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February 19th, 2018

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

RE: Yadkin Valley Sewer Authority WWTP
NPDES Permit Number: NC0020567
Surry County

Yadkin Valley Sewer Authority WWTP
NPDES Permit Number: WQCS00376

Dear Sirs,

Enclosed you will find the Annual Performance Report for the year 2017 for the Yadkin Valley Sewer Authority Wastewater Treatment Plant and the Yadkin Valley Sewer Authority Collections System. We believe the report to be complete and accurate. The customers will be notified of the availability of the report through local newspaper or sewer bills.

If you have any questions, please feel free to contact the YVSA office at 336-835-9819.

Sincerely,

Yadkin Valley Sewer Authority


Nicole Johnston
Executive Director

Cc: Hal Transou, WWTP ORC
Alvin Hayes, Collections System ORC

500 NC Hwy 268 W ~ Elkin, NC 28621
Phone: 336-835-9819 ~ www.yvsa.org ~ Fax: 336-835-9840

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THE YADKIN VALLEY SEWER AUTHORITY ANNUAL PERFORMANCE REPORT

The Yadkin Valley Sewer Authority experienced fifteen (15) reportable SSOs and three (3) non-reportable SSOs in the calendar year of 2017. The spills are attached for you review as Exhibit A.

YVSA COLLECTION SYSTEM SUMMARIZATION

The YADKIN VALLEY SEWER AUTHORITY (YVSA) oversees approximately eight-five (85) miles of sewer lines. There are approximately fifty (50) miles of sewer in Elkin (inside Surry County), twenty-five (25) miles in Jonesville (inside Yadkin County), and a five (5) mile force main to Ronda (inside Wilkes County) along with five (5) miles of sewer within the town limits.

As noted during the 2016 year (and for the 2016 Annual Report), there were several changes that occurred to the Collections System and the Wastewater Treatment Plant which mainly revolved around four (4) main capital improvement projects during the year. The four (4) projects are as listed below:

Project #1: 2015 Wastewater Treatment Plant Upgrades –

Projected started in April 2017 and consists of the following:

- Construction of a 58' diameter clarifier
- New lab building
- Cured-In-Place lining of approximately 2,150' of 18" effluent line
- Existing headworks mechanical screen replacement
- Improve aeration control with new dissolved oxygen (DO) probes and SCADA/control programming of the blowers

- Improve the RAS flow rate control by installing a magnetic flow meter on the RAS discharge force main
- Replace scum pump for clarifier
- Replace Subnatant PS pumps

PROJECT	CWSRF-PF	CWSRF-0%	Local Match	Total Cost
2017 Wastewater Treatment Plant Improvements	\$483,000	\$483,000	\$19,320	\$985,320

CWSRF-PF (State Revolving Fund) - DENR - principal forgiveness
 CWSRF-0% (State Revolving Fund) - DENR - 0% interest for 20 yrs

Project #2: Candlewyck PS Rehab –

Install new pump bases, install new ductile iron discharge piping, adjust guide rails and pipe supports, and paint with a high-build epoxy coating. Completed with local money (\$20,815).

Project #3: 2017 Collection System Rehabilitation –

The project is currently in the design phase and is expected to out to bid by December 2017. In order to reduce 1/1 (inflow & infiltration) and eliminate the SSOs and subsequent NOV's, the following work will be completed:

1. Repair or rehabilitation of 191 smoke test defect sources (defective cleanouts, plug abandoned service lines, repair defective service lines, and disconnect storm to sewer connections).
2. Repair or rehabilitation of 144 manholes (including cementitious lining of 52 brick manholes (approx. 321 vertical feet), various manhole repairs (including 22-frame reseal to riser or cone, la-frame/cover replacements, 9-raise frame/cover), and installation of 78 manhole inserts/bowls).
3. Repair and rehabilitation of gravity main defects, including replacing 575 LF of 4" to 6" Orangeburg pipe, 15 spot repairs, 18,300 LF of 8" cured-in-place pipe (CIPP) and 3,000 LF of 12" CIPP. The project will include cleaning and CCTV inspections of 81,900 LF of 8" and 12" gravity sewers to verify the highest priority segments for the CIPP and spot repairs.
4. Replace 4,800 LF of 12" VCP with 12" PVC and 24 manholes (Jonesville Yadkin River Outfall).
5. Improve the Elkin Yadkin River 21" Outfall by raising the rims of 10 manholes and replacing the aerial segment (approximately 50 feet of concrete pipe).
6. Verify exact location of storm sewer cross-connection near MH 153 and repair sanitary sewer (approximately 100 LF).

PROJECT	WWSR-GRANT	WWSR-LOAN	Local Match	Total Cost
2017 Collection System Rehabilitation	\$1,984,125	\$661,375	\$42,989	\$2,688,489

Project #4: 2017 Wastewater Treatment Plant Improvements –

The project is currently in the design phase and is expected to out to bid by December 2017, or early 2018. This project will include the following:

1. Rehabilitate concrete structures & improve access to the digester mixers.
2. Rehabilitate the sludge drying beds.
3. Repair of approximately 100 feet of eroded embankment at the effluent line.
4. Replace the WAS pumps.

PROJECT	CWSRF-GRANT	WWSR-LOAN	Local Match	Total Cost
2017 Wastewater Treatment Plant Improvements	\$483,000	\$483,000	\$19,320	\$985,320

Additionally, YVSA submitted applications for the following:

2018 Collection System Rehabilitation Project –
 Rehabilitation of 15,840 LF of 8-inch gravity sewer and Forest Hill PS; replacement of 765 LF of 8-inch gravity sewer, and replacement of 2,050 LF of 4-inch with 8-inch gravity sewer.

2018 Pump Stations Rehabilitation Project –
 Rehabilitation of Fox Hall PS, PVH PS, and the Hampton Inn PS to include replacement of pumps, rails, piping, valves, and valve vault; replacement of Shore Street PS with 1,670 LF of 8-inch gravity sewer, Dutchman Creek PS with 2,200 LF of 8-inch gravity sewer, and 100 LF of 3-inch force main for the Osborne Street PS, and repairs of equipment at the Regional PS due to settling.

Asset Inventory and Assessment grant for High Priority Areas Collection System Assessment.

YADKIN VALLEY SEWER AUTHORITY
WASTEWATER TREATMENT FACILITY

ANNUAL PERFORMANCE REPORT

For the Calendar Year 2017

Prepared: January, 2018

2018 Annual Performance Report
for the
Yadkin Valley Sewer Authority
Wastewater Treatment Facility

I. General Information

Facility/System Name: Yadkin Valley Sewer Authority Wastewater Treatment Plant

Responsible Entity: Yadkin Valley Sewer Authority

Person in Charge/Contact: Ms. Nicole Johnston
Executive Director
500 NC Hwy 268 West
Elkin, NC 28621
(336) 835 -9819

Description of Collection System or Treatment Process:

The Yadkin Valley Sewer Authority operates a 1.8 MGD, design capacity, wastewater treatment plant. The facility treats a combination of domestic and commercial wastewaters. The unit processes in the liquid train include preliminary treatment, oxidation ditches, secondary clarification, chlorination, and dechlorination. Sludge stabilization is accomplished by an aerobic digester and sludge thickening/holding tank. Liquid stabilized sludge may be land applied in liquid form to permitted sites, and/or dewatered on sand drying beds and land applied.

II. Compliance Performance

The North Carolina Department of Environment and Natural Resources (NCDENR) regulates the Authority's effluent discharge under the National Pollutant Discharge Elimination System (NPDES). The NCDENR issued to the Authority a NPDES Permit that includes water quality limits and sampling and monitoring requirements. The NPDES Permit requires the Authority to test more than 11 different constituents in the treated water. The monitoring frequency for these constituents are set at various intervals such as continuous, daily, weekly, three times per week, and quarterly. During the reporting period, the Authority conducted 3,232 tests of the treated water before it was discharged to the creek. The WWTP achieved a Compliance Level of 100% with its NPDES Permit requirements. Following is a summary of the testing for the parameters that are assigned Water Quality Standards by the NPDES Permit. Please note the summary does not include parameters that only incorporate a monitoring requirement, nor does it include daily process control testing.

Constituent	Number of Test Required	Number of Test Conducted *
Flow	Continuous	Continuous
Biochemical Oxygen Demand (BOD)	208	210
Total Suspended Solids (TSS)	208	210
Ammonia	52	52
Fecal Coliform	52	105
Chlorine	156	161
Total Nitrogen	12	12
Total Phosphorus	12	12
Toxicity	4	5

In addition to the required testing, the Authority conducted over 1,300 in-house tests to ensure the proper operation of the wastewater treatment plant.

Following is a summary of permit violations, which occurred during the year:

There were no permit violations during the year.

Part III- Certification

I have personally examined and am familiar with the information submitted in this document and attachments. Based upon my inquiry of those individuals immediately responsible for obtaining the information reported herein, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Signed this 26th day of February, 2018.

Nicole Johnston
(Name) Nicole Johnston
Executive Director

Nicole Johnston
(Signature)

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PUBLIC NOTICE

February 26, 2018
For immediate publication:

PUBLIC NOTICE:

The Yadkin Valley Sewer Authority, in accordance with State Regulations, is hereby giving public notice that the Yadkin Valley Sewer Authority Wastewater Treatment Plant has completed its 2017 Annual Performance Report. The report also provides a summary of sanitary sewer overflows documented for the year for the Collection System. The report is available for public inspection at the YVSA office, located at 500 NC Hwy 268W, as well as at the Elkin, Jonesville, and Ronda Town Halls, and at the YVSA Wastewater Treatment Plant.

Publish in: *The Tribune*
March 7, 2018

EXHIBIT A

2017 Reportable Spills

DATE	INCIDENT	MH #	LOCATION	TOWN	GALLONS	CAUSE OF SSO	HIT WATER - Y/N	WATER SOURCE
2/1/2017	201700163	1010 & 1011A	East of West Main Street, Jonesville (along Yadkin River)	Jonesville	10,000	Grease / Debris in line	Y	Yadkin River
2/6/2017	201700180	1528	Blanket Lane	Elkin	120	Debris in line	Y	Yadkin River
2/13/2017	201700219	N/A	185 East Main Street	Elkin	250,000	Pipe Failure	Y	Dutchman Creek
4/23/2017	201700589	980 & 988	Regional Pump Station & Crater Park	Elkin	50,000	Severe Natural Condition	Y	Yadkin River
5/15/2017	201700864	551 & 553	Outfall in Jonesville beside Cobb Creek	Jonesville	230	Pipe Failure	Y	Cobb Creek
5/22/2017	201700908	980	Manhole behind Regional Pump Station	Elkin	37,500	Severe Natural Condition	Y	Yadkin River
5/22/2017	201700909	988	Manhole at Crater Park	Elkin	105,000	Severe Natural Condition	Y	Yadkin River
5/23/2017			Manhole located near Contact Chamber	Elkin	40,000	Excessive rainfall	Y	Dutchman Creek
5/26/2017	201700944	1177	Candlewyck Pump Station	Elkin	100	Other	Y	Yadkin River
5/29/2017	201700948	535 & 534	Between Manhole # 535 and 534 Winston Road	Jonesville	6,600	Severe Natural Condition	Y	Sandyberry Creek
6/30/2017	201701112	1167	Claremont Drive	Elkin	225	Debris in line	Y	Dutchman Creek
7/15/2017	201701183	1228	315 Nothwood Drive	Elkin	1,600	Debris in line	Y	Elkin Creek (River)
8/10/2017	201701270	1114 & 1115	West Brenhaven Drive	Elkin	120	Pipe Failure	Y	Elkin Creek (River)
8/22/2017	201701322		Osborne Street Pump Station	Jonesville	30	Pipe Failure	Y	Yadkin River
9/14/2017	201701418	823	Claremont Drive and Woodlawn Drive	Elkin	150	Grease / Debris in line	Y	Dutchman Creek

2017 Non-Reportable Spills

DATE	INCIDENT	MH #	LOCATION	TOWN	GALLONS	CAUSE OF SSO	HIT WATER - Y/N	WATER SOURCE
6/13/2017	2017-1	157	North Bridge Street	Elkin	60	Debris in line	N	N/A
10/15/2017	2017-2	482	Veneer Street	Elkin	20	Grease	N	N/A
11/2/2017	2017-3	1177	PGW Candlewyck Pump Station	Elkin	10	Other	N	N/A