

ANNUAL REPORT FORM FOR INDIVIDUAL NPDES PERMITS FOR MUNICIPAL SEPARATE STORM SEWER SYSTEMS (RULE 62-624.600(2), F.A.C.)

- This Annual Report Form must be completed and submitted to the Department to satisfy the annual reporting requirements established in Rule 62-621.600, F.A.C.
- Submit this fully completed and signed form and any REQUIRED attachments by email to the NPDES Stormwater Program Administrator or to the MS4 coordinator. Their names and email addresses are available at: <http://www.dep.state.fl.us/water/stormwater/npdes/contacts.htm>. If files are larger than 10mb, materials may be placed on the NPDES Stormwater ftp site at: ftp://ftp.dep.state.fl.us/pub/NPDES_Stormwater/. After uploading the ANNUAL REPORT files, an email must be sent to the MS4 coordinator or the NPDES program administrator notifying them the report is ready for downloading
- Refer to the Form Instructions for guidance on completing each section.
- Please print or type information in the appropriate areas below

SECTION I. BACKGROUND INFORMATION	
A.	Permittee Name: City of Auburndale
B.	Permit Name: Polk County Municipal Separate Storm Sewer System
C.	Permit Number: FLS000015-003 (Cycle 3)
D.	Annual Report Year: <input type="checkbox"/> Year 1 <input type="checkbox"/> Year 2 <input type="checkbox"/> Year 3 <input checked="" type="checkbox"/> Year 4 <input type="checkbox"/> Year 5 <input type="checkbox"/> Other, specify Year:
E.	Reporting Time Period (month/year): 9/ 14 through 9 / 15
F.	Name of the Responsible Authority: Robert R. Green
	Title: City Manager
	Mailing Address: P.O.Box 186
	City: Auburndale Zip Code: 33823 County: Polk
	Telephone Number: 863-965-5506 Fax Number: 863-965-5583
	E-mail Address:
G.	Name of the Designated Stormwater Management Program Contact (if different from Section I.F above): John Dickson
	Title: Public Works Director
	Department: Public Works
	Mailing Address: P.O Box 186
	City: Auburndale Zip Code: 33823 County: Polk
	Telephone Number: 863-965-5511 Fax Number: 863-956-5597
	E-mail Address: jdickson@auburndalefl.com

SECTION II. MS4 MAJOR OUTFALL INVENTORY (Not Applicable In Year 1)	
A.	Number of outfalls ADDED to the outfall inventory in the current reporting year (insert "0" if none): 0 (Does this number include non-major outfalls? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable)
B.	Number of outfalls REMOVED from the outfall inventory in the current reporting year (insert "0" if none): 0 (Does this number include non-major outfalls? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable)
C.	Is the change in the total number of outfalls due to lands annexed or vacated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Applicable

SECTION III. MONITORING PROGRAM

A.	<p>Provide a brief statement as to the status of monitoring plan implementation: <i>DEP Note: Polk County provides ambient monitoring for all but one lake (Juliana) within the City limits. This monitoring effort has collected water quality samples for Lakes Ariana, Arietta, and Lena since 1971 and Lakes Agnes, Mariana and Tennessee since 1985. This monitoring program is expected to continue and will provide valuable insight to the effectiveness of the City of Auburndale's stormwater program.</i></p>
B.	<p>Provide a brief discussion of the monitoring results to date: Based on a cursory trend analysis of the ambient monitoring data, it appears most of the six monitored lakes (Agnes, Ariana, Arietta, Lena, and Tennessee) have seen an improving trend in nutrient concentrations(TN and TP) with the exception of: Ariana shows an increasing 10 and 30 year Total Nitrogen trend; Agnes shows a slight increase in the 10 year Total Phosphorus trend and; Arietta shows a slight increase in the 10 year Total Phosphorus trend.</p> <p>However, the above identified increasing trends are not associated with the limiting nutrients. When evaluating each lake based on the limiting nutrients all six lakes are showing significant improvements. Though many factors contribute to nutrients concentrations within the lakes, the monitoring data can be interpreted as a positive result of the City's and Polk County's MS4 Program. Table 1 has been included as an attachment to this report and provides a summary of the monitoring data analysis. The raw sampling data and graphs can be provided, if necessary.</p> <p><i>DEP Note: See Part V of the permit for the monitoring requirements. Each permittee must discuss the monitoring results as it relates to the implementation and effectiveness of their SWMP.</i></p>
C.	<p>Attach a monitoring data summary, as required by the permit. See attached Table 1 for the monitoring data summary</p>

SECTION IV. FISCAL ANALYSIS

A.	<p>Total expenditures for the NPDES stormwater management program for the current reporting year: \$50,370.97 <i>DEP Note: If program resources have decreased from the previous year, attach a discussion of the impacts on the implementation of the SWMP as per Part II.F of the permit.</i></p>
B.	<p>Total budget for the NPDES stormwater management program for the subsequent reporting year: \$4000.00</p>

SECTION V. MATERIALS TO BE SUBMITTED WITH THIS ANNUAL REPORT FORM

Only the following materials are to be submitted to the Department along with this fully completed and signed Annual Report Form (check the appropriate box to indicate whether the item is attached or is not applicable):

Attached <input type="checkbox"/>	N/A XX <input type="checkbox"/>	*** <i>DEP Note: Please complete Checklists A & B at the end of the tailored form.</i> *** Any additional information required to be submitted in this current annual reporting year in accordance with Part III.A of your permit that is not otherwise included in Section VII below.
xxx <input type="checkbox"/>	<input type="checkbox"/>	A monitoring data summary as directed in Section III.C above and in accordance with Rule 62-624.600(2)(c), F.A.C.
<input type="checkbox"/>	xx <input type="checkbox"/>	Year 1 ONLY: An inventory of all known major outfalls and a map depicting the location of the major outfalls (hard copy or CD-ROM) in accordance with Rule 62-624.600(2)(a), F.A.C.
<input type="checkbox"/>	xxx <input type="checkbox"/>	Year 3 ONLY: The estimates of pollutant loadings and event mean concentrations for each major outfall or each major watershed in accordance with Rule 62-624.600(2)(b), F.A.C.
XX <input type="checkbox"/>	<input type="checkbox"/>	Year 4 ONLY: Permit re-application information in accordance with Rule 62-624.420(2), F.A.C

This report will serve as the application for the NPDES MS 4 permit

DO NOT SUBMIT ANY OTHER MATERIALS
 (such as records and logs of activities, monitoring raw data, public outreach materials, etc.)

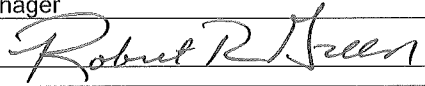
SECTION VI. CERTIFICATION STATEMENT AND SIGNATURE

The Responsible Authority listed in Section I.F above must sign the following certification statement, as per Rule 62-620.305, F.A.C:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted 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 for knowing violations.

Name of Responsible Authority (type or print): Robert R. Green

Title: City Manager

Signature:  Date: 3/18/2016

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE

A.	B.	C.	D.	E.	F.	
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity	Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments	
Part III.A.1	Structural Controls and Stormwater Collection Systems Operation					
<p>Maintain an up-to-date inventory of the structural controls and roadway stormwater collection structures operated by the permittee, including, at a minimum, all of the types of control structures listed in Table II.A.1.a of the permit. Report the current known inventory.</p>						
<p><i>DEP Note: The permittee needs to "customize" this section by adding any structural controls to the list below that are part of the permittee's MS4 currently or are planned for the future. The permittee may remove any structural controls listed that it does not have currently or will likely not have during this permit cycle. Please see the attached description of each type of structure. In addition, the permittee may choose its own unit of measurement for each structural control to be consistent with the unit of measurement in the documentation. Unit options include: miles, linear feet, acres, etc.</i></p>						
<p>Provide an inventory of all known major outfalls covered by the permit and a map depicting the location of the major outfalls (hard copy or CD-ROM). Provide the outfall inventory and map with the Year 1 Annual Report.</p>						
<p>Report the number of inspection and maintenance activities conducted for each type of structure included in Table II.A.1.a, and the percentage of the total inventory of each type of structure inspected and maintained. If the minimum inspection frequencies set forth in Table II.A.1.a were not met, provide as an attachment an explanation of why they were not and a description of the actions that will be taken to ensure that they will be met.</p>						
<p><i>DEP Note: If the minimum inspection frequencies set forth in Table II.A.1.a of the permit were not met for one or more type of structure, the permittee must provide as an attachment an explanation of why they were not and a description of the actions that will be taken to ensure that they will be met. Please provide the title of the attached explanation in Column D and the name of the entity who finalized the explanation in Column E.</i></p>						
Type of Structure	Number of Activities Performed			Documentation / Record	Entity Performing the Activity	Comments
Dry retention systems	Total Number of Structures	Number of Inspections	Percentage Inspected	Number of Maintenance Activities	Percentage Maintained	
	1	2	100	52	100	Waste Water Dept.
Wet detention systems	2	4	100	52	100	Waste Water Dept.
Stormwater pump stations	2	5	100	1	100	Waste Water Dept.

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE

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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity				Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	Major stormwater outfalls	0	0	0	0			(the outfalls reported Year 1 were not major according to rule 62-624.200(5) F.C.
	MS4 pipes / culverts (miles)	31	1	100	1	Public Works Report	Public Works	
	Inlets / catch basins / grates	2	8	100	8	Waste Water Report	Waste Water Dept.	
	Ditches / conveyance swales (miles)	2	52	100	5	Public Works Report	Public Works	
Part III.A.2	Areas of New Development and Significant Redevelopment Report the number of significant redevelopment projects reviewed by the permittee for post-development stormwater considerations. <i>DEP Note: Please provide an explanation in Column F for any "0" reported in Column C.</i>							
	Number of significant redevelopment projects reviewed				1	BZ Reports	City of Auburndale/BZ	
	Provide in the Year 2 Annual Report the summary report of the review of local codes activity. Provide in the Year 4 Annual Report the follow-up report on plan implementation of modifying codes to allow low impact design BMPs. <i>DEP Note: Refer to Part III.A.2 of the permit for details regarding what the review entails, and what must be included in the summary report and follow-up report. Please provide the title of the attached report in Column D and the name of the entity who finalized the report in Column E.</i>							
	Year 2 ONLY: Attach the summary report of the review activity Year 4 ONLY: Attach the follow-up report on plan implementation							
Part III.A.3	Roadways Annually review (and revise, as needed) and implement the permittee's written procedures for the litter control program(s) for public streets, roads, and highways, including rights-of-way, employed within the permittee's jurisdictional area and properly dispose of collected material. Implement the program on a monthly, or on an as needed, basis. Report on the litter control program, including the frequency of litter collection, an estimate of the total number of road miles cleaned or amount of area covered by the activities, and an estimate of the quantity of litter collected. <i>DEP Note: Please provide an explanation in Column F for any "0" reported in Column C. In addition, the permittee may choose its own units of measurement for the reporting items. Unit options for the amount of litter include: bags, cubic yards, pounds, tons. Unit options for the amount of area covered by the activity include: square feet, linear feet, yards, miles, acres. If all litter collection is performed by staff or by contractors, but not by both, please remove the non-applicable reporting items.</i>							

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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity	Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	<p>PERMITTEE Litter Control Program: Frequency of litter collection</p> <p>PERMITTEE Litter Control Program: Estimated amount of area maintained (miles)</p> <p>PERMITTEE Litter Control Program: Estimated amount of litter collected (cubic yards)</p> <p>CONTRACTOR Litter Control Program: Frequency of litter collection</p> <p>CONTRACTOR Litter Control Program: Estimated amount of area maintained (linear feet)</p> <p>CONTRACTOR Litter Control Program: Estimated amount of litter collected (cubic yards)</p>	<p>Daily Mon-Fri</p> <p>233.5 miles</p> <p>248-60Gal. Bags</p> <p>0</p> <p>0</p> <p>0</p>	<p>Litter collection Report</p> <p>Local Mileage Sheet</p> <p>Local Mileage Sheet</p>	<p>Public Works</p> <p>Public Works</p> <p>Public Works</p>	
	<p>If an Adopt-A-Road or similar program is implemented, report the total number of road miles cleaned and an estimate of the quantity of litter collected.</p> <p><i>DEP Note: The permittee may choose its own unit of measurement for the amount of litter collected. Unit options include: bags, cubic yards, pounds, tons. If an Adopt-A-Road or similar program is not implemented by the permittee, please note that in Column F but do not remove the Adopt-A-Road Program reporting items.</i></p> <p>Trash Pick-up Events: Estimated amount of litter collected (cubic yards)</p> <p>Adopt-A-Road Program: Total miles cleaned</p> <p>Adopt-A-Road Program: Estimated amount of litter collected (cubic yards)</p> <p>Report on the street sweeping program, including the frequency of the sweeping, total miles swept, an estimate of the quantity of sweepings collected, and the total nitrogen (TN) and total phosphorus (TP) loadings that were removed by the collection of sweepings. If no street sweeping program is implemented, provide the explanation of why not in the Year 1 Annual Report.</p> <p><i>DEP Note: Please provide an explanation in Column F for any "0" reported in Column C. Also, the permittee may choose its own unit of measurement for the amount of sweeping material collected. Unit options include: cubic yards, pounds, tons.</i></p> <p><i>DEP Note: If the permittee has curbs and gutters but no street sweeping program is implemented, the permittee must provide an explanation of why not in the Year 1 Annual Report. Refer to Part III.A.3 of the permit for the information that must be included in the explanation (including the alternate BMPs used or planned in lieu of street sweeping). Please provide the title of the attached explanation in Column D and the name of the entity who finalized the explanation in Column E.</i></p>	<p>0</p> <p>0</p> <p>0</p> <p>0</p>			<p>No Program</p> <p>No Program</p> <p>No Program</p> <p>No Program</p>
	<p>Year 1 ONLY: If have curbs and gutters, attach explanation of why no street sweeping program and the alternate BMPs used or planned</p> <p>Annually review (and revise, as needed) and implement the permittee's written standard practices to reduce the pollutants in stormwater runoff from areas associated</p>				

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	<p>with road repair and maintenance, and from permittee-owned or operated equipment yards and maintenance shops that support road maintenance activities. Report the number of applicable facilities and the number of inspections conducted for each facility.</p> <p><i>DEP Note: The permittee needs to "customize" this section by listing the names of the applicable facilities in Column B and the number of inspections of each facility in Column C. Add more rows if necessary. If "0" is reported in Column C for the number of inspections conducted and the permittee has one or more applicable facilities, please provide an explanation in Column F for why no inspections were conducted. In addition, if the same facility is applicable under both Parts III.A.3 and III.A.5 of the permit, the same site inspection can count towards both inspection requirements as long as it covers the applicable waste area(s). Be sure to report the site inspection under both Parts III.A.3 and III.A.5.</i></p>	<p>Number of Inspections</p> <p>4</p>	<p>Public Works</p>	<p>Public Works</p>	
Part III.A.4	<p>Flood Control Projects</p> <p>Report the total number of flood control projects that were constructed by the permittee during the reporting period and the number of those projects that did NOT include stormwater treatment. The permittee shall provide a list of the projects where stormwater treatment was not included with an explanation for each of why it was not. Report on any stormwater retrofit planning activities and the associated implementation of retrofitting projects to reduce stormwater pollutant loads from existing drainage systems that do not have treatment BMPs.</p> <p><u>DEP Note:</u> A "stormwater retrofit project" is one implemented primarily to provide stormwater treatment for areas currently without treatment.</p> <p><u>DEP Note:</u> The status of the flood control and retrofit projects should be reported as of the last day of the applicable reporting period. Therefore, there should be no duplication for those reported as planned, for those reported as under construction and for those reported as completed.</p> <p><u>DEP Note:</u> If applicable, please provide the title of the attached list of flood control projects that did not include stormwater treatment in Column D and the name of the entity who finalized the list in Column E.</p>				
	<p>Flood control projects completed during the reporting period</p> <p>Flood control projects completed during the reporting period that did not include stormwater treatment</p> <p>ATTACH a list of the flood control projects that did not include stormwater treatment and an explanation for each of why it was not</p> <p>Stormwater retrofit projects planned</p> <p>Stormwater retrofit projects under construction during the reporting period</p> <p>Stormwater retrofit projects completed during the reporting period</p>	<p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p>			
Part III.A.5	<p>Municipal Waste Treatment, Storage, and Disposal Facilities Not Covered by an NPDES Stormwater Permit</p> <p>Annually review (and revise, as needed) and implement the permittee's written procedures for inspections and the implementation of measures to control discharges from the following facilities that are not otherwise covered by an NPDES stormwater permit:</p>				

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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity	Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments										
	<ul style="list-style-type: none"> • Operating municipal landfills; • Municipal waste transfer stations; • Municipal waste fleet maintenance facilities; and • Any other municipal waste treatment, waste storage, and waste disposal facilities. <p>Report the number of applicable facilities and the number of the inspections conducted for each facility.</p> <p><i>DEP Note: The permittee needs to "customize" this section by listing the names of the applicable facilities in Column B and the number of inspections of each facility in Column C. Add more rows if necessary. If "0" is reported in Column C for the number of inspections conducted and the permittee has one or more applicable facilities, please provide an explanation in Column F for why no inspections were conducted. An applicable facility under Part III.A.5 includes, but is not limited to, those facilities/yards where street sweeping material and/or yard waste are temporary stockpiled, and where solid waste collection vehicles are parked and/or maintained. In addition, if the same facility is applicable under both Parts III.A.3 and III.A.5 of the permit, the same site inspection can count towards both inspection requirements as long as it covers the applicable waste area(s). Be sure to report the site inspection under both Parts III.A.3 and III.A.5.</i></p>	<table border="1"> <thead> <tr> <th data-bbox="711 768 764 999">Number of Inspections</th> </tr> </thead> <tbody> <tr> <td data-bbox="764 768 885 999">4</td> </tr> <tr> <td> </td> </tr> <tr> <td> </td> </tr> </tbody> </table>	Number of Inspections	4			<table border="1"> <thead> <tr> <th data-bbox="418 516 472 768">Inspection Report</th> </tr> </thead> <tbody> <tr> <td data-bbox="472 516 885 768">Public Works</td> </tr> <tr> <td> </td> </tr> <tr> <td> </td> </tr> </tbody> </table>	Inspection Report	Public Works						
Number of Inspections															
4															
Inspection Report															
Public Works															
Part III.A.6	<p>Pesticides, Herbicides, and Fertilizer Application</p> <p>Continue to require proper certification and licensing by the Florida Department of Agriculture and Consumer Services (FDACS) for all applicators contracted to apply pesticides, herbicides, or fertilizers on permittee-owned property, as well as any permittee personnel employed in the application of these products. Report the number of permittee personnel applicators and contracted commercial applicators of pesticides and herbicides who are FDACS certified / licensed. Report the number of permittee personnel and contractors who have been trained through the Green Industry BMP Program, and the number of contracted commercial applicators of fertilizer who are FDACS certified / licensed.</p> <p><i>DEP Note: If "0" is reported in Column C for any of the reporting items, please include in Column F an explanation of why training was not provided to / obtained by personnel and contractors during the applicable reporting year, the most recent year that training / certification was previously provided / obtained, and the names of the personnel and contractors previously trained / certified.</i></p> <p>PERSONNEL: Florida Department of Agriculture and Consumer Services (FDACS) certified applicators of pesticides and herbicides herbicides</p> <p>CONTRACTORS: FDACS certified / licensed applicators of pesticides and herbicides</p> <p>CONTRACTORS: FDACS certified / licensed applicators of fertilizer</p> <p>CONTRACTORS: Green Industry BMP Program training completed</p> <p>CONTRACTORS: Green Industry BMP Program training completed</p> <p>Pursuant to SB 2080 (2009), all local governments are encouraged to adopt a Florida-friendly Landscaping Ordinance similar to the one set forth in the document "Florida-friendly Guidance Models for Ordinances, Covenants and Restrictions." If the broader Florida-friendly ordinance described above is not adopted, then all local</p>	<table border="1"> <tbody> <tr> <td data-bbox="1198 768 1252 999">0</td> <td data-bbox="1252 768 1305 999">None Used</td> </tr> <tr> <td data-bbox="1305 768 1359 999">0</td> <td data-bbox="1359 768 1412 999">None Used</td> </tr> <tr> <td data-bbox="1412 768 1466 999">0</td> <td data-bbox="1466 768 1520 999">None Used</td> </tr> <tr> <td data-bbox="1520 768 1573 999">4</td> <td data-bbox="1573 768 1624 999">None Used</td> </tr> <tr> <td data-bbox="1627 768 1624 999">0</td> <td data-bbox="1680 768 1624 999">None used</td> </tr> </tbody> </table>	0	None Used	0	None Used	0	None Used	4	None Used	0	None used			
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SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE

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	<p>Permit Requirement/Quantifiable SWMP Activity</p>				
	<p>governments within the watershed of a nutrient-impaired water body shall adopt the Department's Model Ordinance for Florida-Friendly Fertilizer Use on Urban Landscapes pursuant to SB 494 (2009) or an ordinance that includes all of the requirements set forth in the Model Ordinance. The ordinance shall be adopted within 24 months of the date of permit issuance. Provide a copy of the adopted ordinance with the subsequent Year 1 or Year 2 Annual Report.</p> <p><u>DEP Note:</u> If this provision is not applicable because the permittee is not within the watershed of a nutrient-impaired water body, then please indicate that in Column F, but do not remove this reporting item.</p>				
	<p><u>DEP Note:</u> Please provide the title and citation of the ordinance in Column D, and the name of the entity who finalized the ordinance in Column E.</p>				
	<p>Year 1 or Year 2 ONLY: Attach copy of adopted Florida-friendly ordinance</p> <p>During Year 1 of the permit, develop and implement a written public education and outreach program plan to encourage citizens to reduce their use of pesticides, herbicides, and fertilizers. Report on the public education and outreach activities that are performed or sponsored by the permittee within the permittee's jurisdiction to encourage citizens to reduce their use of pesticides, herbicides, and fertilizers, including the type and number of activities conducted, the type and number of materials distributed, the percentage of the population reached by the activities in total, and the number of Web site visits (if applicable). Activities performed under the Florida Yards and Neighborhoods (FYN) program should only be reported if the permittee is contributing funding towards the FYN staff and program within its jurisdiction.</p> <p><u>DEP Note:</u> The permittee should "customize" the list of public outreach activities by removing items or adding items to the list below as appropriate to their particular public outreach program. However, the reporting item of "Estimated percentage of the population reached by the activities in total" must remain. The permittee may add more specifics to the reporting items, such as the name of the brochure or newsletter distributed. If "0" is reported in Column C for all the reporting items please include in Column F an explanation for why no outreach was performed.</p>				
	<p><u>DEP Note:</u> Polk County is to report the public education and outreach activities that it performed county-wide (and not just in the unincorporated areas of Polk County). The co-permittees are to report just the public education and outreach activities that they performed.</p> <p><u>DEP Note:</u> Indicate under Column E "Entity Performing the Activity" if FYN or IFAS is performing any of the reported public education and outreach activities. In addition, please complete the following line:</p>				
	<p>FYN PROGRAM FUNDING: Permittee Provides Funding? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Amount of Funding = \$</p>				
	<p>Estimated percentage of the population reached by the activities in total</p> <p>Brochures/Flyers/Fact sheets distributed FYN: Brochure/Flyers/Fact sheets distributed</p> <p>Neighborhood presentations: Number conducted FYN: Neighborhood presentations: Number of participants</p> <p>Neighborhood presentations: Number of participants FYN: Neighborhood presentations: Number of notices published</p> <p>Newspapers & newsletters: Number of articles/notices published Newsletters: Number of newsletters distributed</p> <p>Public displays (e.g., kiosks, storyboards, posters, etc.) FYN: Public displays (e.g., kiosks, storyboards, posters, etc.)</p> <p>Radio or television Public Service Announcements (PSAs) FYN: Radio or television Public Service Announcements (PSAs)</p> <p>School presentations: Number conducted</p>	<p>11.16</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>2</p>		<p>FYN</p> <p>FYN</p> <p>FYN</p> <p>FYN</p>	

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Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity	Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	School presentations: Number of participants FYN: School presentations: Number conducted FYN: School presentations: Number of participants Seminars/Workshops: Number conducted Seminars/Workshops: Number of participants FYN: Seminars/Workshops: Number conducted FYN: Seminars/Workshops: Number of participants Special events: Number conducted Special events: Number of participants FYN: Special events: Number conducted FYN: Special events: Number of participants Web Site: Number of hits / visitors to the stormwater-related pages	1200 0 0 0 0 0 0 0 0 0 0 0		FYN FYN FYN FYN FYN FYN FYN FYN	
Part III.A.7.a	Illicit Discharges and Improper Disposal — Inspections, Ordinances, and Enforcement Measures Where applicable, strengthen the legal authority to conduct inspections, conduct monitoring, control illicit discharges, illicit connections, illegal dumping and spills into the MS4 and to require compliance with conditions in ordinances, permits, contracts, and orders. Report amendments, as needed.				
	<i>DEP Note: If applicable, please provide the title of the attached report in Column D and the name of the entity who finalized the report in Column E.</i> ATTACH a report on any amendments to the applicable legal authority				
Part III.A.7.c	Illicit Discharges and Improper Disposal — Investigation of Suspected Illicit Discharges and/or Improper Disposal				
During Year 1 of the permit, develop and implement a written proactive inspection program plan for identifying and eliminating sources of illicit discharges, illicit connections, or dumping to the MS4. Report on the proactive inspection program, including the number of inspections conducted, the number of illicit activities found, and the number and type of enforcement actions taken.					
<i>DEP Note: If "0" is reported in Column C for the first reporting item, please include an explanation in Column F for why no proactive inspections were performed. In addition, the permittee should re-word the "NOVs / warning letters / citations issued" reporting item to more accurately reflect its particular initial enforcement activity, if necessary.</i>					
<i>DEP Note: Proactive inspections may include, for example, suspect areas (e.g., industrial areas), commercial businesses (e.g., restaurants, car washes, service stations, laundries / dry cleaners, auto body shops, mobile carpet cleaners) or temporary activities (e.g., special events / fairs / circus) that would not otherwise be inspected during routine inspections and maintenance of the MS4, in association with high risk industrial facilities or construction sites, or in response to citizen or staff reports.</i>					
<i>DEP Note: Polk County is to report ONLY the proactive inspections it performed in the unincorporated areas of Polk County — any proactive inspections it performed in the co-permittees' jurisdictions are to be reported by the co-permittees. Each co-permittee is to report the Polk County proactive inspections done in their jurisdiction separately from the proactive inspections that the co-permittee performed itself.</i>					
<i>DEP Note: Refer to Part III.A.7.c of the permit for what must be included in the written proactive inspection program plan. Please provide the title of the attached plan in Column D and the name of the entity who finalized the plan in Column E.</i>					

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE

A.	B.	C.	D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity	Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	Proactive inspections performed by Polk County on behalf of a co-permittee for suspected illicit discharges / connections / dumping	0			
	Proactive inspections performed by the permittee for suspected illicit discharges / connections / dumping	52		City of Auburndale Public Works	Performed weekly when going to job sites.
	Illicit discharges / connections / dumping found during a proactive inspection	0			
	Notices of Violation (NOVs) / warning letters / citations issued for illicit discharges / connections / dumping found during a proactive inspection	0			
	Fines issued for illicit discharges / connections / dumping found during a proactive inspection	0			
	Year 1 ONLY: Attach the written proactive inspection program plan				
	Annually review (and revise, as needed) and implement the permittee's written procedures to conduct reactive investigations to identify and eliminate the source(s) of illicit discharges, illicit connections or improper disposal to the MS4, based on reports received from permittee personnel, contractors, citizens, or other entities regarding suspected illicit activity. Report on the reactive investigation program as it relates to reports of suspected illicit discharges, including the number of reports received, the number of investigations conducted, the number of illicit activities found, and the number and type of enforcement actions taken. If a permittee relies on Polk County to conduct these activities on its behalf, the permittee shall obtain (and, upon request, Polk County shall make available) the necessary annual report information from the County.				
	<i>DEP Note: If the number of reports received differs from the number of reactive investigations, please provide an explanation for the discrepancy in Column F. In addition, the permittee should re-word the "NOVs / warning letters / citations issued" reporting item to more accurately reflect its particular initial enforcement activity, if necessary.</i>				
	Reports received by Polk County of suspected illicit connections / discharges / dumping received	0			
	Reports received by the permittee of suspected illicit connections / discharges / dumping received	0			
	Reactive investigations of reports of suspected illicit discharges/connections / dumping	0			
	Illicit discharges / connections / dumping found during a reactive investigation	0			
	Notices of Violation (NOVs) / warning letters / citations issued for illicit discharges / connections / dumping found during a reactive investigation	0			
	Fines issued for illicit discharges / connections / dumping found during a reactive investigation	0			
	During Year 1 of the permit, develop and implement a written plan for the training of all appropriate permittee personnel (including field crews, fleet maintenance staff, and inspectors) and contractors to identify and report conditions in the stormwater facilities that may indicate the presence of illicit discharges / connections / dumping to the MS4. Refresher training shall be provided annually. Report the type of training activities, and the number of permittee personnel and contractors trained (both in-house and outside training).				
	<i>DEP Note: If "0" is reported for either reporting item, please include in Column F an explanation of why training was not provided to / obtained by personnel and</i>				

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE

A.	B.	C.	D.	E.	F.								
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity	Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments								
	<i>contractors during the applicable reporting year, the most recent year that training was previously provided / obtained, and the names of the personnel and contractors previously trained.</i>												
	<table border="1"> <tr> <td data-bbox="357 1239 381 1417">Initial Training</td> <td data-bbox="357 997 381 1239">6</td> <td data-bbox="357 1239 381 1417">Refresher Training</td> <td data-bbox="357 997 381 1239">9</td> </tr> <tr> <td data-bbox="381 1239 406 1417">Personnel trained</td> <td data-bbox="381 997 406 1239"></td> <td data-bbox="381 1239 406 1417">Contractors trained</td> <td data-bbox="381 997 406 1239"></td> </tr> </table>	Initial Training	6	Refresher Training	9	Personnel trained		Contractors trained					
Initial Training	6	Refresher Training	9										
Personnel trained		Contractors trained											
Part III.A.7.d	<p>Illicit Discharges and Improper Disposal — Spill Prevention and Response</p> <p>Annually review (and revise, as needed) and implement the permittee's written spill-prevention/spill-response plan and procedures to prevent, contain, and respond to spills that discharge into the MS4. Report on the spill prevention and response activities, including the number of spills addressed. If a permittee relies on the Polk County Fire Rescue or Fire Services Division to conduct these activities on its behalf, the permittee shall obtain (and, upon request, Polk County Fire Rescue/Fire Services Division shall make available) the necessary annual report information from the County.</p> <p><i>DEP Note: The permittee may report the number of hazardous material spills separately from the number of non-hazardous material spills, or report one combined number, to more accurately reflect its tracking of these spills.</i></p>	7	Auburdale Fire Dept. Records	Auburdale Fire Dept.									
	<p>Hazardous and non-hazardous material spills responded to</p> <p>During Year 1 of the permit, develop and implement a written plan for the training of all appropriate permittee personnel (including field crews, firefighters, fleet maintenance staff and inspectors) and contractors on proper spill prevention, containment, and response techniques and procedures. Refresher training shall be provided annually. Report the type of training activities, and the number of permittee personnel and contractors trained (both in-house and outside training).</p> <p><i>DEP Note: If "0" is reported for either reporting item, please include in Column F an explanation of why training was not provided to / obtained by personnel and contractors during the applicable reporting year, the most recent year that training was previously provided / obtained, and the names of the personnel and contractors previously trained.</i></p>												
Part III.A.7.e	<p>Illicit Discharges and Improper Disposal — Public Reporting</p> <p>During Year 1 of the permit, develop and implement a written public education and outreach program plan to promote, publicize, and facilitate public reporting of the presence of illicit discharges and improper disposal of materials into the MS4. Report on the public education and outreach activities that are performed or sponsored by the permittee within the permittee's jurisdiction to encourage the public reporting of suspected illicit discharges and improper disposal of materials, including the type and number of activities conducted, the type and number of materials distributed, the percentage of the population reached by the activities in total, and the number of Web site visits (if applicable).</p> <p><i>DEP Note: The permittee should "customize" the list of public outreach activities by removing items or adding items to the list below as appropriate to their particular public outreach program. However, the reporting item of "Estimated percentage of the population reached by the activities in total" must remain. The permittee may add more specifics to the reporting items, such as the name of the brochure or newsletter distributed. If "0" is reported in Column C for all the reporting items, please include in Column F an explanation for why no outreach was performed.</i></p> <p><i>DEP Note: Polk County is to report the public education and outreach activities that it performed county-wide (and not just in the unincorporated areas of Polk</i></p>	3	Auburdale Fire Dept. Records	Auburdale Fire Dept.									
	<table border="1"> <tr> <td data-bbox="617 1239 641 1417">Initial Training</td> <td data-bbox="617 997 641 1239">0</td> <td data-bbox="617 1239 641 1417">Refresher Training</td> <td data-bbox="617 997 641 1239">17</td> </tr> <tr> <td data-bbox="641 1239 665 1417">Personnel trained</td> <td data-bbox="641 997 665 1239"></td> <td data-bbox="641 1239 665 1417">Contractors trained</td> <td data-bbox="641 997 665 1239"></td> </tr> </table>	Initial Training	0	Refresher Training	17	Personnel trained		Contractors trained					
Initial Training	0	Refresher Training	17										
Personnel trained		Contractors trained											

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE

A. Permit Citation/ SWMP Element	B. Permit Requirement/Quantifiable SWMP Activity	C. Number of Activities Performed	D. Documentation / Record	E. Entity Performing the Activity	F. Comments
	<p>Neighborhood presentations: Number conducted</p> <p>Neighborhood presentations: Number of participants</p> <p>Newspapers & newsletters: Number of articles/notices published</p> <p>Newsletters: Number of newsletters distributed</p> <p>Public displays (e.g., kiosks, storyboards, posters, etc.)</p> <p>School presentations: Number conducted</p> <p>School presentations: Number of participants</p> <p>Seminars/Workshops: Number conducted</p> <p>Seminars/Workshops: Number of participants</p> <p>Special events: Number conducted</p> <p>Special events: Number of participants</p> <p>Storm sewer inlets newly marked/replaced</p> <p>Web Site: Number of visitors to the stormwater-related pages</p>	<p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>2</p> <p>1200</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>0</p> <p>128</p>		<p>City Web Site Counter</p> <p>City Of Auburndale</p>	
<p>Part III.A.7.g</p>	<p>Illicit Discharges and Improper Disposal — Limitation of Sanitary Sewer Seepage</p>				
	<p>Annually review (and revise, as needed) and implement the permittee's written procedures to reduce or eliminate sanitary wastewater contamination into the MS4, including discharges to the MS4 from sanitary sewer overflows (SSOs) and from inflow / infiltration from collection / transmission systems and/or septic tank systems. Advise the appropriate utility owner of a violation if constituents common to wastewater contamination are discovered in the MS4. Report on the type and number of activities undertaken to reduce or eliminate SSOs and inflow/ infiltration, the number of SSOs or inflow / infiltration incidents found and the number resolved, and the name of the owner of the sanitary sewer system within the permittee's jurisdiction.</p> <p><i>DEP Note: The permittee needs to "customize" this section as it pertains to the type of activities undertaken to reduce or eliminate SSOs and inflow / infiltration into the MS4. The first five reporting items below are examples.</i></p> <p><i>DEP Note: The permittee should contact the appropriate authorities for accurate reporting information, such as the sanitary sewer system operator who is responsible for investigating and eliminating SSOs and the local health department who is responsible for permitting / overseeing septic tank systems.</i></p> <p><i>DEP Note: Report only the SSOs and inflow / infiltration incidents into the MS4.</i></p> <p>Activity to reduce/eliminate SSOs and inflow / infiltration: Sanitary sewer pipe inspected for infiltration (linear feet)</p> <p>Activity to reduce/eliminate SSOs and inflow / infiltration: Sanitary sewer pipe sealed, lined, and / or replaced (linear feet)</p> <p>Activity to reduce/eliminate SSOs and inflow / infiltration: Sanitary sewer line breaks repaired</p> <p>Activity to reduce/eliminate SSOs and inflow / infiltration: Septic systems removed</p> <p>Activity to reduce/eliminate SSOs and inflow / infiltration: Emergency generator added</p> <p>SSO incidents discovered</p>	<p>1800</p> <p>7000</p> <p>6</p> <p>0</p> <p>0</p> <p>0</p>	<p>Waste Water Report</p> <p>Waste Water Report</p> <p>Waste Water Report</p> <p>Waste Water Report</p> <p>Waste Water Report</p> <p>Waste Water Report</p>	<p>Waste Water Dept</p> <p>Waste Water Dept.</p> <p>Waste Water Dept.</p> <p>Waste Water Dept.</p> <p>Waste Water Dept.</p> <p>Waste Water Dept.</p>	

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE

A.	B.	C.	D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity	Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	SSO incidents resolved Inflow / infiltration incidents discovered Inflow / infiltration incidents resolved Name of owner of the sanitary sewer system	0 0 0 City Of Auburndale	Waste Water Report	Dept. Waste Water Dept.	
Part III.A.8.a	Industrial and High-Risk Runoff — Identification of Priorities and Procedures for Inspections				
	<p>Continue to maintain an up-to-date inventory of all existing high risk facilities discharging into the permittee's MS4. The inventory shall identify the outfall and surface water body into which each high risk facility discharges. For the purposes of this permit, high risk facilities include:</p> <ul style="list-style-type: none"> • Operating municipal landfills; • Hazardous waste treatment, storage, disposal and recovery facilities; • Facilities that are subject to EPCRA Title III, Section 313 (also known as the Toxics Release Inventory (TRI) maintained by the U.S. EPA); and • Any other industrial or commercial discharge that the permittee determines is contributing a substantial pollutant loading to the permittee's MS4. This could include facilities identified through the proactive inspection program as per Part III.A.7.c of the permit. <p>Report on the high risk facilities inventory, including the type and total number of high risk facilities and the number of facilities newly added each year. If a permittee relies on Polk County to conduct these activities on its behalf, the permittee shall obtain (and, upon request, Polk County shall make available) the necessary annual report information from the County.</p> <p><u>DEP Note:</u> The TRI is updated every spring / summer by the U.S. EPA at www.epa.gov/triexplorer. Select "Facility" on the left, chose your Geographic Location, and then select "Generate Report." Please indicate in Column F when (month / year) you last checked EPA's TRI for applicable facilities.</p> <p>During Year 1 of the permit, develop and implement a written plan for conducting inspections of high risk facilities to determine compliance with all appropriate aspects of the stormwater program. While the permittee may determine the order and frequency of the inspections, the permittee shall inspect each identified facility at least once during the permit term; however, facilities identified as high risk due to the findings of the proactive inspection program as per Part III.A.7.c of the permit shall be inspected annually. Report on the high risk facilities inspection program, including the number of inspections conducted and the number and type of enforcement actions taken. If a permittee relies on Polk County to conduct these activities on its behalf, the permittee shall obtain (and, upon request, Polk County shall make available) the necessary annual report information from the County.</p> <p><u>DEP Note:</u> If "0" is reported for the number of inspections conducted and the permittee has one or more high risk facilities, please provide an explanation in Column F for why no inspections were conducted. In addition, the permittee should re-word the "NOVs / warning letters / citations issued" reporting item to more accurately reflect its particular initial enforcement activity, if necessary.</p> <p><u>DEP Note:</u> Polk County is to report ONLY the inventory of high risk facilities in the unincorporated areas of Polk County — the inventory of high risk facilities located in the co-permittees' jurisdictions are to be reported by the co-permittees. Likewise, the County is to report ONLY the high risk facility inspections performed in the unincorporated areas of Polk County — any high risk facility inspections performed in the co-permittees' jurisdictions are to be reported by the co-permittees. Each co-permittee is to obtain the necessary information from Polk County that pertains to its jurisdiction.</p>				
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SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE

A.	B.	C.	D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity	Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
		Notices of Violation (NOVs) / warning letters / citations issued			
	Total high risk facilities	1			
	New high risk facilities added to the inventory during the current reporting period	0			
	Operating municipal landfills	0			
	Hazardous waste treatment, storage, disposal and recovery (HWTSDR) facilities	0			
	EPCRA Title III, Section 313 facilities (that are not landfills or HWTSDR facilities)	0			None In City
	Facilities determined as high risk by the permittee through the proactive inspections as per Part III.A.7.c	0			
	Other facilities determined as high risk by the permittee (that are not facilities identified through the proactive inspections)	1		Public Works	Auburndale Fleet Maint.
Part III.A.8.b	Industrial and High-Risk Runoff — Monitoring for High Risk Industries				
	Sampling of the discharge to the stormwater system may be required on an as-needed basis in the event that inspections of high-risk facilities disclose suspected illicit discharges to the MS4. New high-risk industrial facilities as defined in 40 CFR 122.26(d)(2)(iv)(C) must be evaluated to determine if the new discharge is contributing a substantial pollutant load to the MS4. The evaluation may include site-specific monitoring. Report the number of high risk facilities sampled.				
	Site Inspection Indicated No Monitoring Required				
	<i>DEP Note: Polk County is to report ONLY the number of high risk facilities in the unincorporated areas of Polk County that were sampled – the high risk facilities located in the co-permittees' jurisdictions that were sampled by the County are to be reported by the co-permittees.</i>				
	High risk facilities sampled	0		Polk County Water Resources	
Part III.A.9.a	Construction Site Runoff — Site Planning and Non-Structural and Structural Best Management Practices				
	Continue to implement the local codes or land development regulations and the written pre-construction site plan review procedures that require the use and maintenance of appropriate structural and non-structural erosion and sedimentation controls during construction to reduce the discharge of pollutants to the MS4. Report the number of permittee and private pre-construction site plans reviewed for stormwater, erosion, and sedimentation controls, and the number approved.				
	<i>DEP Note: Please provide an explanation in Column F for any "0" reported in Column C.</i>				
	PERMITTEE SITES: Construction site plans reviewed	1	BZ Report	City Of Auburndale BZ	
	PERMITTEE SITES: Construction site plans approved	1	BZ Report	City Of Auburndale BZ	

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE

A.	B.	C.	D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity	Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	PRIVATE SITES: Construction site plans reviewed	12	BZ Report	City Of Auburndale BZ	
	PRIVATE SITES: Construction site plans approved	12	BZ Report	City Of Auburndale BZ	
	Annually review (and revise, as needed) and implement the permittee's written procedures to notify all new development / redevelopment permit applicants of the need to obtain all required stormwater permits. Report the number of new development/redevelopment permit applicants notified of the ERP and CGP, and the number of applicants who confirmed ERP and CGP coverage.				
	<i>DEP Note: Please provide an explanation in Column F for any "0" reported in Column C. If the number of applicants notified of ERP or CGP coverage is less than the number of construction site plans reviewed, please provide an explanation for the discrepancy in Column F.</i>				
	Notified of ERP stormwater permit requirements	10	BZ Report	City Of Auburndale BZ	
	Confirmed ERP coverage	10	BZ Report	City Of Auburndale BZ	
	Notified of CGP stormwater permit requirements	10	BZ Report	City Of Auburndale BZ	
	Confirmed CGP coverage	0	BZ Report	City Of Auburndale BZ	
Part III.A.9.b	Construction Site Runoff — Inspection and Enforcement				
	As an attachment to the Year 1 Annual Report, the permittee shall submit a written plan that details the standard operating procedures for implementation of the stormwater, erosion and sedimentation inspection program for construction sites discharging stormwater to the MS4. The permittee shall implement the plan for inspecting construction sites immediately upon written approval by the Department. Prior to Department approval, the permittee shall continue to perform inspections in accordance with its previously developed construction site inspection procedures. Report on the inspection program for privately-operated and permittee-operated construction sites, including the number of active construction sites during the reporting year, the number of inspections of active construction sites, the percentage of active construction sites inspected, and the number and type of enforcement actions / referrals taken.				
	<i>DEP Note: If "0" is reported in Column C for the number of inspections conducted, please provide an explanation in Column F of why no inspections were conducted. If the number of inspections reported is equal to or less than the number of active construction sites, or the percentage inspected is less than 100%, please provide an explanation in Column F. In addition, the permittee should re-word the "NOVs / warning letters / citations issued" reporting item to more accurately reflect its particular initial enforcement activity, if necessary.</i> <i>DEP Note: Refer to Part III.A.9.b of the permit for what must be included in the construction site inspection program plan. Please provide the title of the attached plan in Column D and the name of the entity who finalized the plan in Column E.</i>				
	PERMITTEE SITES: Active construction sites	1	BZ Report	City Of Auburndale BZ	
	PERMITTEE SITES: Inspections of active construction sites for proper stormwater, erosion and sedimentation BMPs	3	BZ Report	City Of Auburndale BZ	
	PERMITTEE SITES: Percentage of active construction sites inspected	100	BZ Report	City Of Auburndale BZ	
	PRIVATE SITES: Active construction sites	5	BZ Report	City Of Auburndale BZ	

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE

A.	B.	C.	D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity	Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	<p>PRIVATE SITES: Inspections of active construction sites for proper stormwater, erosion and sedimentation BMPs</p> <p>PRIVATE SITES: Percentage of active construction sites inspected</p> <p>Red Tags issued</p> <p>Notices of Violation (NOVs) issued</p> <p>Stop Work Orders issued</p> <p>Fines issued</p>	<p>7</p> <p>100</p> <p>3</p> <p>3</p> <p>0</p> <p>0</p>	<p>BZ Report</p> <p>BZ Report</p> <p>BZ Report</p> <p>BZ Report</p> <p>BZ Report</p> <p>BZ Report</p>	<p>Auburndale BZ</p> <p>City Of Auburndale BZ</p> <p>City Of Auburndale BZ</p> <p>City Of Auburndale BZ</p> <p>City Of Auburndale BZ</p> <p>City Of Auburndale BZ</p> <p>City Of Auburndale BZ</p>	
<p>Part III.A.9.c</p>	<p>Year 1 ONLY: Attach the written construction site inspection program plan</p> <p>Construction Site Runoff — Site Operator Training</p>				
	<p>During Year 1 of the permit, develop and implement a written plan for stormwater training / outreach for construction site plan reviewers, site inspectors and site operators. Provide training for permittee personnel (employed by or under contract with the permittee) involved in the site plan review, inspection or construction of stormwater management, erosion, and sedimentation controls. Also provide training for private construction site operators. All permittee inspectors (employed by or under contract with the permittee) of construction sites shall be certified through the Florida Stormwater, Erosion and Sedimentation Control Inspector Training program, or an equivalent program approved by the Department. Refresher training shall be provided annually. Report the type of training activities, the number of inspectors, site plan reviewers and site operators trained (both in-house and outside training), and the number of private construction site operators trained by the permittee.</p>				
	<p><i>DEP Note: If "0" is reported for any of these reporting items, please include in Column F an explanation of why training was not provided to / obtained by the permittee's staff and private construction site operators during the applicable reporting year.</i></p>				
<p>Permittee construction site inspectors</p> <p>Permittee construction site plan reviewers</p> <p>Permittee construction site operators</p>	<p>Inspector Certification Training</p> <p>2</p> <p>Non-Inspector Initial Training (non-certification)</p> <p>Refresher Training</p>		<p>BZ Records/ Public Works</p>	<p>City Of Auburndale BZ Dept.</p>	

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE

A.	B.	C.	D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity	Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
	Private construction site operators				

SECTION VIII. EVALUATION OF THE STORMWATER MANAGEMENT PROGRAM (SWMP)

Permit Citation/ SWMP Element	SWMP EVALUATION
Part II.A.1 Structural control inspection and maintenance	<p>Strengths: Most work is done by city's Public Works crew.</p> <p>Weaknesses: None at This Time</p> <p>SWMP Revisions to address deficiencies: N/A</p>
Part II.A.2 Significant redevelopment	<p>Strengths: Good records from the city's building /zoning dept.</p> <p>Weaknesses: None At this time</p> <p>SWMP Revisions to address deficiencies: None at this time</p>
Part II.A.3 Roadways	<p>Strengths: The city's street Dept. makes every effort to keep the streets clean, Street sweeping program is active. Litter is now picked up daily. New street sweeper added better pickup.</p> <p>Weaknesses: None at this time</p> <p>SWMP Revisions to address deficiencies: N/A</p>
Part II.A.4 Flood control	<p>Strengths: Pumps in place for flood control with back up.</p> <p>Weaknesses: None at this time</p> <p>SWMP Revisions to address deficiencies N/A</p>
Part II.A.5 Waste TSD Facilities	<p>Strengths: Employees make every effort of keeping the facilities controls standards high.</p> <p>Weaknesses: N/A</p> <p>SWMP Revisions to address deficiencies: N/A</p>
Part II.A.6 Pesticide, herbicide, fertilizer application	<p>Strengths: 4 Personal Trained</p>

A.

SECTION VIII. EVALUATION OF THE STORMWATER MANAGEMENT PROGRAM (SWMP)

Strengths: City's employee's trained in detection. Web site for public for information and reporting.

Part II.A.7 Illicit Discharge Detection and Elimination	Weaknesses: None at this time SWMP Revisions to address deficiencies: N/A
Part II.A.8 High Risk Industry Runoff	Strengths: Cooperative efforts by city and county personnel. Weaknesses: None at this time. SWMP Revisions to address deficiencies: None at this time
Part II.A.9 Construction Site Runoff	Strengths: City's employees report problems to our B/Z and Street Depts. 2 Personal have been trained Weaknesses: None at this time SWMP Revisions to address deficiencies: N/A

SECTION IX. CHANGES TO THE STORMWATER MANAGEMENT PROGRAM (SWMP) ACTIVITIES (Not Applicable In Year 4)

Proposed Changes to the Stormwater Management Program Activities Established as Specific Requirements Under Part III.A of the Permit (Including the Rationale for the Change) — **REQUIRES DEP APPROVAL PRIOR TO CHANGE IF PROPOSING TO REPLACE OR DELETE AN ACTIVITY.**

DEP Note: There may be changes deemed necessary after developing / reviewing your plans and SOPs as per Part III.A of the permit, after completing your SWMP evaluation as per Part VI.B.2 of the permit, or due to a TMDL / BMAP as per Part VIII.B of the permit.

No Plan Changes Proposed

Changes to the Stormwater Management Program Activities NOT Established as Specific Requirements Under Part III.A of the Permit (Including the Rationale for the Change)

DEP Note: There may be changes deemed necessary after developing / reviewing your plans and SOPs as per Part III.A of the permit, after completing your SWMP evaluation as per Part VI.B.2 of the permit, or due to a TMDL / BMAP as per Part VIII.B of the permit.

No Plan Changes Proposed

CHECKLIST A: ATTACHMENTS TO BE SUBMITTED WITH THE ANNUAL REPORTS

Below is a list of items required by the permit that may need to be attached to the annual report. Please check the appropriate box to indicate whether the item is attached or is not applicable for the current reporting period. Please provide the number and the title of the attachments in the blanks provided.

Attached	N/A	Rule / Permit Citation	Required Attachment	Attachment Number	Attachment Title
<input type="checkbox"/>	<input type="checkbox"/>	Part II.F	EACH ANNUAL REPORT: If program resources have decreased from the previous year, a discussion of the impacts on the implementation of the SWMP.		
<input type="checkbox"/>	<input type="checkbox"/>	Part III.A.1	EACH ANNUAL REPORT: An explanation of why the minimum inspection frequency in Table II.A.1.a was not met, if applicable.		
<input type="checkbox"/>	<input type="checkbox"/>	Part III.A.4	EACH ANNUAL REPORT: A list of the flood control projects that did not include stormwater treatment and an explanation for each of why it did not, if applicable.		
<input type="checkbox"/>	<input type="checkbox"/>	Part III.A.7.a	EACH ANNUAL REPORT: A report on amendments / changes to the legal authority to control illicit discharges, connections, dumping, and spills, if applicable.		
<input type="checkbox"/>	<input type="checkbox"/>	Part V.B.9	EACH ANNUAL REPORT: Reporting and assessment of monitoring results. [Also addressed in Section III of the Annual Report Form]		
<input type="checkbox"/>	<input type="checkbox"/>	Part VI.B.2	EACH ANNUAL REPORT: An evaluation of the effectiveness of the SWMP in reducing pollutant loads discharged from the MS4 that, at a minimum, must include responses to the questions listed in the permit.		
<input type="checkbox"/>	<input type="checkbox"/>	Part VIII.B.3.e	EACH ANNUAL REPORT: A status report on the implementation of the requirements in this section of the permit and on the estimated load reductions that have occurred for the pollutant(s) of concern.		
<input type="checkbox"/>	<input type="checkbox"/>	Part VIII.B.4.f	EACH ANNUAL REPORT after approval of the BPCP: The status of the implementation of the Bacterial Pollution Control Plan (BPCP).		
<input type="checkbox"/>	<input type="checkbox"/>	Part III.A.1	YEAR 1: An inventory of all known major outfalls and a map depicting the location of the major outfalls (hard copy or CD-ROM).		
<input type="checkbox"/>	<input type="checkbox"/>	Part III.A.3	YEAR 1: If have curbs and gutters but no street sweeping program, an explanation of why no street sweeping program and the alternate BMPs used or planned.		
<input type="checkbox"/>	<input type="checkbox"/>	Part III.A.6	YEAR 1 or YEAR 2: A copy of the adopted Florida-friendly Ordinance, if applicable.		
<input type="checkbox"/>	<input type="checkbox"/>	Part III.A.7.c	YEAR 1: A proactive illicit discharge / connection / dumping inspection program plan.		
<input type="checkbox"/>	<input type="checkbox"/>	Part III.A.9.b	YEAR 1: A construction site inspection program plan. [For approval by DEP]		
<input type="checkbox"/>	<input type="checkbox"/>	Part III.A.2	YEAR 2: A summary report of a review of codes and regulations to reduce the stormwater impact from new development / redevelopment.		
<input type="checkbox"/>	<input type="checkbox"/>	Part V.A.2	YEAR 3: Estimates of annual pollutant loadings and EMCs, and a table comparing the current calculated loadings with those from the previous two Year 3 ARs.		
<input type="checkbox"/>	<input type="checkbox"/>	Part V.A.3	YEAR 4: If the total annual pollutant loadings have not decreased over the past two permit cycles, revisions to the SWMP, as appropriate.		
<input type="checkbox"/>	<input type="checkbox"/>	Part V.B.3	YEAR 4: The monitoring plan (with revisions, if applicable).		
<input type="checkbox"/>	<input type="checkbox"/>	Part VII.C	YEAR 4: An application to renew the permit.		
<input type="checkbox"/>	<input type="checkbox"/>	Part VIII.B.3.d	YEAR 4: A TMDL Implementation Plan / Supplemental SWMP.		

CHECKLIST B: THE REQUIRED ANNUAL REVIEWS OF WRITTEN STANDARD OPERATING PROCEDURES (SOPs) & PLANS

The permit requires annual review, and revision if needed, of written Standard Operating Procedures (SOPs) and plans (e.g., public education and outreach, training, inspections). Please indicate your review status below. If you have made revisions that need DEP approval, you must complete Section VIII.A of the annual report.

Did not complete review of existing SOP / Plan	Developed new written SOP / Plan	Reviewed & no revision needed to existing SOP / Plan	Reviewed & revised existing SOP / Plan	Permit Citation	Description of Required SOPs / Plans
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.1	SOP and/or schedule of inspections and maintenance activities of the structural controls and roadway stormwater collection system.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.2	SOP for development project review and permitting procedures and/or local codes and regulations for new development / areas of significant development.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.3	SOP for the litter control program.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.3	SOP for the street sweeping program.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.3	SOP for inspections of equipment yards and maintenance shops that support road maintenance activities.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.5	SOP for inspections of waste treatment, storage, and disposal facilities not covered by an NPDES stormwater permit.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.6	Plan for public education and outreach on reducing the use of pesticides, herbicides and fertilizer.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.6	SOP for reducing the use of pesticides, herbicides and fertilizer, and for the proper application, storage and mixing of these products.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.7.c	Plan for proactive illicit discharge / connections / dumping inspections.*
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.7.c	SOP for reactive illicit discharge / connections / dumping investigations.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.7.c	Plan for illicit discharge training.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.7.d	SOP for spill prevention and response efforts.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.7.d	Plan for spill prevention and response training.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.7.e	Plan for public education and outreach on how to identify and report the illicit discharges and improper disposal to the MS4.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.7.f	Plan for public education and outreach on the proper use and disposal of oils, toxics and household hazardous waste.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.7.g	SOP to reduce / eliminate sanitary wastewater contamination of the MS4.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.8	SOP for inspections of high risk industrial facilities.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.9.a	SOP for construction site plan review for stormwater, erosion and sedimentation controls, and ERP and CGP coverage.
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.9.b	Plan for inspections of construction sites.*
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Part III.A.9.c	Plan for stormwater, erosion and sedimentation BMPs training.

* Revisions to these plans require DEP approval – please complete Section VIII.A of the annual report.

REMINDER LIST OF THE TMDL / BMAP REPORTS TO BE SUBMITTED SEPARATELY FROM AN ANNUAL REPORT

Rule / Permit Citation	Report Title	Due Date
Part VIII.B.3.a	6 MONTHS from effective date of permit: TMDL Prioritization Report.	
Part VIII.B.3.b	12 MONTHS from effective date of permit: TMDL Monitoring and Assessment Plan.	
Part VIII.B.3.c	6 MONTHS from receiving analyses from the lab: TMDL Monitoring Report.	TBD
Part VIII.B.4	30 MONTHS from start date per TMDL Prioritization Report: A Bacterial Pollution Control Plan (BPCP).	TBD

BMAP Reporting

MS4 permittees are NOT required to submit the annual report required by any BMAP that applies to them since the NPDES Stormwater Staff can obtain them from the department's Watershed Planning and Coordination staff. However, to assure that the stormwater staff are aware of which BMAPs apply to the MS4 permittees and when the latest BMAP annual report was submitted, please complete the information below, if applicable:

Rule/Permit Citation	BMAP Title	Date BMAP Annual Report Submitted to DEP
Part VIII.B.2		
Part VIII.B.2		
Part VIII.B.2		
Part VIII.B.2		

**END OF REVISED TAILORED MS4 AR FORM
CYCLE 3 PERMIT**

TMDL Implementation Plan (Lake Lena)

DEP Permit Number: FLS000015-003



Prepared for

CITY OF AUBURNDALE

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1. INTRODUCTION

1.1. Purpose

As part of the City of Auburndale's (the "City") NPDES Municipal Separate Storm Sewer System (MS4) permit (FLS000015), Part VIII.B.3.b, the City is required to develop a Total Maximum Daily Load (TMDL) Implementation Plan for its priority waterbody. The Implementation Plan should identify structural and non-structural management strategies necessary to reduce nutrient loads and help address the TMDL, to the maximum extent practicable. It should be noted that the City is only responsible for reducing the anthropogenic loads associated with stormwater outfalls it owns or otherwise has responsible control over. It is not responsible for reducing other non-point source (NPS) loads in its jurisdiction.

The City currently has jurisdiction over MS-4 outfalls directly discharging into two (2) waterbodies with established TMDLs, Lake Lena and Lake Ariana. The City's TMDL Waterbody Prioritization Report, April 2015, identified Lake Lena as the City's top priority TMDL waterbody.

1.2. Lake Lena TMDL

The Florida Department of Environmental Protection (FDEP) most recently adopted a TMDL for Lake Lena in March 2015. The Lake Lena TMDL evaluated in-lake WQ monitoring and rainfall data collected between 1999 and 2012, to determine the TMDL target TN concentration. It defines an annual geometric mean in-lake TN Concentration of 1.14 mg/L to meet applicable water quality standards. To determine the load reduction needed to meet the TMDL, an estimate of existing nutrient loading is needed. The FDEP TMDL report utilized the maximum annual geometric mean TN concentration between 2002 and 2012 of 1.98 mg/L (2009) as existing conditions. Based on the need to reduce in-lake concentrations from 1.98mg/L to 1.14 mg/L, a 42% reduction in Lake Lena's TN concentration was calculated. The TMDL noted Polk County and the City of Auburndale may be responsible for a 42% TN reduction in current anthropogenic loads.

However, the TMDL report also concludes that issues other than external anthropogenic nutrient loads may be influencing the lake's water quality. This would include such factors as lake hydraulic residence time and internal cycling of nutrients. If in-lake sources are influencing the TN and TP concentrations in the lake, the City may not necessarily be responsible to achieve the entire 42% reduction by addressing external anthropogenic loads within its outfall drainage basins.

2. WATERSHED INFORMATION

2.1. Project Location

Lake Lena is located in western Polk County, along the north side of US-92, just east of the Polk Parkway. The lake receives runoff from an 830 acre drainage area in addition to surface water flows from Lakes Ariana, Whistler, and Arietta, an additional 4,300 acres. **Figure 2-1** shows the individual drainage area of each lake. For the purposes of this plan, analysis will focus on reducing external anthropogenic loads discharging directly to Lake Lena from its 830 acre drainage area.

2.2. City’s MS-4 Outfalls and Drainage Areas

Based on the City’s outfall inventory map and field site visits, the location, classification, type and size of each of the City’s ten (10) MS-4 outfalls have been identified and shown in **Table 2-1**. Of the City’s 10 MS-4 outfalls, only AUB-44B is considered “Major”. **Figure 2-2** and **Figure 2-3** show the location and drainage area of the City’s MS-4 outfalls which discharge into Lake Lena. The City’s MS-4 outfalls drain approximately 138 acre or 17% of Lake Lena’s drainage area.

Table 2-1 Lake Lena MS-4 Outfall Summary

Outfall ID	Type	Classification	Description	Drainage Area (Acres)
AUB-40	PIPE	MINOR	18" RCP	4.1
AUB-41	PIPE	MINOR	18" RCP	2.5
AUB-42	PIPE	MINOR	15" RCP	6.5
AUB-43	PIPE	MINOR	15" RCP	1.5
AUB-44	PIPE	MINOR	18" RCP	7.93
AUB-44B	PIPE	MAJOR	18" RCP w/Industrial	58.3
AUB-45	PIPE	MINOR	18" RCP	12.5
AUB-46	PIPE	MINOR	18" RCP	26.4
AUB-47	PIPE	MINOR	18" RCP	18.1
AUB-47B	PIPE	MINOR	15" RCP	0.3
TOTAL				138.1

Figure 2-1 Lake Drainage Areas

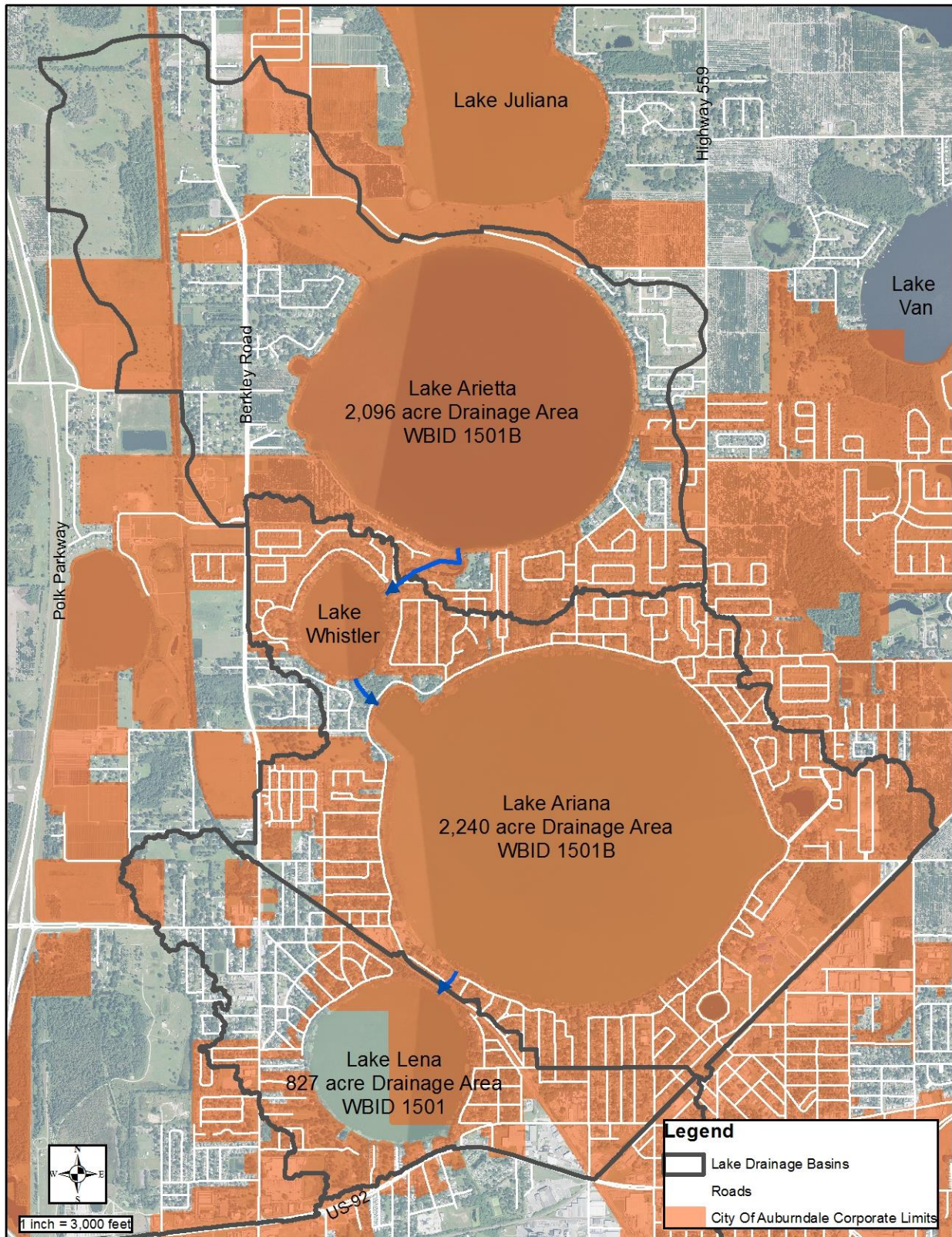


Figure 2-2 Lake Lena MS-4 Outfalls and Drainage Areas

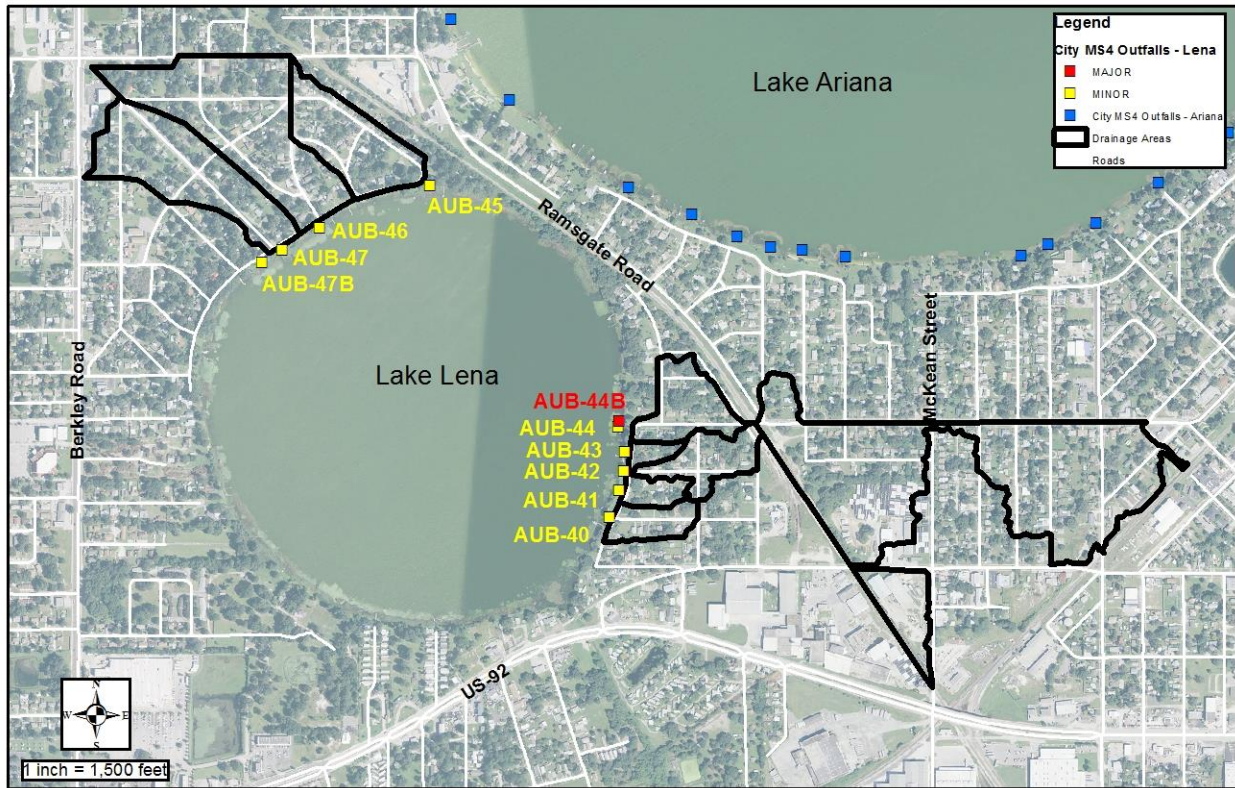
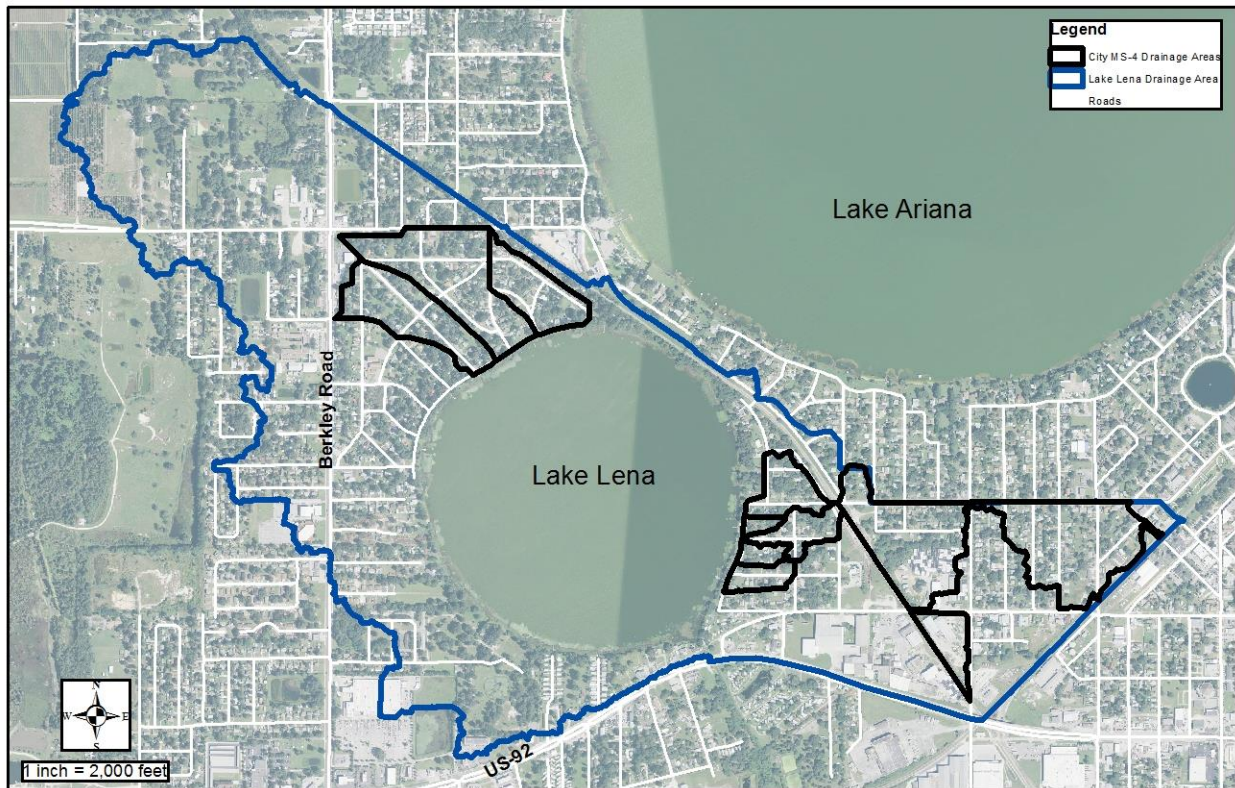


Figure 2-3 Lake Lena Drainage Area



2.3. Land Use Coverage

The land use coverage was obtained from SWFWMD. As shown on **Figure 2-4** land use within the drainage areas is highly developed, consisting mostly of residential with some commercial and industrial areas. It should be noted that Lake Lena's surface area itself accounts for approximately 210 acres (25%) of the watershed.

Table 2-2 Lake Lena Land use Summary

Land Use	Area (Acres)
Citrus	8.4
General Agriculture	8.8
High-Intensity Commercial	13.9
Highway	28.9
Light Industrial	60.0
Low-Density Residential	21.3
Low-Intensity Commercial	70.9
Multi-Family	31.8
Open Water / Lake	199.3
Pasture	24.3
Single-Family	328.6
Undeveloped / Rangeland / Forest	18.3
Wetland	12.8

2.4. Hydrologic Soil Coverage

The soil coverage was obtained from Polk County's GIS data library and is based on the United States Department of Agriculture - Natural Resource Conservation Services (Formerly USDA/SCS) soil maps. The hydrologic soil group ("HSG") coverage, shown as **Figure 2-5**, shows the pervious areas of Lake Lena's drainage areas are well drained and consist almost entirely of HSG A and A/D.

Figure 2-4 Lake Lena Land Use

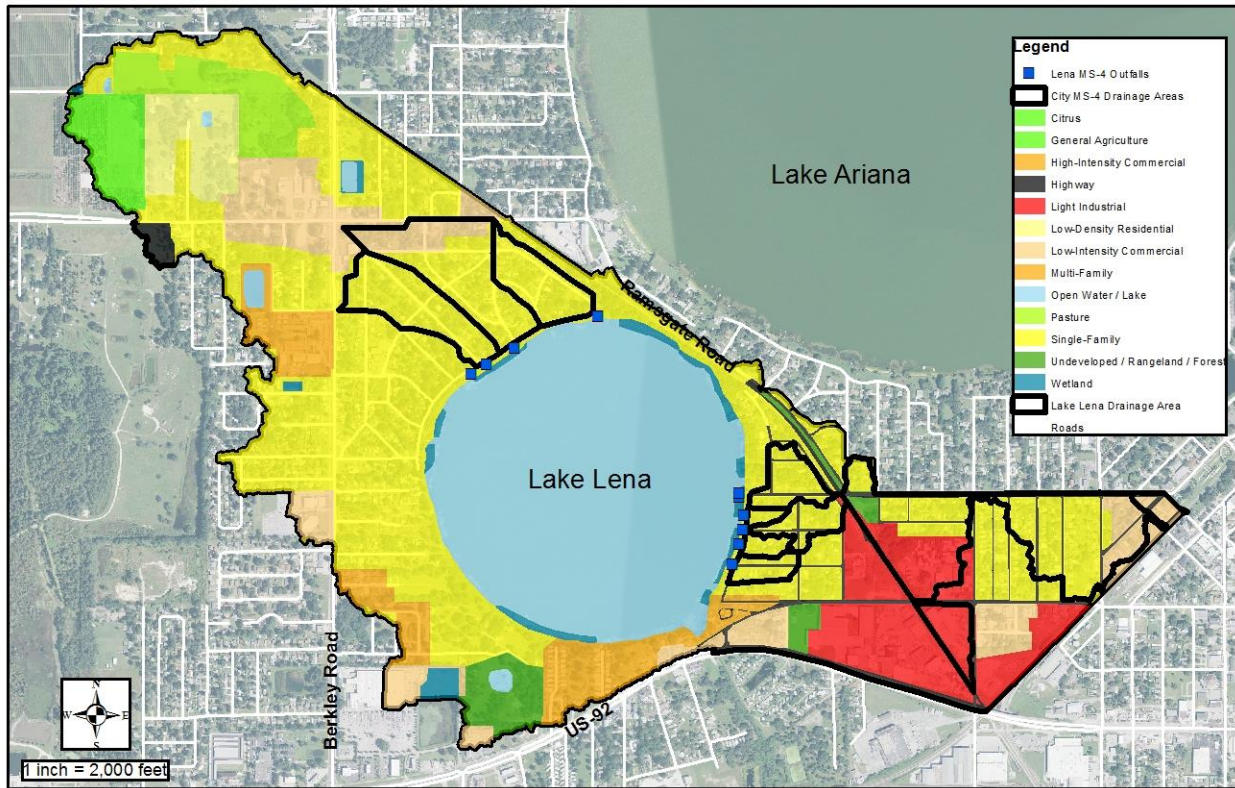
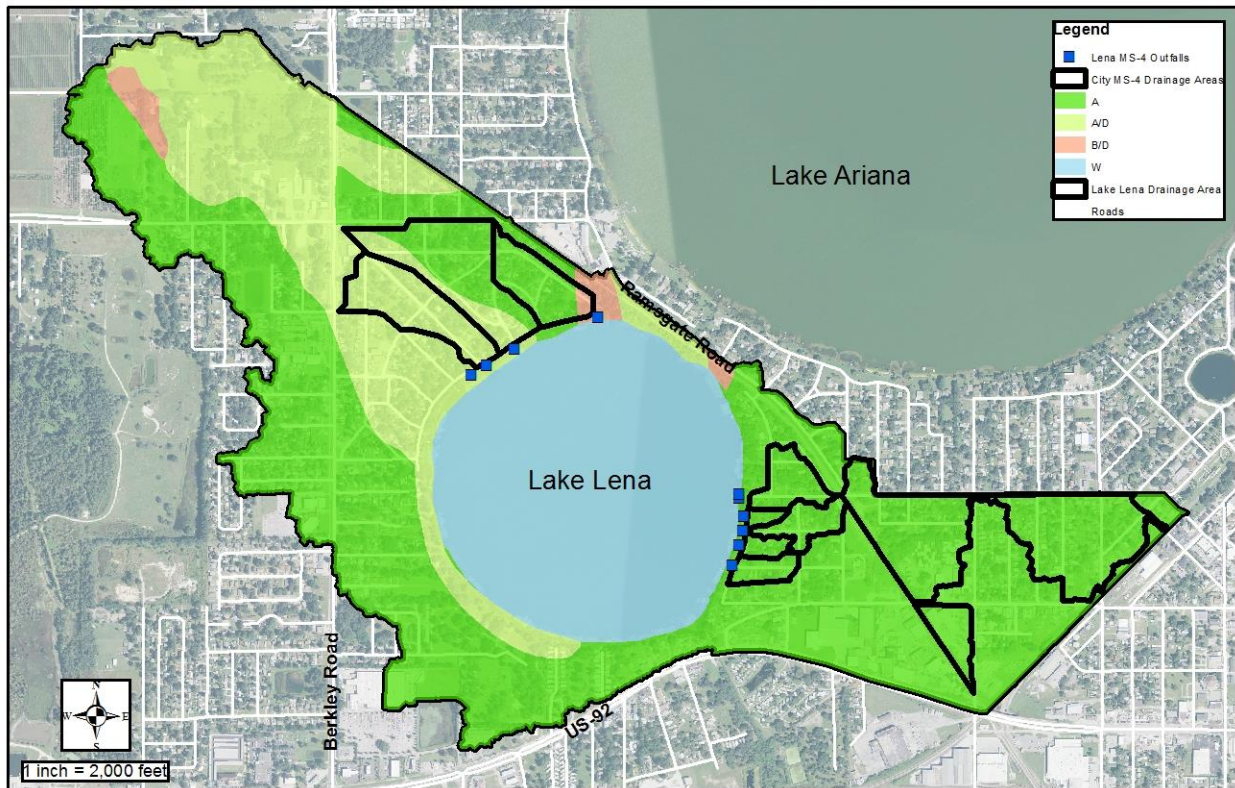


Figure 2-5 Lake Lena Soils



3. Baseline Watershed Pollutant Loading Estimates

3.1. Pollutant Loading Parameterization

An Event Mean Concentration (“EMC”) based method for estimating the quantity of pollutants carried downstream by stormwater runoff was utilized for these analyses. The method is used to identify where pollutant loads are likely being produced. Average yearly pollutant loads have been estimated for Total Nitrogen (“TN”), Total Phosphorous (“TP”).

3.2. Rainfall/Runoff

EMC based pollutant loading estimates are highly dependent on the amount of runoff produced over the drainage area. Using the mean annual rainfall map provided as **Figure 3-1**, a 50-inch mean annual rainfall depth was selected based on the project location. The 50-inch mean annual rainfall depth is then converted to a mean annual runoff depth. Based on the land use/soil combination, a non-DCIA CN and DCIA percentage is selected using **Table 3-1**. The CN/DCIA combination is converted to a runoff coefficient (“C”) using **Table 3-2**. Zone 2 runoff coefficients were selected based on data provided by Polk County. A 10% initial abstraction values was used based on standard literature.

The following formula was applied to calculate the annual runoff depth:

$$\text{Annual Runoff (in)} = 0.9 * \text{Runoff Coefficient (C)} * \text{Annual Rainfall (in)}$$

3.3. Event Mean Concentrations

The concentration of pollutant loads is specific to the type of land use, where the runoff is being produced. Monitoring and field measurement of the pollutant concentrations from runoff produced by various Florida land use types has been compiled and converted to standardized EMC values, expressed in milligrams/liter (“mg/L”). The EMC values are multiplied by the yearly runoff volume to calculate a mass of pollutants, expressed as pounds/year (“lb/yr”). The land use specific EMC values utilized for this project are based on those provided by the Phase I MS-4 Permit Resource Manual and included as **Table 3-3**.

Table 3-1 CN and DCIA Lookup Table

FLUCC Code	Land Use Description	A	A/D	B/D	DCIA
1400	COMMERCIAL AND SERVICES	39	39	61	85
2100	CROPLAND AND PASTURELAND	39	80	80	0
6440	EMERGENT AQUATIC VEGETATION	98	98	98	100
6410	FRESHWATER MARSHES	98	98	98	100
1500	INDUSTRIAL	39	39	61	72
1700	INSTITUTIONAL	39	39	61	65
6530	INTERMITTENT PONDS	98	98	98	100
5200	LAKES	98	98	98	100
2400	NURSERIES AND VINEYARDS	67	89	89	5
1900	OPEN LAND	39	80	80	0
2600	OTHER OPEN LANDS <RURAL>	39	80	80	0
1800	RECREATIONAL	39	80	80	10
5300	RESERVOIRS	98	98	98	100
1300	RESIDENTIAL HIGH DENSITY	39	39	61	50
1100	RESIDENTIAL LOW DENSITY < 2 DWELLING UNITS	39	39	61	20
1200	RESIDENTIAL MED DENSITY 2->5 DWELLING UNIT	39	39	61	25
8100	TRANSPORTATION	83	83	89	25
2200	TREE CROPS	39	79	79	10

Table 3-2 Mean Annual Runoff Coefficients as a Function of CN and DCIA

Zone 2 Mean Annual Runoff Coefficients (C Values) as a Function of DCIA Percentage and Non-DCIA Curve Number (CN)																					
NDCIA	Percent DCIA																				
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
30	0.002	0.043	0.083	0.123	0.164	0.204	0.244	0.285	0.325	0.366	0.406	0.446	0.487	0.527	0.567	0.608	0.648	0.688	0.729	0.769	0.809
35	0.004	0.044	0.085	0.125	0.165	0.205	0.246	0.286	0.326	0.366	0.407	0.447	0.487	0.528	0.568	0.608	0.648	0.689	0.729	0.769	0.809
40	0.007	0.047	0.087	0.127	0.167	0.207	0.248	0.288	0.328	0.368	0.408	0.448	0.488	0.528	0.569	0.609	0.649	0.689	0.729	0.769	0.809
45	0.010	0.050	0.090	0.130	0.170	0.210	0.250	0.290	0.330	0.370	0.410	0.450	0.490	0.530	0.570	0.610	0.650	0.690	0.729	0.769	0.809
50	0.015	0.055	0.095	0.134	0.174	0.214	0.254	0.293	0.333	0.373	0.412	0.452	0.492	0.531	0.571	0.611	0.651	0.690	0.730	0.770	0.809
55	0.022	0.061	0.101	0.140	0.179	0.219	0.258	0.298	0.337	0.376	0.416	0.455	0.494	0.534	0.573	0.613	0.652	0.691	0.731	0.770	0.809
60	0.030	0.069	0.108	0.147	0.186	0.225	0.264	0.303	0.342	0.381	0.420	0.459	0.498	0.537	0.576	0.615	0.654	0.693	0.731	0.770	0.809
65	0.042	0.080	0.119	0.157	0.195	0.234	0.272	0.311	0.349	0.387	0.426	0.464	0.502	0.541	0.579	0.618	0.656	0.694	0.733	0.771	0.809
70	0.057	0.095	0.133	0.170	0.208	0.245	0.283	0.321	0.358	0.396	0.433	0.471	0.509	0.546	0.584	0.621	0.659	0.697	0.734	0.772	0.809
75	0.079	0.116	0.152	0.189	0.225	0.262	0.298	0.335	0.371	0.408	0.444	0.481	0.517	0.554	0.590	0.627	0.663	0.700	0.736	0.773	0.809
80	0.111	0.146	0.181	0.216	0.251	0.285	0.320	0.355	0.390	0.425	0.460	0.495	0.530	0.565	0.600	0.635	0.670	0.705	0.740	0.774	0.809
85	0.160	0.192	0.225	0.257	0.290	0.322	0.355	0.387	0.420	0.452	0.485	0.517	0.550	0.582	0.614	0.647	0.679	0.712	0.744	0.777	0.809
90	0.242	0.270	0.299	0.327	0.355	0.384	0.412	0.440	0.469	0.497	0.526	0.554	0.582	0.611	0.639	0.667	0.696	0.724	0.753	0.781	0.809
95	0.404	0.424	0.444	0.464	0.485	0.505	0.525	0.546	0.566	0.586	0.606	0.627	0.647	0.667	0.688	0.708	0.728	0.749	0.769	0.789	0.809
98	0.595	0.605	0.616	0.627	0.638	0.648	0.659	0.670	0.680	0.691	0.702	0.713	0.723	0.734	0.745	0.756	0.766	0.777	0.788	0.799	0.809

Figure 3-1 Mean Annual Rainfall Map



Table 3-3 Event Mean Concentration Input Values

Land Use Description	TN (mg/L)	TP (mg/L)
Low-Density Residential	1.5	0.18
Single-Family	1.85	0.31
Multi-Family	1.91	0.48
Low-Intensity Commercial	0.93	0.16
High-Intensity Commercial	2.48	0.23
Light Industrial	1.14	0.23
Highway	1.37	0.17
Pasture	2.48	0.7
Citrus	2.31	0.16
Row Crops	2.47	0.51
General Agriculture	2.42	0.46
Undeveloped / Rangeland / Forest	1.15	0.055
Mining / Extractive	1.18	0.15
Wetland	1.01	0.09
Open Water / Lake	0	0

3.4. Gross Pollutant Loading Calculation

The annual pollutant load is calculated for each unique land use/soil area, using the above referenced mean annual rainfall, annual runoff and EMC values by spatially intersecting the land use and soil coverage. The annual pollutant load produced by each unique area is accumulated, to express the gross average annual pollutant load, for the watershed areas.

The following formula was applied to estimate the gross average annual pollutant load:

$$Gross\ Average\ Annual\ Load\ (lbs) = 0.226 * Annual\ Runoff\ (in) * EMC\ (mg/L) * Area\ (Ac)$$

3.5. Results of Pollutant Loading Estimates

Based on the method described above, pollutant loading rates have been estimated for TN, TP on an annual (lb/yr) and event mean concentration (mg/L) basis. Table 3-4 shows the annual quantity of pollutant loads produced within each MS-4 drainage area as well as Lake Lena’s drainage area. Approximately, 22% of the estimated external anthropogenic loads discharged to Lake Lena are from City’s MS-4 outfalls.

Table 3-4 Pollutant Loading Estimates

MS-4 Outfall	Drainage Area (Acres)	Runoff Volume (Ac-ft)	Total Nitrogen (lb/year)	Total Phosphorous (lb/year)	Total Nitrogen (mg/L)	Total Phosphorous (mg/L)
AUB-40	4.1	3.2	16.0	2.7	1.85	0.31
AUB-41	2.5	1.9	9.7	1.6	1.85	0.31
AUB-42	6.5	5.3	25.9	4.4	1.79	0.30
AUB-43	1.5	1.1	5.7	1.0	1.85	0.31
AUB-44	7.9	6.2	30.9	5.2	1.85	0.31
AUB-44B	58.3	84.6	300.5	55.1	1.31	0.24
AUB-45	12.5	9.8	49.0	8.2	1.85	0.31
AUB-46	26.4	34.9	123.9	21.0	1.31	0.22
AUB-47	18.1	14.2	70.6	11.8	1.84	0.31
AUB-47B	0.2	0.2	1.0	0.2	1.85	0.31
City MS-4 Total	138	161	633	111		
Lake Lena Total	617 (Ex. Lake Surface Area)	1,350	2,963	509		
City’s Percent of Total	22%	12%	21%	22%		

3.6. Storm Event Sampling Summary

To test that the baseline pollutant loading estimates are not overstating the City's discharge, the City selected outfall AUB-44B for storm event sampling. AUB-44B was selected using FDEP monitoring plan guidance to select the outfall with the highest predicted nutrient loads. The sampling effort obtained nutrient (TN and TP) concentrations from runoff discharged by seven (7) storm events between 9/25/2015 and 1/15/2016.

Table 3-5 summarizes the results of the storm event sampling for AUB-44B. The samples are flow weighted composites of each storm event. For the purposes of this analysis data from the 10/27/2015 will be considered an outlier and excluded since the event produced abnormally little rainfall over an extended period of time (0.138" over 19 hours).

Table 3-5 AUB-44B Storm Event Sampling

Event Date	Rainfall (Inches)	Rainfall Duration (hours)	Runoff Volume (cf)	Calculated Runoff Coefficient	Total Nitrogen (mg/L)	Total Phosphorous (mg/L)
9/25/2015	0.371	2.5	3,801	0.043	0.99	0.155
10/13/2015	0.136	0.5	551	0.017	2.56	0.431
10/27/2015*	0.138	19	733	0.023	5.99	0.255
11/7/2015	1.21	2.75	18,790	0.066	2.48	0.533
11/21/2015	1.38	15.5	27,664	0.085	1.29	0.252
12/18/2015	0.15	6.25	1,879	0.053	2.62	0.384
1/15/2016	1	5.35	8,576	0.036	4.03	1.22
Average	0.63	7.4	8,856	0.05	2.85	0.46
Average (Ex. 10/27/2015)	0.71	5.48	10,210	0.05	2.33	0.5

Based on the storm event sampling at AUB-44B, it appears a substantial amount of runoff is bypassing the inlet and sheet flowing downstream, rather than discharging directly to the lake, through AUB-44. This is evident by the 0.05 average calculated runoff coefficient verses that which would be expected for a highly developed basin with sandy soils of 0.4 to 0.5. To develop a more accurate baseline loading rate for AUB-44B, the average concentrations and the average calculated runoff coefficient from sampling data will be used to re-calculate the annual baseline load discharging from AUB-44B. A 20% safety factor will be added to the final load to account for uncertainty associated with the conversion from water level readings to flow volumes. Since no sampling data is available for the remaining outfalls, the original baseline loading estimates will be considered the best available data.

Table 3-6 Revised Annual Loading Summary

MS-4 Outfall	Drainage Area (Acres)	Runoff Volume (Ac-ft)	Total Nitrogen (mg/L)	Total Phosphorous (mg/L)	Total Nitrogen (lbs/year)	Total Phosphorous (lbs/year)
AUB-44B (Original)	58.3	84.6	1.31	0.24	300.5	55.1
AUB-44B (Revised)	58.3	13.1*	2.33	0.5	82.9*	17.8*
Original City MS-4 Total	138	161			633	111
Revised City MS-4 Total	138	89.5*			415.4*	73.7*

* Includes 20% Safety Factor

4. Implementation Strategies

4.1. City’s Load Reduction

Based on the 42% reduction needed to meet the TMDL, approximately 174 pounds of the estimated 415 pounds of TN discharging from the City’s MS-4 should be intercepted prior to discharging into Lake Lena. To meet the target TN loadings, the City is proposing implementation of the following best management practices.

4.2. Proposed Activities

LID Stormwater Improvement Projects: The City is currently working to design a stormwater quality improvement project which focuses on treating runoff for approximately 70 acres of Lake Lena’s drainage basin. The project consists of a series of Low Impact Development (LID) stormwater improvement features including a reduction in impervious area (PK Avenue road diet), rain gardens, bio-retention swales, stormwater retention pond, and a nutrient separating baffle box. Initial TN reduction estimates anticipate capture of 200 lbs of TN, annually.

The project is currently in the design and permitting phases with construction anticipated to occur sometime during the next permit cycle. It should be noted, this project is partially dependent on co-operative and/or grant funding support. Currently, the project is funded with full anticipation of completion. If cooperative funding sources become unavailable to the City and the anticipated load reductions are not fully achieved, the City will attempt to make up the difference through alternative strategies outlined below.

GIS Mapping of the City's Stormwater System (Alternative): Mapping of municipal stormwater systems using GIS is becoming a popular approach to facilitate system management (inspections/maintenance). The City is currently developing a GIS database scheme to house the spatial locations, photographs, inspection reports and maintenance records for its stormwater system. The database design is anticipated to be completed this year and the City's goal will be to populate the database over the next permit cycle.

Initial mapping effort will be focused within the Lake Lena drainage area. The GIS system will allow field crews to monitor the performance of their stormwater system and resolve deficiencies more effectively. Although quantifying the associated improvements in water quality through more effective system management is difficult, for the purposes of this analysis a 5% reduction in nutrient loads has been estimated. Thus, this activity will be assumed to remove about 21 lbs of TN from the City's outfall areas annually.

Increased Inspection of Stormwater Facilities (Alternative): To further improve the quality of runoff discharging into Lake Lena, City staff can focus additional inspection and maintenance activities to stormwater structures (inlets, pipes and swales) within the lake's drainage area. The purpose of the increased inspections will be to identify and eliminate potential sources of nutrient loads resulting from illicit discharges, excess sediment, improper use of fertilizer, and other activities known to produce excess nitrogen.

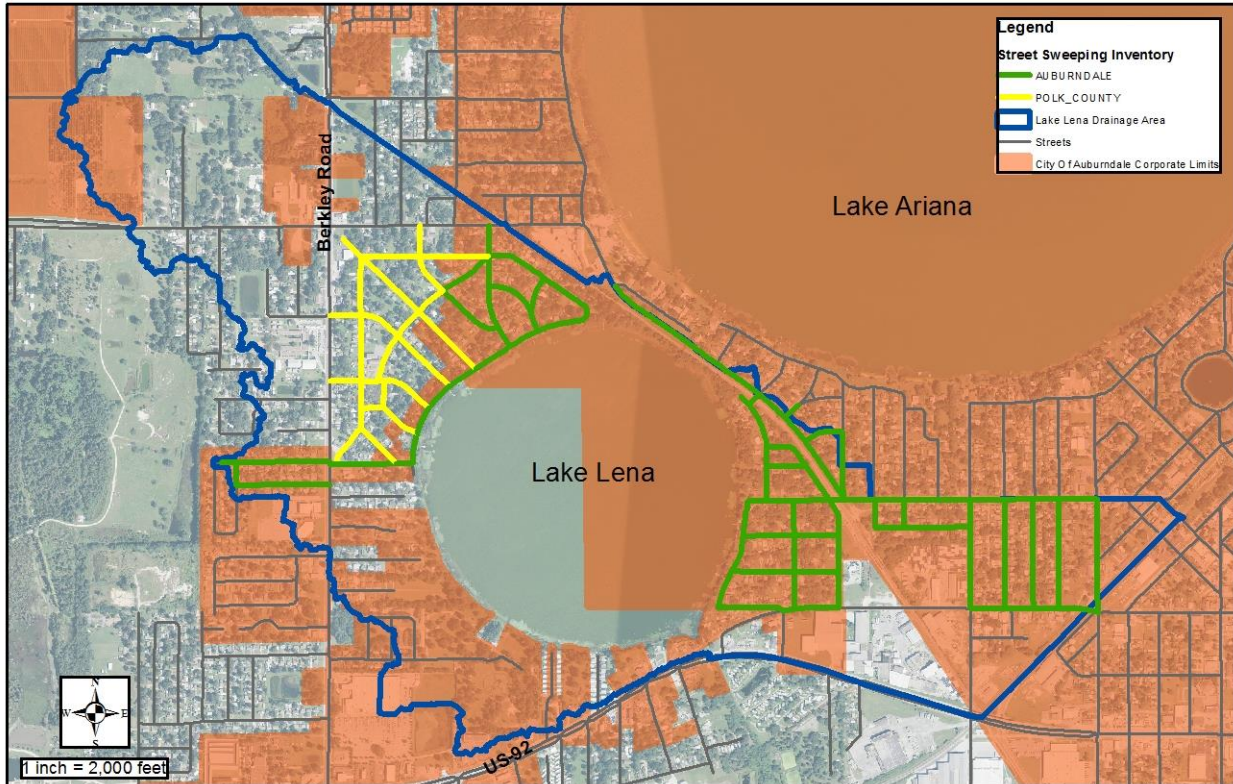
The City will document maintenance activities and quantify the estimated annual TN removal of such activities as part of its annual report. Although quantifying the associated improvements in water quality through more focused maintenance activities is difficult, for the purposes of this analysis a 5% reduction in nutrient loads has been estimated. Thus, this activity will be assumed to remove about 20 lbs of TN from the City's outfall areas annually.

Concentrated Street Sweeping (Alternative): As an alternative or supplemental strategy to augment, as needed, the above referenced structural improvement project, the City can increase the frequency and expand the limits of its existing street sweeping program. The City is committed to limiting sediment, trash and debris build-up along City roadways for a variety of reasons, including improvements to the quality of stormwater discharge. Currently, the City's goal is to sweep the majority of City streets on at least an annual basis. As shown by Figure 4-1, approximately 15.2 miles of roadway exist within the Lake's drainage basin, of which 7 miles are swept by the City and 2.2 miles are swept by the County on an annual basis. Approximately, 6.2 miles are not swept by either the City or the County.

To further improve the quality of runoff discharging into Lake Lena the City proposes to increase street sweeping within the lakes drainage basin to a bi-annual frequency. The City will consider further increased frequency for each roadway if results deem necessary. Although quantifying

the associated improvements in water quality through more frequent street sweeping is difficult, for the purposes of this analysis a 2.5% reduction in nutrient loads has been estimated. Thus, this activity will be assumed to remove about 10 lbs of TN from the City’s outfall areas annually.

Figure 4-1 Lake Lena Street Sweeping Inventory



5. Conclusion

Based on this analysis, the City is actively implementing strategies to improve the quality of stormwater discharging into Lake Lena from the City’s MS-4 system. Furthermore, the City will continue to identify opportunities which further improve the quality runoff discharging into the Lake to the extent practicable. The management strategies outlined in this report are expected go above and beyond the TMDL implementation requirement included as part of the City’s NPDES permit.