

MS4 Annual Report FY-2015

City of Oak Ridge, Tennessee



CITY OF OAK RIDGE



OFFICE OF THE CITY MANAGER

POST OFFICE BOX 1 • OAK RIDGE, TENNESSEE 37831-0001

September 22, 2015

Tennessee Department of Environment and Conservation
TN Division of Water Resources
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, TN 37243

RE: CITY OF OAK RIDGE MS4 ANNUAL REPORT – TNS088366

Enclosed is the City of Oak Ridge MS4 Annual Report for fiscal year July 1, 2014 to June 30, 2015.

The Tennessee Department of Environment and Conservation issued Notice of Coverage to the City of Oak Ridge on March 23, 2014. The enclosed second year Annual Report covers the first full fiscal year of 2015.

The City of Oak Ridge has continued work on several milestones identified in the Notice of Intent (NOI) during the reporting period and are listed below:

- Draft Stormwater Ordinance using the MTAS Model Stormwater Ordinance
- Reorganization of staff to provide stormwater program support
- Upgrade the existing City stormwater website for public education purposes
- Establish a citizen hot line phone number on the city website
- GIS mapping of the stormwater system

The stormwater team will continue to work toward meeting the yearly milestones and obtaining City funds to fully implement the program. The City is striving to develop a complete stormwater management program that will meet the needs of the citizens and create a cleaner environment that addresses water quality and quantity issues.

Thank you for your assistance working with us on the development of the program. Please contact Pat Fallon, Operations Division Manager at 865-425-1847 or pfallon@oakridgetn.gov with any questions concerning this submittal.

Sincerely,

A handwritten signature in cursive script that reads "Mark S. Watson".

Mark S. Watson
City Manager

Enclosure: Annual Report

cc: Pat Fallon, Operations Division Manager
Jack Suggs, Public Works Director



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

City of Oak Ridge TNS088366

Name of MS4 MS4 Permit Number

Pat Fallon pfallon@oakridgetn.gov

Name of Contact Person Email Address

865-425-1847

Telephone (including area code)

PO Box 1

Mailing Address

Oak Ridge TN 37831-0001

City State ZIP code

What is the current population of your MS4? 29,419

What is the reporting period for this annual report? From 7/1/14 to 6/30/15

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. See Item 2-B

C. Does your MS4's jurisdictional area contain any waterbodies where a TMDL has been approved for parameters other than pathogens, siltation and habitat alterations? If yes, please attach a list. Yes No
See Item 2-C

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
See Item 2-D

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.

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? _____

Municipal Separate Storm Sewer System (MS4) Annual Report

- D. Note specific successful outcome(s) (NOT tasks, events, publications) fully or partially attributable to your public education program during this reporting period. Stormwater website, high school and marina rain gardens
- 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? City website, newspaper articles, radio advertisement in conjunction with TN Stormwater Association (TNSA)
- G. Do you have a webpage dedicated to your stormwater program? Yes No
If so, what is the link/URL: stormwater.oakridgetn.gov
- H. Are you tracking and maintaining records of public education, outreach, involvement and participation activities? Please attach a summary of these activities. Yes No
See Attachment 4-H

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? 22
- D. Have any of these outfalls been screened for dry weather discharges? Yes No
- F. What is your frequency for screening outfalls for illicit discharges? to be determined
- 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)? 0
- I. Of those illicit discharges/illegal connections that have been discovered or reported, how many have been eliminated? 0

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.)? each work day
- E. Do you prioritize certain construction sites for more frequent inspections? Yes No
If Yes, based on what criteria? phase of construction

7. PERMANENT STORMWATER CONTROLS (SECTION 4.2.5)

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

Municipal Separate Storm Sewer System (MS4) Annual Report

- 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 land disturbing activities
- 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.
none
- F. How many development and redevelopment project plans were reviewed for this reporting period? 12
- G. How many development and redevelopment project plans were approved? 10
- H. How many permanent stormwater management practices/facilities were inspected? 2
- I. How many were found to have inadequate maintenance? N/A
- J. Of those, how many were notified and remedied within 30 days? (If window is different than 30 days, please specify) N/A
- K. How many enforcement actions were taken that address inadequate maintenance? N/A
- 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? 0
- 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. Stormwater Ordinance is near completion and should be adopted in 2015
- 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

Municipal Separate Storm Sewer System (MS4) Annual Report

- 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? Twice Weekly
- 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? After moderate rain events
- 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? _____

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). none
- Changes to replace an ineffective or unfeasible BMP (Section 4.4.2.b). none
- Information (e.g. additional acreage, outfalls, BMPs) on program area expansion based on annexation or newly urbanized areas. none
- Changes to the program as required by the division (Section 4.4.3). none

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 |
|-------------------------|-----------------------|-------------------------------|---------------------|
| <i>Example: E. coli</i> | <i>2003</i> | <i>Weekly April–September</i> | <i>20</i> |
| | | | |
| | | | |

Municipal Separate Storm Sewer System (MS4) Annual Report

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 City is in the process of obtaining sampling data from the Department of Energy which has multiple monitoring stations located in various streams throughout the area.

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 | # <u>0</u> | # _____ | # _____ | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Administrative fines | # <u>0</u> | # _____ | # _____ | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Stop Work Orders | # <u>0</u> | # _____ | # _____ | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Civil penalties | # <u>0</u> | # _____ | # _____ | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Criminal actions | # <u>0</u> | # _____ | # _____ | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Administrative orders | # <u>0</u> | # _____ | # _____ | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> 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? silt fence failures, tracking onto streets, grading without a permit

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? \$150,000 total

B. What is next year's budget for implementing the requirements of your MS4 NPDES permit and SWMP? \$200,000

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)? 0

Municipal Separate Storm Sewer System (MS4) Annual Report

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

See Appendix A.


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.”

Mark S. Watson, City Manager

Printed Name and Title


Signature

9/22/15
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 |

ITEM 2B

IDENTIFYING IMPAIRED STREAMS AND OTHER WATER BODIES

Using the GIS mapping tool (<http://tnmap.tn.gov/wpc/>) along with the most current 303(d) list published on the division's web site: http://www.tn.gov/environment/water/water-quality_publications.shtml, identify whether stormwater discharges from any part of the MS4 contribute pollutants of concern to an impaired waterbody and list below: For any impairment, indicate the waterbody ID#, name of impacted waterbody, nature of pollution (cause), and the source. If you have additional streams to list, please include in a separate attachment.

| WATERBODY ID# AND NAME OF IMPACTED WATERBODY | CAUSE OF IMPAIRMENT | SOURCE OF IMPAIRMENT |
|--|--|--|
| East Fork Poplar Creek (Roane Co), TN06010207026-1000 | PCBs, Mercury, E. coli, NO2 + NO3, Total P, Siltation | US Dept of Energy Releases, Oak Ridge Area |
| East Fork Poplar Creek (Anderson & Roane Co), TN06010207026-2000 | PCBs, Mercury, E. coli, NO2 + NO3, Total P, Siltation, Habitat Alterations | US Dept of Energy Releases, Oak Ridge Area |
| Ernies Creek, TN06010207006T-1100 | E. coli | Municipal (Urbanized High Density Area) |
| Melton Hill Reservoir, TN06010207006-1000 | PCBs, Chlordane | Contaminated Sediment Deposits |
| Scarboro Creek, TN6010207006T-0900 | E. coli | Municipal (Urbanized High Density Area) |
| Poplar Creek, TN06010207020-1000 | NO2 + NO3, Total P | Municipal (Urbanized High Density Area), and Sanitary Sewer Overflows |
| Poplar Creek Embayment, TN06010207001-0100 | Mercury, PCBs | Contaminated Sediments (Mercury & PCBs), Industrial Point Source Discharge (Mercury) |
| Mitchell Branch, TN06010207020-1300 | Hexavalent Chromium, Substrate Habitat Alteration, PCBs | CERCLA NPL Sites (Chromium, PCBs) Channelization (Substrate) |
| White Oak Creek, TN06010207247-1000 | Cesium, Strontium | CERCLA NPL Sites |
| | | |

Comment: The DOE is covered under 3 separate permits and is a source of some of the known pollutants.

ITEM E

HAS THE STATE OR EPA ISSUED A TMDL FOR ANY STREAMS DIRECTLY AFFECTED BY RUNOFF FROM YOUR MS4?

Determine whether or not a TMDL has been established and approved by EPA and identify by checking the appropriate box. A list of EPA-Approved TMDLs as well as EPA-Established TMDLs for Tennessee waters can be found on the division's web site: http://www.tn.gov/environment/water/water-quality_total-daily-maximum-loads.shtml.

Yes No If yes, list the waterbody ID#, name of impacted waterbody and parameter(s) of concern:

| WATERBODY ID# AND NAME OF IMPACTED WATERBODY | PARAMETERS OF CONCERN |
|---|---|
| Lower Clinch Watershed, HUC 06010207 | Pathogens (2005), Siltation & Habitat Alteration (2006, 2007), PCBs & Chlordane (2010) |
| East Fork Poplar Creek, TN06010207026-1000 & 2000 | Pathogens (2005), Siltation & Habitat Alteration (2006, 2007) |
| Melton Hill Reservoir, 06010207006-1000 | Pathogens (2005), Siltation & Habitat Alterations (2006, 2007), PCBs & Chlordane (2010) |
| Watts Bar Reservoir, 06010207006-1000 | Pathogens (2005), Siltation & Habitat Alteration (2006, 2007), PCBs & Chlordane (2010) |

If you have additional streams to list, please include in a separate attachment.

Comment: The City's SWMP will address the requirements of the general permit for discharges to water quality impaired waters (Section 3.1), protection of state or federally listed species (Section 3.2), analytical & non-analytical monitoring of impaired streams (Section 5.1 & 5.2)

ITEM 2-C

| Waterbody ID | Impacted Waterbody | County | CAUSE/TMDL Priority | Pollutant Source | Comments |
|--------------------------|---------------------------|-------------------|--|---|--|
| TN06010207 020 - 1000 | POPLAR CREEK | Roane Anderson | Nitrate+Nitrite M Total Phosphorus M | Municipal Point Source Collection System Failure | Stream is Category 5. (One or more uses impaired.) |
| TN06010207 020 - 1300 | MITCHELL BRANCH | Anderson | Hexavalent Chromium L PCBs L Physical Sbsttrate Habitat Alterations L | CERCLA site Channelization | Stream is Category 5. TMDLs for DOE sites should be done by EPA. |
| TN06010207 026 - 0600 | BEAR CREEK | Roane Anderson | Nitrate+Nitrite M Escherichia coli NA | CERCLA site Undetermined Source | Category 5. EPA approved a pathogen TMDL for some of the known pollutants. |
| TN06010207 026 - 1000 | EAST FORK POPLAR CREEK | Roane | PCBs L Mercury L Escherichia coli NA Loss of biological integrity due to diltation NA Nitrate+Nitrite M Total Phosphorus M | Industrial Point Source Municipal Point Source Contaminated Sediments Collection System Failure Urbanized High Density Area | Impacted by releases at DOE's Oak Ridge facilities (K-25, Y-12, ORNL). Fishing advisory due to mercury and PCBs. Bacterial levels are also elevated due to sources in the Oak Ridge area. Category 5. EPA approved siltation and pathogen TMDLs that address some of the known pollutants. EPA should develop the TMDL for DOE facilities. |
| TN06010207 026 - 2000 | EAST FORK POPLAR CREEK | Anderson Roane | PCBs L Mercury L Escherichia coli NA Loss of biological integrity due to siltation NA Nutrients M Other Anthropogenic Habitat Alterations M | Industrial Point Source Contaminated Sediments Urbanized High Density Area | Same as previous segment. Category 5. EPA approved siltation and pathogen TMDLs that address some of the known pollutants. EPA should develop the TMDL for pollutants for DOE facilities. |
| TN06010207 006 - 1000 | MELTON HILL RESERVOIR | Anderson Roane | PCBs NA Chlordane NA | Contaminated Sediment | Fishing advisory due to PCBs and chlordane. Category 4a. EPA approved a PCB/chlordane TMDL for the known pollutants. |

| Waterbody ID | Impacted Waterbody | County | CAUSE/TMDL Priority | Pollutant Source | Comments |
|---------------------------|---|----------|---|---|---|
| TN06010207 006T - 0900 | SCARBORO CREEK | Anderson | Escherichia coli H | Urbanized High Density Area | Stream is Category 5. (One or more uses impaired) |
| TN06010207 006T - 1100 | ERNIES CREEK | Anderson | Escherichia coli H | | Stream is Category 5. (One or more uses impaired) |
| TN06010207 001 - 0100 | POPLAR CREEK EMBAYMENT, WATTS BAR RESERVOIR | Roane | PCBs Mercy L L | Industrial Point Source Contaminated Sediments | Fishing advisory due to PCBs and Mercury. DOE impacts. Stream is Category 5. EPA should produce TMDL for pollutants from DOE facilities. |
| TN06010207 247 - 1000 | WHITEOAK CREEK | Anderson | Cesium Strontium Biological integrity loss due to undetermined cause NA NA L | CERCLA site | Category 4b for strontium and cesium. A TMDL would not be helpful as the CERCLA ROD is the enforceable control strategy here. Category 5 for unknown toxicity. TMDLs for pollutants originating from DOE facilities should be developed by EPA. |

ITEM 2-D

Municipal Separate Storm Sewer System (MS4) Annual Report

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

| <u>Waterbody</u> | <u>Description</u> | <u>Basis for Inclusion</u> |
|---|--|---|
| Clinch River | From Melton Hill Dam (river mile 23.1) to Pellissippi Parkway (river mile 43.7). | State Scenic River (Class III Developed River Area) |
| Clinch River – Melton Hill Reservoir | Clinch River from Melton Hill Dam to Pellissippi Parkway. | State Scenic River (Class III – Developed River Area). |

FY 2015 Education Outreach Summary (4-H)

February 2015

- Stormwater brochures were created and distributed
- City Stormwater website was created and launched. Website included information on the program, tips for residents regarding stream health and stormwater control, contact information to report illicit discharge, etc.

March 2015

- 50K Tree Day was held in Oak Ridge on city-owned property off of Tuskegee Drive on March 14th. This is a state-wide event with the goal of planting 50,000 trees in one hour. Outreach was implemented via flyers throughout the city, posted on the Keep Anderson County Beautiful website, Oak Ridge Facebook page, & Oak Ridge Earth Day website, and through contacting Oak Ridge High School teachers about the event. With about 60 volunteers, roughly 400 trees were planted within one hour. Participants were educated on the important role that trees play in stream health and stormwater control.
- In collaboration with Tennessee Smart Yards, the City of Oak Ridge Stormwater Management helped facilitate outreach for two rain garden workshops that took place in Oak Ridge. Flyers were dispersed at the Recreation and Parks Department, the city Library, the Central Services Complex, and Municipal Building. Advertisement for the workshops were aired on the local public access channel and on the local NPR station, WUOT. The workshops took place on March 26th and 28th. Participants spent the morning learning about the functionality and construction of rain gardens as applicable to their personal stormwater drainage issues. After lunch, participants went to the site of the demonstration micro-rain garden which was located at the City of Oak Ridge Melton Lake Park near the row house. Each class was able to either dig the rain garden by hand or install plants in the rain garden. There were 26 participants between the two workshops.

April 2015

- City of Oak Ridge Stormwater Management participated in Earth Day Oak Ridge by tabling. We had informational bookmarks and brochures, magnets, a children's poster game, and an informational poster. 2 people worked the table for about 5 hours and reached roughly 100 people through this event.

May 2015

- City of Oak Ridge Stormwater Management worked with students from Oak Ridge High School to maintain the rain garden at the school. There was a short lesson about the benefits and function of rain gardens, followed by "deep weeding" and plant identification within the rain garden. There were 5 classes of about 20 students each, reaching roughly 100 students that day.

June 2015

- City of Oak Ridge Stormwater Management helped facilitate stormwater activities at Rainbow Camp, an annual summer camp held at the Oak Ridge Unitarian Universalist Church. Lessons about stream health were implemented using an Enviroscape set and macroinvertebrates. Children's ages ranged from 6 to 13 years. Throughout the day, around 65 children attended the lessons and activities.

**OAK RIDGE STORMWATER ORGANIZATIONAL CHART
APPENDIX "A"**

OAK RIDGE CITY COUNCIL

OAK RIDGE CITY MANAGER

PUBLIC WORKS DIRECTOR

STORMWATER COORDINATOR

**FIRE
DEPARTMENT
TRAINING & GOOD
HOUSEKEEPING**

**ELECTRIC
DEPARTMENT
TRAINING & GOOD
HOUSEKEEPING**

**COMMUNITY
DEVELOPMENT
DEPARTMENT
MAPPING AND CODE
ENFORCEMENT**

**PUBLIC WORKS
DEPARTMENT
ENGINEERING DIVISION
INSPECTION,
ENFORCEMENT & MAPPING
UTILITIES & OPERATIONS
DIVISION
TRAINING & GOOD
HOUSEKEEPING**

**PARKS &
RECREATION
TRAINING & GOOD
HOUSEKEEPING**

**INFORMATION
SERVICES
WEBSITE, MAPPING &
PUBLIC
ANNOUNCEMENTS**

Education Outreach Log FY 2015 (4-H)

| Event | Date | Type | Nature of Outreach | Number of participants | Outreach Locations |
|--|-----------------------|---------------------------------|--|------------------------|--|
| Development Symposium Planning | ongoing | Emails and flyers | Gain speakers and attendees for symposium | Approximately 50 | Flyers at Home Depot and Community Development window, email |
| ORHS biweekly lessons + service projects | 2014-2015 school year | Education outreach and workdays | Working with four of Ms. Beth Adler's STEM classes | Approximately 80 | Oak Ridge High School |