I. General Information

- Name of regulated entity and county: Town of Highlands
  Macon County

- Responsible entity, persons or contacts:
  David Wilkes – Mayor
  Bob Frye – Town Manager
  Lamar Nix, P.E. - Public Works Director

Mailing address: Town of Highlands
PO Box 460; Highlands, NC 28741

Physical Address: 210 North Fourth Street; Highlands, NC 28741

Phone numbers:
- 828-421-1187 David Wilkes - Mayor
- 828-526-2118 Lamar Nix, P.E. - Public Works Director
- 828-526-2595 - fax
- 828-526-5266 Robert "Bob" A. Frye, II – Town Manager
- 828-526-2695 - fax
- 828-526-0504 Alec Templeton - ORC

- Listing of applicable permits:
  Sewer Collection System: WQCS00186
  Wastewater Treatment Plant: NPDES permit # NC0021407

- Description of collection or treatment system or process:

  **Sewer Collection System:**

  The Town of Highlands serves a population of 998. During peak tourist season, the population averages 20,000 to 25,000.
  There are 850 sewer connections (685 residential and 165 commercial).
  There are 2013 water connections (1816 residential & 214 commercial).
  There are 62 Town employees, including 35 in the Public Works Dept.

  The collection system consists of: ~ 17 miles
  ~ 10 miles of gravity sewer (55,000 ft); sizes: 6 – 12 inch dia;
  7.09 miles of force main (4500 ft); sizes: 2,3,4,6,8,10 & 12 inch dia;
  materials: DIP, PVC and a small amount of clay pipe.
  450 manholes: pre-cast concrete, brick & 2 stack rock manholes; and
  6 duplex / triplex pumping stations.
  High priority line: aerial line of 8 inch ductile iron gravity sewer that runs parallel with Mill Creek for ~ 500 feet.
Pump Stations - with Sensaphone telemetry & dual high water alarms:

1. Mill Creek: three 20 HP (855 gpm) submersible pumps; 8 in dia discharge; peroxide chemical feed system (at old WWTP site); and 125 KW Onan diesel generator.
2. Arnold Road: two 30 HP (215 gpm) suction lift pumps; 6 in dia discharge; 100 KW Spectrum Detroit Diesel generator.
3. Mirror Lake: two 30 HP (215 gpm) suction lift pumps; 8 in dia discharge; 40 KW Cummings diesel generator.
4. Moorewood Rd: two 5 HP (165 gpm) pumps; 2 in dia discharge, ONAN generator.
5. Shelby Place: two 5 HP (100 gpm) pumps; 2 in dia discharge, ONAN generator.
6. Lower Brushy Face: two 2 HP (60 gpm) pumps; 1.25 in dia "", ONAN generator.

Cleaning: 10% cleaning required = 1.7 miles = 8976 ft

One hundred percent of the gravity sewer lines are cleaned twice a year (April / May and November) by contractor. Cleaning costs/year: $11,700. The pump stations are pressure washed twice a year.

Financials:
FY 12-13: Capital Improvements Plan (CIP) for the sewer collection system was $82,000.
FY 12-13: Revenue for sewer and WWTP was $619,411.

Wastewater Treatment Plant type:

1.5 MGD dual-path SBR (sequencing batch reactor consisting of:
12 inch (US Hwy 64) influent force main; septage collection facility; influent manual bypass bar screen; influent mechanical bar screen (out-of-service); influent valve vault / flow splitter; dual 0.8 Mgal SBRs (sequencing batch reactors) with three 25 HP surface floating mechanical mixers, dual 100 HP blowers with fine bubble diffusers and motorized inlet valves with timers, gravity decanters, decant valve vault, drain pumping station (sludge from bottom of SBRs pumped to digestors) and 3 HP sludge wasting pumps; 331,876 gal post-equalization basin with surface floating mechanical aerator; 21,000 gal post- equalization basin; dual 4.2 MGD cloth media disc tertiary filters with q emergency by-pass; thickened sludge is pumped to the dual 0.22 Mgal aerobic digestors (old SBR units) with dual 7.5 HP surface floating mechanical mixers; 0.10 Mgal sludge holding tank with dual 20 HP positive displacement blowers providing course bubble diffused air, decant tube and 1.7 HP submersible decant pump (supernatant is pumped to the head of WWTP); polymer feed sludge conditioning; 1 meter Komline-Sanderson Engineering Corp. belt filter press with belt washer booster pump, sludge pump and Polyblend polymer system (cationic polyacrylamide) Superfloc C-496 flocculant; dual 16 ft x 26 ft sludge vacuum bed (temporary sludge storage, prior to being taken to the Macon County Landfill - permit no: 5703-P01); dual 10 HP Flygt submersible non-clog filtrate vacuum pumps and wetwell (filtrate is pumped back to head of WWTP); dual 4.2 MGD ultra-violet disinfection units; v-notch weir; flow proportional composite sampler; ultrasonic flow measurement; post aeration step cascade; emergency generator; and gravity line to outfall.
II. Performance

- Description of overall 12 month performance, noting highlights and deficiencies.
  January – December: **There were no violations during 2012.**

- By month, list of the number and type of any violations of permit conditions, environmental regulations or environmental laws, including (but not limited to):
  - Permit Limit Violations: **There were no violations during 2012.**
  - Monitoring and Reporting Violations: **There were no violations during 2012.**
  - (Illegal) Bypass of treatment facilities*: **There were no bypasses during 2012.**
  - Sanitary Sewer Overflows*: **There were no SSOs during 2012.**

- Description of any known environmental impact of violations - **None**

- Description of corrective measures taken to address violations or deficiencies – **N/A**

III. Notification

- Statement as to how users or customers have been provided access to the report.

  A copy of this report is available upon request and is posted at the Town Office.

IV. Certification

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

**NC Certified Operators:**

**Sewer Collection System ORC (Operator in Responsible Charge):**
  James “Stanley” Houston; CS 1 Cert. # 988462

**Sewer Collection System Back-up ORCs (Operator in Responsible Charge):**
  Howard W. Brown; CS 1 Cert. # 13750
  Robert D. McMahan; CS 1 Cert. # 988457

**Wastewater Treatment Plant ORC (Operator in Responsible Charge):**
  Alec H. Templeton; WW IV Cert. # 995198

**Wastewater Treatment Plant Back-up ORC (Operator in Responsible Charge):**
  Howard W. Brown; WW II Cert. # 8284

To the best of my knowledge, this report is accurate and complete.

**Signature**  **Title**  **Date**
Notes by DWQ:

It shall be left to the individual applicable entities to decide both how much detail above minimum they wish to provide in the report and how they will provide the report to their users or customers. This law was established to provide a mechanism for public oversight (and hopefully, to instill public confidence). Those entities that fall under the scope of this part of the law are encouraged to be forthcoming in their report and they should provide its readers a contact where they may view more detailed information.

To satisfy the Departmental reporting requirement, **three copies** of the report should be submitted to the following address:

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

**Annual reports must be submitted within 60 days of the end of the applicable 12-month review period.** You may base your report on either a calendar year or a fiscal year (July 1 – June 30) time frame.