			
December 2013			
January 2014			
February 2014			
March 2014			
April 2014			
May 2014			
June 2014			

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:	Jeff Stines	Cert. # 987994	CS 4
Collection System back-up ORC:	David Snyder	Cert. # 987789	CS 1

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 Frederick L. Baker Date 7/14/14

Annual Sewer Report

**July 1, 2013
Thru
June 30, 2014**

SEWER DEPARTMENT

Sewer Spill Log

July 1, 2013 -----June 30, 2014

December 22, 2013

Hwy 209 at the Haywood County Fairgrounds – at the manhole

February 3, 2014

Hwy 209 at the Haywood County Fairgrounds – at the manhole

Sewer Department

Line Replacements 07/01/2013----06/30/2014

October 2, 2013

Edwards Street

8" – 240 LF SDR 35 (Main line)

Installed 2 new manholes

4" – 5 laterals approx. 30 ft. average

October 11, 2013

Edwards Street

8" – 260 LF SDR 35 (Main line)

Installed 1 new manhole

4" – 7 laterals approx. 30 ft. average

October 17, 2013

Edwards Street

8" – 225 LF SDR 35 (Main line)

Installed 1 new manhole

4" – 4 laterals approx. 30 ft. average

October 31, 2013

Edwards Street

8" - 235 LF SDR 35 (Main line)

Installed 1 new manhole

4" – 5 laterals approx. 30 ft. average

December 16, 2013

Hwy 209 / Fair Grounds

24" – 250 LF SDR 35 (Main line)

Rebuilt 2 manhole tops

April - May, 2014

Riverbend Street

8" – 1100 LF SDR 35 (Main line)

Installed 5 new manholes

4" – 17 laterals approx. 25 ft. average

6" – 2 laterals approx. 10 ft. average

Line Replacements continued:

May 6, 2014

Lickstone Road

8" – 293 LF SDR 35 (Main line)

Installed 1 manhole

4" – 11 laterals approx. 25 ft. average

June 6, 2014

Lickstone Road

8" – 264 LF SDR 35 (Main line)

4" – 9 laterals approx. 30 ft. average

June 13, 2014

Lickstone Road

8" – 535 LF SDR 35 (Main line)

4" – 14 laterals approx. 30 ft. average

Total 24" LF replaced = 250

Total 8" LF replaced = 3152

Total footage replaced = 3402

Total lateral LF replaced = 2040

New manholes installed = 11

Manhole tops rebuilt = 2

Sewer Inspection Report

07/01/2013----06/30/2014

July 2013

6" – 1865 ft.

8" – 8840 ft.

August 2013

6" – 7105 ft.

September 2013

6" – 5060 ft.

8" – 90 ft.

18" – 1850 ft.

October 2013

6" – 4490 ft.

November 2013

6" – 2220 ft.

8" – 540 ft.

December 2013

4" – 7150 ft.

6" – 425 ft.

December 2013

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 2014

6" – 5155 ft.
8" – 300 ft.
12" – 600 ft.

February 2014

6" – 4147 ft.
8" – 2513 ft.

March 2014

6" – 3862 ft.
8" – 3650 ft.
10" – 1475 ft.

March 2014

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 2014

6" – 9410 ft.
8" – 1855 ft.
10" – 264 ft.

Total Year by Line Size:

6" – 50464 ft.
8" – 18213 ft.
10" – 1739 ft.
12" – 600 ft.
18" – 1850 ft.

Total Footage Inspected for Year: 72866 ft.

Sewer Preventative Maintenance Report
07/01/2013----06/30/2014

Non-Breakdown Line Washing By Month

July 2013

8" – 2763 ft.
6" – 6772 ft.
4" – 875 ft.

August 2013

10" – 1475 ft.
8" – 3790 ft.
6" – 5877 ft.
4" – 518 ft.

September 2013

8" – 10175 ft.
6" – 4835 ft.
4" – 230 ft.

October 2013

8" – 428 ft.
6" – 15645 ft.
4" – 440 ft.

November 2013

18" – 1850 ft.
8" – 920 ft.
6" – 10410 ft.
4" – 560 ft.

December 2013

8" – 180 ft.
6" – 6566 ft.
4" – 220 ft.

January 2014

8" – 630 ft.
6" – 5465 ft.
4" – 330 ft.

February 2014

18" - 1900 ft.
8" - 1205 ft.
6" - 11770 ft.
4" - 1240 ft.

March 2014

12" - 600 ft.
8" - 4485 ft.
6" - 8685 ft.
4" - 340 ft.

June 2014

14" - 600 ft.
8" - 2652 ft.
6" - 2400 ft.

Total Year by Line Size:

18" - 3750 ft.
14" - 600 ft.
12" - 600 ft.
10" - 1475 ft.
8" - 27228 ft.
6" - 78425 ft.
4" - 4753 ft.

Total Footage Washed for Year: 111179 ft.

CAMERA ----- LINE INSPECTION

JULY 2013 – JUNE 2014

JULY 2013	South Main Street @ Big Mtn BBQ (old location)	6" – 40 ft.
	Laurel Ridge Country Club / Eagles Nest Road	8" – 312 ft.
	Valley View Terrace	8" – 200 ft.
	East Street	8" – 210 ft.
SEPTEMBER 2013	Hwy 209 / Crabtree Road and Fair Grounds	24" – 774 ft.
	Hwy 209 / Crabtree Road	24" – 2227 ft.
DECEMBER 2013	South Main Street / New Taco Bell	8" – 120 ft.
	Westwood Circle	4" – 60 ft.
JANUARY 2014	Lickstone Road @ Browning Branch Road	8" – 247 ft.
	Lickstone Road	8" – 1285 ft.
	Cow pasture / Behind Lot 249	8" – 1340 ft.
	Lickstone Road @ Pinewood Drive	8" – 539 ft.
	Lickstone Road @ Allens Creek Road	8" – 205 ft.
	Allens Creek Road	8" – 1715 ft.
	Allens Creek Road @ Buchanan Drive	8" – 156 ft.
	Edwards Road	8" – 1031 ft.
	Howell Street	6" – 90 ft.
MAY 2014	Riverbend Street	6" – 80 ft.

TOTAL CAMERA BY LINE SIZE INSPECTION FOOTAGE:

24" – 3001 FT.
8" – 7360 FT.
6" – 210 FT.
4" – 60 FT.

TOTAL CAMERA INSPECTION FOOTAGE:

10631 FT.