THE UNIVERSITY OF TENNESSEE KNOXVILLE

FACILITIES SERVICES

Public Information and Education (PIE) Plan

NPDES Phase II Municipal Separate Storm Sewer System (MS4) Permit No. TNS076121

October 2014

THE UNIVERSITY OF TENNESSEE KNOXVILLE
FACILITIES SERVICES

Table of Contents

Introduction

The Public Information and Education (PIE) Plan is a requirement in the State of Tennessee's Small Municipal Separate Storm Sewer System (MS4) National Pollution Discharge Elimination System General Permit (here after referred to as the "NPDES permit"). Coverage under this permit was granted to the University of Tennessee on January 16, 2013 under Permit Tracking Number TNS076121. The requirements of the PIE plan are listed in section 4.2.1 of the NPDES permit. Under this section the University of Tennessee must provide the following:

Detail specific goals and public information events/activities that will occur over the remainder of the permit cycle;

Incorporate components from outreach campaigns and one-on-one communications;

Incorporate a mode to evaluate the plan's effectiveness so adjustments can be made (if necessary); and,

Include targeted educational campaigns addressing the following issues:

a. General public awareness of the impacts on water quality from general housekeeping maintenance/activities;

b. Provide Best Management Practice awareness training for University Departments and other operators of permanent BMPs and maintenance activities;

c. University departments and professional chemical applicators awareness on the proper storage, use, and disposal of pesticides, herbicides and fertilizers;

d. University Motor Pool Department awareness on the proper storage, use and disposal of oil and other automotive-related fluids;

e. General public (students) and University employees on the awareness of identifying and reporting procedures for illicit connections/ discharges, sanitary sewer, spills, etc.;

f. Local engineering, design, and construction community awareness of stormwater policies, regulations and guidance materials related to construction and post construction phase water quality impacts; and,

g. University employee/contractor awareness of water quality impacts from daily operations.

This PIE plan presents an outline for the University of Tennessee's public education and outreach program and documents the University's plan for compliance with these requirements.

As reflected in this PIE plan, the University will provide both general information on the impacts of stormwater discharges to local water bodies and outline steps the public can adopt to reduce pollutants in stormwater runoff. In addition to general educational campaigns, The University of Tennessee Knoxville will conduct more targeted informational campaigns for specific water resources, audiences, and/or pollutants located within the MS4 jurisdiction. The public education and outreach requirements of the NPDES permit allows the University to serve the role of an educator, by using communication strategies, as well as functioning as a regulator issuing Notices of Violation (NOV's), conducting inspections or conducting physical maintenance activities. The University of Tennessee's education and outreach program is based on the understanding that awareness of positive and negative behaviors can empower the University community to improve the quality of stormwater flowing from their property.

The University of Tennessee began implementing a public education program in 2014 within the cycle of the first NPDES permit. To date, the University has a program that includes many of the required elements of the NPDES permit. This PIE plan incorporates the existing activities and provides additional required elements in the current NPDES permit. The PIE plan must also provide for a mode to evaluate the effectiveness of the elements of the education program. In general, the University of Tennessee Knoxville will measure the efficiency of programmatic elements by observing the number of people and/or groups influenced by an activity or campaign. Observing the number of impressions made from year to year affords the University the opportunity to evaluate the extent of its effort and decide whether it is allocating resources effectively, or if changes are needed. Employing this metric is also useful for fulfilling reporting requirements as outlined in the NPDES permit.

Section 1: Public Awareness

Section 1:
Public Awareness Opportunities on the University of Tennessee's Campus and Other University Properties

The University of Tennessee Knoxville, has constructed a number of water quality improvements that will provide the general public an opportunity to experience natural water quality best management practices first hand. Citizens can view stormwater cisterns, stream restorations and riparian buffers, as well as constructed stormwater wetlands, permeable surfaces, rain gardens, and other green infrastructure devices. Some of the sites have educational signage explaining the importance of the features that have been installed. The following is a listing of both currently installed best management practices (BMP's) and those expected to begin implementation by the end of 2015.

Table 1: Installed and Projected BMP's

Venue	Wetland Enhancement	Stormwater Wetland	Riparian Enhancement	Permeable Surface	Native Vegetation	Stormwater Retention	Water Quality
Haslam Music Building				X		X	
Parking Facilities				X		X	X
Student Union				X		X	X
Environmental and Landscape Lab					X	X	
Student Involvement	X	X	X		X	X	X
2nd Creek ISCO meter			X				X
UT Gardens	X	X		X	X	X	X
Neyland Stadium Plaza				X		X	X
West Campus Redevelopment Site				X		X	X
Strong Hall						X	X
Gibbs Hall							X
Student Union				X	X	X	X

These demonstration practices effectively reach the general public and provide education on the water quality benefits of green infrastructure. Educational signage will be installed at the sites most used by the general public by the end of 2015 to stress the water quality importance of 1) how to identify and report illicit discharges 2) stormwater wetland functions, 3) rainwater retention and reuse.

Information about the locations and best management practices on campus can be found at the University of Tennessee Stormwater website: stormwater.utk.edu.

Section 2: Identifying Education Targets

Section 2: Diagnosing Potential Stormwater Problems to Identify Areas for Targeted Education

The NPDES permit requires the University to focus specific water quality information at targeted audiences about pollutants found in impaired streams. One way to establish specific targets is to review the published 303(d) list of impaired streams created by the State of Tennessee. As a small MS4, The University of Tennessee represents one of many stake holders in the overall process of addressing water quality issues. The University has the opportunity to supplement 303(d) elements, or change focus with the information it collects on its own, including, but not limited to, visual observations in the field, information obtained from complaints, field data collection, enforcement activities, or highly effective local watershed initiative programs.

The University of Tennessee is fortunate to have formed relationships with a number of local and state organizations. Working with these groups gives the University a variety of ways to identify and target audiences and creates unique opportunities to pursue educational campaigns. In addition to this, the University is able to further identify opportunities for education and outreach through stream inventories, watershed initiatives, volunteer events, student internships, faculty participation, one-on-one communications, and faculty and staff training.

Published studies show that offering information and raising awareness about individual behaviors can have an impact on water quality, with the intent that the target audience will be inclined to change those behaviors. The NPDES permit identifies some of the groups to whom targeted education will be created. Over and above those audiences listed in the permit, target audiences are selected through a process of determining whose behaviors have the most potential to contribute pollutants to streams. This PIE Plan outlines activities that will be directed toward these targets.

Table 2: PIE Plan Targets

Target Streams	Target Pollutants	Sources of Impairment	Target Audience
• Third Creek • East Fork Third Creek • Second Creek • Ft. Loudon Reservoir	• Loss of biological integrity due to siltation • Anthropogenic Substrate Alterations • E. Coli • Nitrates	• Discharge from MS4 area • Urbanized high density area • Collection system failure	• Construction Workers • Contractors • General Public • University Employees • Engineers • Architects • Designers • Students

Section 3: Activities and Goals

Section 3: Public Information and Education Activities and Goals

The University is currently implementing an education and outreach program as a result of permit requirements from NPDES permit and requirements that exist outside of the public education minimum control measures of the NPDES permit. The total of these activities comprise the PIE Plan, presented in Table 2. These activities and goals are set to meet targets or provide general information with resources that are available to the University. Each activity is associated with one or more delivery methods or activity types. The chosen activities correspond with permit requirements.

Table 3: PIE Plan Activities and Goals

Description	Goal	Type	Target Groups	Target Pollutants	2010 Permit Citations
Website	• To educate the public on how to prevent stormwater pollution and become involved with University programs • To educate the public on illicit discharge detection • To provide the public a place to report stormwater problems • To provide manuals, policies and information regarding construction-phase and long term stormwater management	Internet	Engineers, Contractors, Construction Workers, University Staff, Students	All	4.2.1; a-h
Make Orange Green Program	• To incorporate stormwater education into the existing program • To educate University students about how to identify and report stormwater problems	Training/ Educational Events	University Staff, Students	All	4.2.1 and 4.2.2
River Rescue	• To provide an opportunity for citizen involvement in visual stream assessments, cleaning streams, and reporting illicit discharges • To educate the public on how to prevent stormwater pollution and become involved with University Programs	Educational Event	University Staff, Students	All	4.2.1 and 4.2.1
Public Notices	To comply with applicable state and local laws governing this activity	Publications/ Internet/ Public Meetings	University Staff, Students	All	4.2.2
University Employee Training	To make University employees aware of water quality impacts from daily operations, and to educate staff on how to identify and report illicit discharges	Training Event/ Publication	University Staff	All	4.2; h
Earth Day	To provide stormwater pollution prevention awareness to public and private groups	Training/ Educational Event	University Staff, Students	All	4.2.1
Pre-Construction Meetings	To make the construction community aware of regulations, guidance materials and long term water quality impacts from construction activities	Educational Events	Engineers, Architects, Construction Workers, Contractors	All	4.2.1; c & g

Section 4: Implementation and Metrics

Section 4: Public Information and Education Implementation and Metrics

Under section 4.2.1 of the NDPES permit, the PIE plan must include a mode for evaluating effectiveness. The University must also track; maintain records; and report education and outreach activities in the annual report for the NPDES permit. The University will accomplish these requirements by maintaining supporting documentation in the file and recording metrics annually for activities performed. The annual entry of results verifies that the intended audience is being reached according to the plan. If any results are insufficient, reduced or missing, the University can seek adjustments to properly address inadequacies. Table 3 below outlines the implementation schedule and corresponding metric(s) for each PIE activity, along with a place to enter results annually.

Table 4: Information and Education Implementation and Metrics

Activity	Supporting Documentation	Metric	Results	
Website	Web hit counter that can be reset or account for running hits from a running total	Number of hits	Permit Year	
			3	
			4	
			5	
Make Orange Green Program	Copies of participating group assessments or sign in sheets	Number of activities completed	2	1
			3	
			4	
			5	
River Rescue/ Stream Cleanups	List of engagements (date and location) and topics discussed will be kept on file	Number of students/public participating in the program	2	80
			3	
			4	
			5	
Public Notices/ Public Meetings	Web hits, newspaper circulation information, number of posted notices and list of locations where notices are posted	Number of notices/number of people at meetings and/or comments received	2	413
			3	
			4	
			5	
University Employee Training	Sign-in sheets with name, date and topic covered	Number of staff trained	2	4
			3	
			4	
			5	
Earth Day	List of engagements (date and location) and topics discussed will be kept on file	Number of participants at each event	2	70
			3	
			4	
			5	
Pre-Construction Meetings	Copies of pre-construction correspondence kept on file	Number of pre-construction conferences held for reporting period	2	17
			3	
			4	
			5	