THE UNIVERSITY OF TENNESSEE KNOXVILLE
FACILITIES SERVICES

September 17, 2015

Geoff Klein
Tennessee Department of Environment and Conservation
Knoxville Environmental Field Office
3711 Middlebrook Pike
Knoxville, TN 37921

Dear Mr. Klein,

On behalf of the University of Tennessee, I am pleased to submit the enclosed third annual report for the NPDES Permit issued January 16, 2013. Below is a summary of information and accomplishments for the University of Tennessee Stormwater Management Program for the 2015 Fiscal Year.

1.0 Executive Summary

This annual report documents The University of Tennessee's compliance with the Stormwater management program requirements as detailed in the Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) permit number TNS076121. This annual report contains program information and accomplishments from June 30, 2014 to June 30, 2015.

1.1 Program Highlights

Program highlights and milestones during the reporting period consist of the following:

- An Illicit Discharge Policy and associated Enforcement Response Plan were developed and implemented on January 5th 2015.
- A Runoff Reduction Policy was developed and implemented on January 5th. 2015. This policy applies to all new and/or redevelopment projects disturbing greater than or equal to 1 acre.
- A BMP manual was developed and titled University of Tennessee Best Management Practice Manual- A Stormwater planning and design manual for Stormwater management practices.
- A Public Information and Education (PIE) Plan was developed. We plan to continually update this as our Stormwater Management program evolves.
- A collection of Standard Operating Procedure for the Stormwater Management Program was developed.
- Conducted over 156 Stormwater Compliance Inspections on active construction projects.
- Finalization of the Stormwater Management Plan consisting of:
    - UT Best Management Practices Manual
    - Public Information and Education Plan

- Illicit Discharge Program and Policy
- Runoff Reduction Policy
- Stream Monitoring Plan
- Stormwater Management Standard Operating Procedures
- Enforcement Response Plan
- Outfall Monitoring and Dry Weather Screening Report
- Best Management Practices Inventory
- Spill Prevention Control and Countermeasures Plan

- The Stormwater Management Coordinator received TDEC Level 2 Certification and two other Facilities Services staff attended the training.

1.2 Program Modifications

Program modifications that occurred during the reporting period consist of the following:

- The University discontinued the use of coal to power our steam plant. New equipment has been installed and we will now power the plant with Natural Gas. The Stormwater Pollution Prevention Plan (SWPPP) for the steam plant is currently undergoing a modification to address these changes.

- The Universities Spill Prevention, Control & Countermeasures Plan adopted in August of 2009 is currently undergoing an update

1.3 Program Advising

The Stormwater Advisory Committee members were selected and an inaugural meeting was held. This Committee meets quarterly to review Stormwater Management recommendations to be presented to the Vice Chancellor for Finance and Administration. The charge of this committee is to serve as oversight for the development and implementation of the permitted Stormwater Management Program.

2.0 Municipal Separate Storm System Information

2.1 Population Served

Due to the seasonal nature of the University of Tennessee, the population densities vary considerably throughout the year. Special events, contractors, vendors, and normal traffic further contribute to our temporary populations. Based on recent enrollment records, the annual student population is over 27,000. The total University staff consists of over 9,600 full time and part time employees.

2.2 Service Area

The University maintains and operates only those portions of the storm sewer system located within the University property boundaries of Main Campus and the Institute of Agriculture Campus. The University of Tennessee properties specifically addressed in this permit cover an area of approximately 580 acres.

Remote University facilities such as properties south of the Tennessee River are primarily rural with less defined Stormwater conveyances. Stormwater runoff at these sites is managed in compliance with pertinent requirements for those locations. These sites are not included in the NPDES MS4 Stormwater Permit.

Many discharges from University outfalls include run-on contributions from the City of Knoxville storm sewer system, but the primary drainage at the outfalls is conveyed from the University.

2.3 MS4 Conveyance System

The storm sewer system for the University of Tennessee conveys water from approximately 1 square mile of University owned land into several watersheds including Second Creek, Third Creek, East Fork Third Creek, and the Tennessee River. Throughout campus, Stormwater runoff is collected in various BMP devices, curb inlets, area drains, and similar drainage structures that lead to the storm sewer system. The runoff is conveyed primarily through underground piping which eventually discharges into open stream channels before leaving University property.

2.4 Land Use Composition Estimates

The following are estimated percentages for land use activities within the University's jurisdictional area.

- Office and Institutional 15%
- Parking 19%
- Roads/Sidewalks/Current Construction 30%
- Athletics 7%
- Green Space 29%

2.5 Receiving Streams

The University of Tennessee contributes runoff into Second Creek, Third Creek, East Fork Third Creek and the Tennessee River/Fort Loudoun Lake. Table 1 below summarizes information provided by the Tennessee Department of Environment and Conservation on the various receiving waters of the State.

Table 1: Receiving Stream Summary

Water Body ID	Water Body Name	Segment/Length	303d Cause	TMDL
TN06010201 087-1000	Second Creek	From Cumberland Avenue to the Tennessee River/ 0.3 Miles	Other Anthropogenic Habitat Alterations, Nitrate, Nitrite, Loss of Biological integrity due to siltation, Escherichia coli	Anthropogenic Substrate Alterations, Siltation and E. Coli; January 27, 2006
TN06010201 067-0100	East Fork Third Creek	From Sutherland Avenue extending 0.12 miles to the South / 0.12 miles	Loss of biological integrity due to siltation, Other Anthropogenic Habitat Alterations, Escherichia coli	
TN06010201 067-1000	Third Creek	From Cumberland Avenue to the Tennessee River/ 1.08 miles	Nitrates, Loss of biological integrity due to siltation, Other Anthropogenic Habitat Alterations, Escherichia coli	Anthropogenic Substrate Alterations, Siltation and E. Coli; January 27, 2006
TN06010201	Fort Loudoun Reservoir	From 0.06 miles upstream of Second Creek to 0.16 miles downstream of Alcoa Highway/ 2.25 miles	Mercury, PCBs	PCB's March 3, 2010

3.0 Public Education and Outreach

An integral part of the Stormwater Management program involves the education of the campus community and others about water resources, how we affect water quality, and what we can do to minimize pollution and lessen our impact on the environment. To facilitate this, the University has developed a Public Information and Education (PIE) plan that outlines target pollutants, target groups, programs/events and measurable goals to provide information to the campus community. The campus community (excluding athletic events) includes over 37,000 students, faculty, staff, contractors, vendors and visitors. The Public Education and Outreach program metrics are summarized in Table 2 below.

Table 2: Public Education and Outreach summary

Fiscal Year 2015 Metrics	Quantity	Target Audience	
		Campus Population	Faculty, Staff, Contracted Employees
Stormwater Awareness Info Graphics posted	150	X	X
Stormdrain Markers Installed	348	X	X
Stormwater Awareness Training sessions	3		X
Stormwater Awareness Stickers distributed	100	X	X
Stormwater Webpage	1	X	X
Public Meetings held	1	X	X
Earth Day events	1	X	X
Stormwater Awareness Presentations	1		X
Stormwater Display in the University Center	1	X	X

4.0 Public Participation and Involvement

4.1 Public Participation Program

The University provides opportunities for stakeholders and the public to participate in the Stormwater Management Program development and implantation through:

- The Stormwater Advisory Committee, which is a group comprised of University stakeholders who oversee the development and implementation of the permitted Stormwater Management Program.
- The Water Quality Forum, which is comprised of local MS4s that work towards a common goal of increasing water quality in our shared watershed.
- The Tennessee Stormwater Association (TNSA), which is comprised of a statewide MS4s, Consultants and State Regulators that work to help each other build consistent Stormwater management programs and ultimately increase water quality.
- The Environmental Compliance Team which is comprised of various University department representatives who ensure the campus stays within compliance of all environmental programs.
- River Rescue, which is an annual event that the University helps facilitate to clean up our local waterways. We sponsor two locations on campus, had 36 volunteers and were able to collect two dump truck loads of trash that were added to the Living Lands and Waters Tennessee River Cleanup barge for disposal.

- The Adopt a Stream program, which provides an opportunity for our faculty, staff and students to take ownership in stream segments that run through campus. These groups focus on invasive vegetation removal and trash pickup.
- Student project assistance and advising, which provides information and project consulting to students working on projects related to Stormwater Management. These student projects range anywhere from Engineering, to Landscape Architecture to Advertising.

Table 3: Public Participation and Involvement Program summary

Fiscal Year 2015 Metrics	Quantity
Stormwater Advisory Committee Meetings	1
Water Quality Forum Meetings	3
TNSA Meetings	4
Environmental Compliance Team Meetings	4
River Rescue Sites	2
Adopt a Stream Sites	1
Student Projects	3

4.2 Public Reporting Program

The University provides an opportunity for the public to participate in the Stormwater Management Program development and implementation through reporting of environmental concerns and illicit discharges. Information on reporting Stormwater related problems have been publicized on the Stormwater awareness info graphics, Stormwater awareness stickers, the Stormwater display in the University Center and on the Stormwater webpage, which has a feature that allows users to submit an electronic form that is sent to the Stormwater Management Coordinator.

Table 4: Public Reporting Program summary

Fiscal Year 2015 Metrics	Quantity
Reported Environmental Concerns	5
Reported Illicit Discharges	3

5.0 Illicit Discharge Detection and Elimination

5.1 Storm Sewer System Inventory

A consultant hired by the university is in the process of mapping all of the underground utilities for the UTK campus. This includes all storm water infrastructure and outfalls. This work began in the summer of 2012 and is approximately 95% complete. We anticipate that they will be complete by Fall of 2015. This mapping will be updated continuously as our infrastructure changes.

5.2 Illicit Discharge Program

A standard operating procedure (SOP) for illicit discharge detection and elimination has been developed and is in place. Illicit discharges are identified via submittal of the electronic form located on the website, or via telephone calls of concern placed by the public. There is currently a substantial amount of construction on the Main Campus, which increases the likelihood that construction related illicit discharges may occur. An Illicit Discharge Policy prohibiting this type of activity, and an associated Enforcement Response Plan were developed and implemented on January 5th 2015.

In addition to the SOP and Policy an Outfall Inventory and Dry Weather Screening is conducted on a simi-annual basis in our 4 receiving streams. A standardized Outfall Inventory data sheet is utilized for collecting all necessary information in the field and documenting illicit discharge inspections at outfall locations. 49 Outfalls were identified and investigated as part of this process and an Outfall inventory and dry weather screening report has been prepared.

Table 5: Illicit Discharge Program summary

Fiscal Year 2015 Metrics	Quantity
Electronic forms received	2
Phone calls received	3
Illicit Discharges detected	3
Illicit Discharges resolved	2
Outfalls Inspected	49

6.0 Construction Site Runoff Control

The University of Tennessee is a state agency and is subject to the State erosion and sediment control regulations as specified in the State of Tennessee general NPDES permit for discharges of Stormwater associated with construction activities. For projects disturbing greater than or equal to 1.0 acres, a Stormwater Pollution Prevention Plan (SWPPP) and associated Erosion and Sediment Control Plan are submitted to the University Stormwater Management Coordinator for review and then submitted to TDEC for review and issuance of a Notice of Coverage prior to commencement of land disturbing activities. For projects disturbing 0.1 to 0.99 acres, the erosion and sediment control plans are submitted to the University Stormwater Management Coordinator for review and approval prior to commencement of land disturbing activities as outlined in the Stormwater Management Standard Operating Procedures.

All projects at the University that have a land disturbance component are required to follow the regulations outlined in the NPDES permit and are subject to enforcement procedures outlined in the Enforcement Response Plan. Unlike other permitted MS4s, the University is typically the owner, developer, and project manager for on-campus projects. Construction requirements and penalties are outlined in the project contract, and typical enforcement is tied to payment and final project acceptance. All approved projects on campus are inspected by the University Stormwater

Management staff on at least a monthly basis. All inspections are performed using the TDEC Erosion and Sediment Control Handbook as guidance.

The Construction Site Runoff Control Program is performance based and is quantifiable through the number of plan reviews/approvals, inspections performed, complaints received and enforcement actions issued. These measureable goals are summarized in Table 6 below.

Table 6: Construction Site Runoff Control Program summary

Fiscal Year 2015 Metrics	Quantity
TDEC NPDES Permits	12
University Plan Review/Approval	15
Projects Receiving NOVs	1
University Erosion and Sediment Control Inspections	156
Publicly Reported Construction Site Issues	6

7.0 Post Construction Runoff Control

The University has developed and implemented a Runoff Reduction policy. This policy provides guidelines to ensure site design standards for all new and redevelopment projects disturbing greater than 1 acre, require management measures that are designed, built and maintained to infiltrate, evapotranspire, harvest and/or reuse at minimum the first inch of every rainfall event preceded by 72 hours of no measurable precipitation. In addition to this policy the University's post construction Stormwater control program includes post construction runoff inspections, a Best Management Practice Inventory and Maintenance Program, and a Best Management Practices Manual- A Stormwater planning and design manual for Stormwater management practices.

8.0 Pollution Prevention and Good Housekeeping

The University's pollution prevention and good housekeeping operations span a collection of multiple individual programs;

1. Stream Monitoring Program
2. NPDES-Regulated Industrial Facilities
3. Stormwater Collection System Operations and Maintenance
4. Permeant Stormwater BMP Operations
5. Landscape Services Operations and Maintenance
6. Snow Removal and Control
7. Recycling and Solid Waste Management
8. Hazardous Waste Management
9. Vehicle Cleaning

These nine programs are described in more detail below.

8.1 Stream Monitoring Program

Stream monitoring of impaired water bodies is required as a component of the MS4 permit to assess the effectiveness of the BMPs in achieving contaminant load allocations. Both analytical monitoring and non-analytical monitoring are required in stream segments listed as impaired. A sampling plan has been developed to satisfy the requirements of the MS4 permit for all 303d listed streams that have the pollutant source identified as discharges from MS4 areas. Implementation of this plan will be used to evaluate the effectiveness of the University's Stormwater Management Program. At minimum these stream segments will be sampled on a 5 year rotation as required. Additional sampling may be conducted as needed. A summary of samples to be collected as part of the stream monitoring program are summarized in table 7 below.

Table 7: Stream monitoring summary

Stream Segment	Samples to be conducted				
	Macro Invertebrate Stream Survey	E. Coli	Total Suspended Solids	Nitrate / Nitrite	Visual Habitat Assessment
East Fork Third Creek		2	2		2
Third Creek		2	2	2	2
Second Creek	2	2	2	2	2
Total Samples to be Collected	2	6	6	4	6

Due to the fact that we are still currently in our first 5 year cycle and the new MS4 permit will be issued in the coming months, we will evaluate our sampling plan according to the new permit language prior to conducting the sampling event.

8.2 NPDES regulated Industrial Facilities

The University's Steam Plant located on Lake Loudon Boulevard maintains a Tennessee Multi Sector General Permit (TMSP) for Stormwater discharges associated with industrial activity. This Facility is permitted as a steam electric power generating operation. Historically this facility has been fuelled by combustion of coal. The use of coal as a fuel source was discontinued in March 2015, and Natural Gas will be used going forward.

Table 8: NPDES Regulated Industrial Facilities summary

Fiscal Year 2015 Metrics	Quantity
NPDES Stormwater Regulated Industrial Facilities	1
Compliance Audits Performed	1
Audited Facility Not in Compliance	0

8.3 Stormwater Collection System Operations and Maintenance

The Stormwater collection system operations and maintenance is performed both by our in house utilities division and outsourced through task managed contracts. The operations and maintenance work performed consists of storm drain cleaning, removal of blockage, cleaning of catch basins and area drains, the inspection and pump out of proprietary water quality treatment devices. Collected material removed from the Stormwater collection system is hauled off site and disposed of properly.

Table 9: MS4 Operations and Maintenance summary

Fiscal year 2015 Metrics	Quantity
Catch Basins/ Inlets Cleaned	20
Stormwater Collection System Repair Work Orders	2
Water quality units inspected	14
Water quality units pumped out	3

8.4 Permanent Stormwater BMP Operations

The University owns and operates various permanent Stormwater Best Management Practices on Campus. See Table 10 below for a breakdown of BMP type.

Table 10: Stormwater BMP summary

Type of BMP	Total Devices	Quantity	Unit
Stormwater Harvesting and Reuse	2	45,000	Gallons
Water Quality Unit	16	16	Units
Rain Garden	1	380	Square Feet
Permeable Pavement System	2	27,119	Square Feet
Dry Detention	3	3	Locations
Green Roof	2	11,311	Square Feet
Silva Cell Bioretention	38	38	Tree Locations
Grassed Swale	1	895	Linear Feet
Vegetated Filter Strip	4	7,670	Linear Feet

Routine monthly BMP inspections, rainfall event triggered inspections (following events exceeding 0.5 inches of rainfall in a 24 hour period), and maintenance are performed under the supervision of staff qualified in Stormwater inspection, operations and maintenances. Standardized maintenance tasks are outlined in the UT BMP Manual and are specific to each type of applicable BMP.

A Stormwater management master plan was created for UTK Facilities Services by the Department of Civil and Environmental Engineering. This document is currently undergoing a revision as our Stormwater Management program is evolving.

The University made application for and were awarded the TNSA Green Infrastructure Grant. The title of our grant application was "Making Orange Green: Towards a Water-Smart Campus at UT". As part of this grant we will install an elevated boardwalk and wetland garden at the University of Tennessee Gardens. In addition, we will install four rain gardens across campus.

The University made application for and received the U.S. Forest Service National Urban and Community Forestry Challenge Cost-Share Grant Program. The title of our grant application was "Stormwater Goes Green? Investigating the Benefit and Health of Urban Trees in Green Infrastructure Installations". We are currently looking at two locations on campus to install Silva Cells as part of this program.

The University is currently working with design consultants to develop a system to capture and reuse rainwater for our west campus housing redevelopment project that is currently underway.

8.5 Landscape Services Operations and Maintenance

Landscape Services is responsible for the maintenance and improvement of the campus grounds on the Main and Agricultural campuses. This includes mowing, raking, mulching, fertilizing, weeding, edging, litter pick-up, street and parking lot cleaning, grading, excavating, trenching, demolition, hauling, asphalt preparation, landscape design, planting, transplanting, pruning, tree removal and greenhouse operation.

Two vacuum trailers are dedicated to perform leaf collection during the 3 month long leaf season. Collected leaves are transported to our compost facility to be incorporated into the campus composting operation

Table 11: Landscape Services Operations and Maintenance summary

Fiscal year 2015 Metrics	Quantity
Landscaped Area Maintained (acres)	165 (estimated)
Leaves /Woodchips / Brush Composted (Tons)	893 tons

8.6 Snow and Ice Removal and Control

Landscape Services provides ice and snow removal services for the Main and Agricultural campuses. These services are provided on a priority basis, with safety of the greatest number of individuals being used to determine the order of service. The universities salt and de-icing supply is stored in an enclosed area with no exposure to Stormwater contact

Table 12: Snow and Ice Removal and Control summary

Fiscal year 2015 Metrics	Quantity
Salt Applied	88 tons
Alternative De-icing Product Applied	22 tons

8.7 Recycling and Solid Waste Management

The University maintains a comprehensive recycling and solid waste reduction program including contract dumpsters with plugs and lids, 123 bottle/can recycling stations, 69 paper recycling stations, 80 cardboard recycling stations, 29 compost stations, and one public recycling drop off location. All waste collection areas are picked up 1-5 times per week depending on location and need.

Table 13: Recycling and Solid Waste Management Program summary

Fiscal year 2015 Metrics	Quantity
Compost/Food	249 tons
Green Waste	893 tons
Construction and Demolition (non-landfill/recycled)	225 tons
Scrap Metal	190 tons
Office Paper (mixed)	312 tons
News Print	3 tons
Cardboard	391 tons
Plastic (mixed)	226 tons
Paper Shredding	110 tons
Textiles (mattress, carpet, clothing donations)	31 tons
Pallets	129 tons
Electronics	22 tons
Batteries	3 tons
Used Motor Oil	4 tons
Tires	2 tons
Cooking Oil	15 tons
Printer Cartridges	3 tons
Light bulbs/Ballasts	17 tons
Cinder Blocks	2 tons
Scrap Wood	2 tons
Landfill	6,551 tons
Dumpsters Repaired	3
Dumpsters Replaced	3
Service Requests	468

8.8 Hazardous Waste Management

The University's Environmental Health and Safety department provides a collection service for all Hazardous and Acutely Hazardous Waste substances. This service is provided to the University labs, shops and storage facilities that generate these types of waste as well as other types of waste materials that require special disposal or handling procedures such as mercury lamps. Incident response agreements are continuously maintained with the City of Knoxville Fire Department.

8.9 Vehicle Cleaning

The Motor Pool has an engineered wash bay facility on campus for washing vehicles. This facility discharges to the sanitary sewer system. There is no vehicle washing that could cause impacts to the storm sewer system permitted outside of the facility constructed for this purpose.

Please see the attached Small MS4 Annual Report Form CN-1291.

Please call me at (865) 805-9729 if you have any questions concerning this report.

Sincerely,

Garrett Ferry, CPESC
Stormwater Management Coordinator
Facilities Services Department
University of Tennessee

Tennessee Department of Environment and Conservation
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243
1-888-891-8332 (TDEC)

Municipal Separate Storm Sewer System (MS4) Annual Report

1. MS4 Information

The University of Tennessee, Knoxville	TNS076121
Name of MS4	MS4 Permit Number
Mr. Garrett Ferry	gferry@utk.edu
Name of Contact Person	Email Address
865-805-9729	
Telephone (including area code)	
2233 Volunteer Blvd.	
Mailing Address	

Knoxville	TN	37996
City	State	ZIP code

What is the current population of your MS4? 36,280 (2014 data)

What is the reporting period for this annual report? From June 30, 2014 to June 30, 2015

2. Water Quality Priorities (Section 3.1)

A. Does your MS4 discharge into waters listed as impaired on TN's most current 303(d) list and/or according to the on-line GIS mapping tool? ☒ Yes ☐ No

B. If yes, please attach a list all impaired waters within your jurisdictional area.

- TN06010201 067-1000 Third Creek
- TN06010201 067-1000 East Fork Third Creek
- TN06010201 097-1000 Second Creek
- TN06010201 020-2000 Ft. Loudon Reservoir

C. Does your MS4's jurisdictional area contain any water bodies where a TMDL has been approved for parameters other than pathogens, siltation and habitat alterations? If yes, please attach a list.

- TN06010201 020-2000 Ft. Loudon Reservoir TMDL for PCB's March 3, 2010
- TN06010201 097-1000 Second Creek TMDL for Anthropogenic Substrate Alterations, Siltation and E. Coli; January 27, 2006
- TN06010201 067-1000 Third Creek TMDL for Anthropogenic Substrate Alterations, Siltation and E. Coli; January 27, 2006

D. Does your MS4 discharge to any Exceptional TN Waters (ETWs) or Outstanding National Resource Waters (ONRWs)? If yes, please attach a list. ☐ Yes ☒ No

E. Are you implementing additional specific provisions to ensure the continued integrity of ETWs or ONRWS located within your jurisdiction? ☐ Yes ☒ No

3. Protection of State or Federally Listed Species (Section 3.2.1 General Permit for Phase II MS4s)

A. Are there any state or federally listed species within the MS4's jurisdiction? ☒ Yes ☐ No

B. Are any of the MS4 discharges or discharge-related activities likely to jeopardize any state or federally listed species? ☐ Yes ☒ No

C. Please attach any authorizations or determinations by U.S. Fish & Wildlife Service on the effect of the MS4 discharges on state or federally listed species. See attached.

4. Public Education and Public Participation (Section 4.2.1 and 4.2.2)

A. Have you developed a Public Information and Education plan (PIE)? ☒ Yes ☐ No

B. Is your public education program targeting specific pollutants and sources of those pollutants, such as Hot Spots? ☒ Yes ☐ No

C. If yes, what are the specific causes, sources and/or pollutants addressed by your public education program?

Any and all pollutants that have the potential to impact Stormwater quality.

D. Note specific successful outcome(s) (NOT tasks, events, publications) fully or partially attributable to your public education program during this reporting period. Removed 2 dump truck loads of trash from 2nd Creek and 3rd Creek during the annual Rescue Event. Removed 3 truckloads of invasive exotic plant species from the bank of 3rd Creek during an Adopt a Stream Event. A market program and plan for advertising the Adopt a Stream Program was developed by Marketing students with the help of the Stormwater Management program. A hypothetical Stormwater capture and reuse design was developed by 1st year Civil Engineering students with the assistance of the Stormwater Management program. Trained 22 Steam Plant employees on the importance of Stormwater management and how to prevent Stormwater pollution. Trained 26 Facilities service staff responsible for the operations and maintenance of the Stormwater Collection System.

E. Do you have an advisory committee or other body comprised of the public and other stakeholders that provides regular input on your stormwater program? ☒ Yes ☐ No

F. How do you facilitate, advertise, and publicize public involvement and participation opportunities? The Daily Beacon (University Newspaper), Tennessee Today, Posters, Campus Calendar

G. Do you have a webpage dedicated to your stormwater program? ☒ Yes ☐ No

If so, what is the link/URL: Stormwater.utk.edu

H. Are you tracking and maintaining records of public education, outreach, involvement and participation activities? Please attach a summary of these activities. ☒ Yes ☐ No

5. Illicit Discharge Detection and Elimination (Section 4.2.3)

A. Have you completed a map of all outfalls and receiving waters of your storm sewer system? ☐ Yes ☒ No

B. Have you completed a map of all storm drain pipes of storm sewer system? ☐Yes ☒ No

C. How many outfalls have you identified in your system? 49

D. Have any of these outfalls been screened for dry weather discharges? 49

F. What is your frequency for screening outfalls for illicit discharges? Semi-Annually

G. Do you have an ordinance that effectively prohibits illicit discharges? ☒ Yes ☐ No

H. During this reporting period, how many illicit discharges/illegal connections have you discovered (or been reported to you)? 3

I. Of those illicit discharges/illegal connections that have been discovered or reported, how many have been eliminated? 2

6. Construction Site Stormwater Runoff (Section 4.2.4)

A. Do you have an ordinance or adopted policies stipulating:

Erosion and sediment control requirements?	☒ Yes	☐ No
Other construction waste control requirements?	☒ Yes	☐ No
Requirement to submit construction plans for review?	☒ Yes	☐ No
MS4 enforcement authority?	☒ Yes	☐ No

B. How many active construction sites disturbing at least one acre were there in your jurisdiction this reporting period? 12

C. How many of these active sites did you inspect this reporting period? 12

D. On average, how many times each, or with what frequency, were these sites inspected (e.g., weekly, monthly, etc.)? Monthly at Minimum

E. Do you prioritize certain construction sites for more frequent inspections? ☒ Yes ☐ No

If Yes, based on what criteria? Size, Contractor Performance

7. Permanent Stormwater Controls (Section 4.2.5)

A. Do you have an ordinance or other mechanism to require:

Site plan reviews of all new and re-development projects?	☒ Yes	☐ No
Maintenance of stormwater management controls?	☒ Yes	☐ No
Retrofitting of existing BMPs with green infrastructure BMPs?	☐ Yes	☒ No

B What is the threshold for new/redevelopment stormwater plan review? (e.g., all projects, projects disturbing greater than one acre, etc.) All projects

C. Have you implemented and enforced performance standards for permanent stormwater controls? ☒ Yes ☐ No

D. Do these performance standards go beyond the requirements found in Section 4.2.5.2 and require that pre-development hydrology be met for:

Flow volumes	☒ Yes	☐ No
Peak discharge rates	☒ Yes	☐ No
Discharge frequency	☐ Yes	☒ No
Flow duration	☐ Yes	☒ No

E. Please provide the URL/reference where all permanent stormwater management standards can be found.

Stormwater.utk.edu

F. How many development and redevelopment project plans were reviewed for this reporting period? 15

G. How many development and redevelopment project plans were approved? 15

H. How many permanent stormwater management practices/facilities were inspected? 109

I. How many were found to have inadequate maintenance? 15

J. Of those, how many were notified and remedied within 30 days? (If window is different than 30 days, please specify) Remedies were initiated within 30 days on 4 of the permanent Stormwater management practices. Maintenance on the other 11 were not performed during this reporting period due to scheduling conflicts with the maintenance contractor.

K. How many enforcement actions were taken that address inadequate maintenance? Self-performed the initiation of this maintenance.

L. Do you use an electronic tool (e.g., GIS, database, spreadsheet) to track post-construction BMPs, inspections and maintenance? ☒ Yes ☐ No

M. Do all municipal departments and/or staff (as relevant) have access to this tracking system? ☐ Yes ☒ No

N. Has the MS4 developed a program to allow for incentive standards for redeveloped sites? ☒ Yes ☐ No

O. How many maintenance agreements has the MS4 approved during the reporting period? 1

8. Codes and Ordinances Review and Update (Section 4.2.5.3)

A. Is a completed copy of the EPA Water Quality Scorecard submitted with this report? ☒ Yes ☐ No

B. Include status of implementation of code, ordinance and/or policy revisions associated with permanent Stormwater management. University of Tennessee Knoxville Illicit Discharge Policy –Implemented, University of Tennessee Runoff Reduction Policy-Implemented.

9. Stormwater Management for Municipal Operations (Section 4.2.6)

A. Have stormwater pollution prevention plans (or an equivalent plan) been developed for:

All parks, ball fields and other recreational facilities	☐ Yes	☒ No
All municipal turf grass/landscape management activities	☐ Yes	☒ No
All municipal vehicle fueling, operation and maintenance activities	☒ Yes	☐ No
All municipal maintenance yards	☒ Yes	☐ No
All municipal waste handling and disposal areas	☐ Yes	☒ No

B. Are stormwater inspections conducted at these facilities? ☒ Yes ☐ No

1. If Yes, at what frequency are inspections conducted? Monthly/Quarterly

C. Have standard operating procedures or BMPs been developed for all MS4 field activities? (e.g., road repairs, catch basin cleaning, landscape management, etc.) ☒ Yes ☐ No

D. Do you have a prioritization system for storm sewer system and permanent BMP inspections? ☐ Yes ☒ No

E. On average, how frequently are catch basins and other inline treatment systems inspected? Catch Basins- Monthly, Treatment Systems- Semi-Annually

F. On average, how frequently are catch basins and other inline treatment systems cleaned out/maintained? As Needed

G. Do municipal employees in all relevant positions and departments receive comprehensive training on stormwater management? ☒ Yes ☐ No

H. If yes, do you also provide regular updates and refreshers? ☒ Yes ☐ No

If so, how frequently and/or under what circumstances? Annually in applicable areas such as the Steam Plant, due to the separate TMSP general permit for industrial activities. Otherwise on an as needed basis.

10. Stormwater Management Program Update (Section 4.4)

A. Describe any changes to the MS4 program during the reporting period including but not limited to:

Changes adding (but not subtracting or replacing) components, controls or other requirements (Section 4.4.2.a). Installed a 22,000 gallon cistern at the new Student Union for Stormwater capture and reuse. Developed a BMP manual, Developed a Public Information and Education Plan. Developed Standard Operating Procedures for the Stormwater Management Program. Finalized the Stormwater Management Plan. Developed and implemented the Enforcement Response Plan. Discontinued the use of coal at the steam plant.

Changes to replace an ineffective or unfeasible BMP (Section 4.4.2.b). N/A

Information (e.g. additional acreage, outfalls, BMPs) on program area expansion based on annexation or newly urbanized areas. N/A

Changes to the program as required by the division (Section 4.4.3). N/A

11. Evaluating/Measuring Progress

A. What indicators do you use to evaluate the overall effectiveness of your Stormwater Management Program, how long have you been tracking them, and at what frequency? Note that these are not measurable goals for individual BMPs or tasks, but large-scale or long-term metrics for the overall program, such as in-stream macroinvertebrate community indices, measures of effective impervious cover in the watershed, indicators of in-stream hydrologic stability, etc.

Indicator	Began Tracking (year)	Frequency	Number of Locations
Example: E. coli	*2003*	*Weekly April–September*	*20*
Sediment	2014	Quarterly (plus storm events of various size)	1
Bacteria	2014	Quarterly (plus storm events of various size)	1
Metals	2014	Quarterly (plus storm events of various size)	1
Nutrients	2014	Quarterly (plus storm events of various size)	1

B. Provide a summary of data (e.g., water quality information, performance data, modeling) collected in order to evaluate the performance of permanent stormwater controls installed throughout the system. This evaluation may include a comparison of current and past permanent stormwater control practices.

The University has installed an ISCO brand Signature flow meter in Second Creek, which is equipped with an area velocity meter and is utilized to activate an ISCO Avalanche refrigerated automatic sampler. Our students surveyed the cross section where we are monitoring to convert depth and velocity readings from the area velocity meter into flow readings.

The University is now collecting base flow samples at least once quarterly over our year of sampling (through grab samples), and additionally are targeting storm events. The goal is to characterize pollutant changes during the course of storm events in the watershed and also to get informational data on how and why concentrations change from storm to storm. Samples are collected after each storm event and tested for sediment, bacteria, metals, and some nutrient species. An ongoing program is under development to quantify various organic pollutants in the stream water as well. A future goal is to have this data available in real time on line via the Stormwater website

12. ENFORCEMENT (SECTION 4.5)

A. Identify which of the following types of enforcement actions you used during the reporting period, indicate the number of actions, the minimum measure (e.g., construction, illicit discharge, permanent stormwater control) or note those for which you do not have authority:

Action	Construction	Permanent Stormwater Controls	Illicit Discharge	Authority?	
Notice of violation	#1	#N/A	#N/A	☒ Yes	☐ No
Administrative fines	#N/A	#N/A	#N/A	☐ Yes	☒ No
Stop Work Orders	#N/A	#N/A	#N/A	☐ Yes	☒ No
Civil penalties	#N/A	#N/A	#N/A	☐ Yes	☒ No
Criminal actions	#N/A	#N/A	#N/A	☐ Yes	☒ No
Administrative orders	#N/A	#N/A	#N/A	☐ Yes	☒ No
Other _____	#_____	#_____	#_____		

B. Do you use an electronic tool (e.g., GIS, data base, spreadsheet) to track the locations, inspection results, and enforcement actions in your jurisdiction? ☐ Yes ☒ No

C. What are the 3 most common types of violations documented during this reporting period? Sediment leaving the construction site.

13. PROGRAM RESOURCES (OPTIONAL)

A. What was your annual expenditure to implement the requirements of your MS4 NPDES permit and SWMP this past reporting period? $29,091

B. What is next year's budget for implementing the requirements of your MS4 NPDES permit and SWMP? $42,900

C. Do you have an independent financing mechanism for your stormwater program? ☐ Yes ☒ No

D. If so, what is it/are they (e.g., stormwater fees), and what is the annual revenue derived from this mechanism?

Source: Amount $

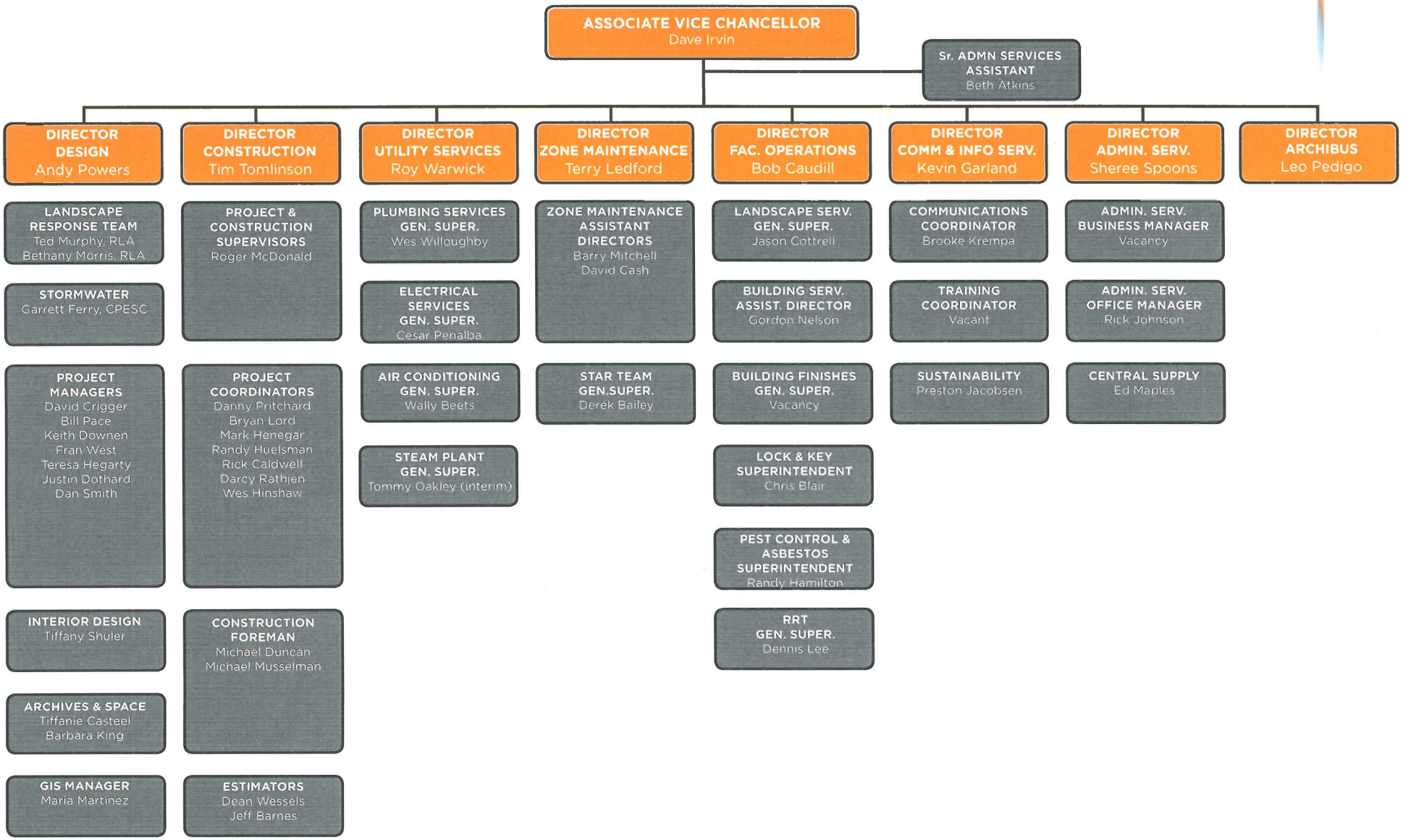
Source: Amount $

E. How many full time employees does your municipality devote to the stormwater program (specifically for implementing the stormwater program vs. municipal employees with other primary responsibilities that dovetail with stormwater issues)? 1

F. Do you share program implementation responsibilities with any other entities? ☐ Yes ☒ No

Entity	Activity/Task/Responsibility	Your Oversight/Accountability Mechanism

G. Please attach a copy of your Organizational Chart


ASSOCIATE VICE CHANCELLOR
Dave Irvin
Sr. ADMN SERVICES ASSISTANT
Beth Atkins
DIRECTOR DESIGN
Andy Powers
LANDSCAPE RESPONSE TEAM
Ted Murphy, RLA
Bethany Morris, RLA
STORMWATER
Garrett Ferry, CPESC
PROJECT MANAGERS
David Crigger
Bill Pace
Keith Downen
Fran West
Teresa Hegarty
Justin Dothard
Dan Smith
INTERIOR DESIGN
Tiffany Shuler
ARCHIVES & SPACE
Tiffanie Casteel
Barbara King
GIS MANAGER
Maria Martinez
DIRECTOR CONSTRUCTION
Tim Tomlinson
PROJECT & CONSTRUCTION SUPERVISORS
Roger McDonald
PROJECT COORDINATORS
Danny Pritchard
Bryan Lord
Mark Henegar
Randy Huelsman
Rick Caldwell
Darcy Rathjen
Wes Hinshaw
CONSTRUCTION FOREMAN
Michael Duncan
Michael Musselman
ESTIMATORS
Dean Wessels
Jeff Barnes
DIRECTOR UTILITY SERVICES
Roy Warwick
PLUMBING SERVICES GEN. SUPER.
Wes Willoughby
ELECTRICAL SERVICES GEN. SUPER.
Cesar Penalba
AIR CONDITIONING GEN. SUPER.
Wally Beets
STEAM PLANT GEN. SUPER.
Tommy Oakley (interim)
DIRECTOR ZONE MAINTENANCE
Terry Ledford
ZONE MAINTENANCE ASSISTANT DIRECTORS
Barry Mitchell
David Cash
STAR TEAM GEN.SUPER.
Derek Bailey
DIRECTOR FAC. OPERATIONS
Bob Caudill
LANDSCAPE SERV. GEN. SUPER.
Jason Cottrell
BUILDING SERV. ASSIST. DIRECTOR
Gordon Nelson
BUILDING FINISHES GEN. SUPER.
Vacancy
LOCK & KEY SUPERINTENDENT
Chris Blair
PEST CONTROL & ASBESTOS SUPERINTENDENT
Randy Hamilton
RRT GEN. SUPER.
Dennis Lee
DIRECTOR COMM & INFO SERV.
Kevin Garland
COMMUNICATIONS COORDINATOR
Brooke Krempa
TRAINING COORDINATOR
Vacant
SUSTAINABILITY
Preston Jacobsen
DIRECTOR ADMIN. SERV.
Sheree Spoons
ADMIN. SERV. BUSINESS MANAGER
Vacancy
ADMIN. SERV. OFFICE MANAGER
Rick Johnson
CENTRAL SUPPLY
Ed Maples
DIRECTOR ARCHIBUS
Leo Pedigo

14. CERTIFICATION

This report must be signed by a ranking elected official or by a duly authorized representative of that person. See signatory requirements in sub-part 6.7.2 of the permit.

"I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury."

Dave Irvin
Assoc. Vice Chancellor
Printed Name and Title

Signature

9/18/15
Date

Annual reports must be submitted in accordance with the requirements of Section 5.4. (Reporting) of the permit. Annual reports must be submitted to the appropriate Environmental Field Office (EFO) by September 30 of each calendar year, as shown in the table below:

EFO	Street Address	City	Zip Code	Telephone
Chattanooga	540 McCallie Avenue STE 550	Chattanooga	37402	(423) 634-5745
Columbia	1421 Hampshire Pike	Columbia	38401	(931) 380-3371
Cookeville	1221 South Willow Ave.	Cookeville	38506	(931) 432-4015
Jackson	1625 Hollywood Drive	Jackson	38305	(731) 512-1300
Johnson City	2305 Silverdale Road	Johnson City	37601	(423) 854-5400
Knoxville	3711 Middlebrook Pike	Knoxville	37921	(865) 594-6035
Memphis	8383 Wolf Lake Drive	Bartlett	38133	(901) 371-3000
Nashville	711 R S Gass Boulevard	Nashville	37216	(615) 687-7000

Mr. Ferry -

Thank you for your e-mail dated July 24, 2015, regarding compliance with the Tennessee Department of Environment and Conservation (TDEC) Notice of Coverage annual reporting requirements for the University of Tennessee's MS4 permit (TNS076121) and stormwater management program in Knox County, Tennessee. U.S. Fish and Wildlife Service (Service) personnel have reviewed your request for technical assistance and offer the following comments.

Review of our endangered species database indicates that no federally listed or proposed endangered or threatened species occur within the jurisdictional boundaries of the University of Tennessee's stormwater management program. In view of this, we believe that adverse effects to federally listed species from activities carried out under that program are not anticipated.

Thank you for the opportunity to comment. If you have any questions, please contact me at 931/528-6481, ext. 210, or via e-mail at steven_alexander@fws.gov.