Stormwater Management Plan
Town of Waynesville
NCS000501

Approved: June 28, 2021

DEQ NORTH CAROLINA Department of Environmental Quality

APPROVED

August 19, 2021

Jeanette Powell
MS4 Program Coordinator

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PART 1: INTRODUCTION

The purpose of this Stormwater Management Plan (SWMP) is to establish and define the means by which the Town of Waynesville will comply with its National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit and the applicable provisions of the Clean Water Act to meet the federal standard of reducing pollutants in stormwater runoff to the maximum extent practicable.

This SWMP identifies the specific elements and minimum measures that the Town of Waynesville will develop, implement, enforce, evaluate and report to the North Carolina Department of Environmental Quality (NCDEQ) Division of Energy, Minerals and Land Resources (DEMLR) in order to comply with the MS4 Permit number NCS000501, as issued by NCDEQ. This permit covers activities associated with the discharge of stormwater from the MS4 as owned and operated by the Town of Waynesville and located within the corporate limits of the Town of Waynesville.

In preparing this SWMP, the Town of Waynesville has evaluated its MS4 and the permit requirements to develop a comprehensive 5-year SWMP that will meet the community's needs, address local water quality issues and provide the minimum measures necessary to comply with the permit. The SWMP will be evaluated and updated annually to ensure that the elements and minimum measures it contains continue to adequately provide for permit compliance and the community's needs.

Once the SWMP is approved by NCDEQ, all provisions contained and referenced in this SWMP, along with any approved modifications of the SWMP, are incorporated by reference into the permit and become enforceable parts of the permit.

PART 2: CERTIFICATION

By my signature below I hereby 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 gather and evaluate the information submitted. Based on 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 fines and imprisonment for knowing violations.

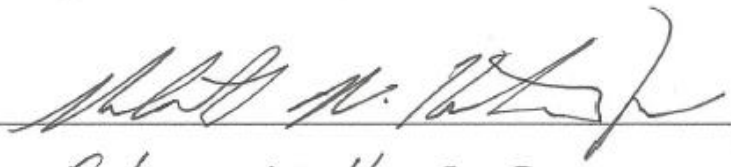
I am also aware that the contents of this document shall become an enforceable part of the NPDES MS4 Permit, and that both the Division and the Environmental Protection Agency have NPDES MS4 Permit compliance and enforcement authority.

☐ I am a ranking elected official.

☒ I am a principal executive officer for the permitted MS4.

☐ I am a duly authorized representative for the permitted MS4 and have attached the authorization made in writing by a principal executive officer or ranking elected official which specifies me as (*check one*):

- ☐ A specific individual having overall responsibility for stormwater matters.
- ☐ A specific position having overall responsibility for stormwater matters.

Signature:	
Print Name:	ROBERT W. HITES JR
Title:	TOWN MANAGER
Signed this 28 day of 2021 .	

PART 3: MS4 INFORMATION

3.1 Permitted MS4 Area

This SWMP applies throughout the corporate limits of the Town of Waynesville, including all regulated activities associated with the discharge of stormwater from the MS4 (Figure 1).

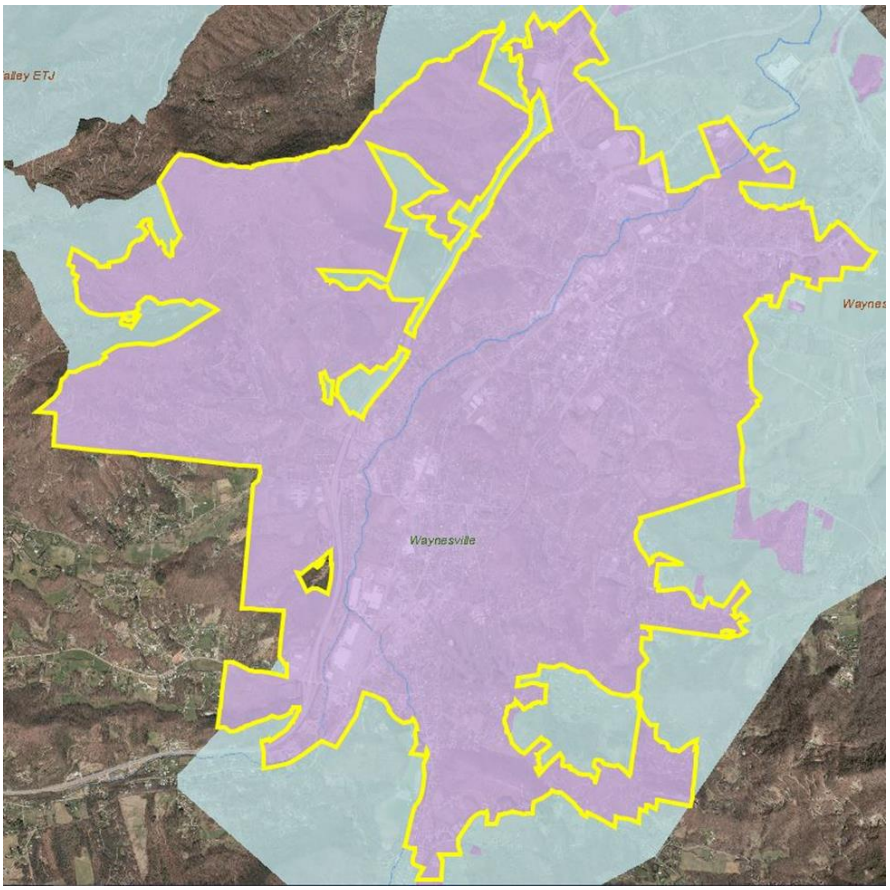


Figure 1. Town of Waynesville corporate limits as of November 2019
(Source: http://maps.haywoodcountync.gov/gisweb/default.htm)

3.2 Existing MS4 Mapping

The MS4 mapping includes information from McGill Associates' Stormwater Master Plan created for the Town in 2008. The data were collected by the Town in a 2003 inventory of their stormwater conveyance system, which were then digitized into a GIS database for analysis by McGill Associates. The results of the survey indicated the town's stormwater conveyance system consists of 1,202 pipes and 1,035 catch basins (Figure 1, Table 1). They also indicated there were 56 outfalls where the pipes discharged into a receiving body of water. McGill also completed a field survey for illicit discharges and found 378 major outfalls, with 24 considered illicit (Figure 2, Table 1). Refer to the Stormwater Master Plan's Sections 3.0 to 3.4 for information on the MS4 mapping process.

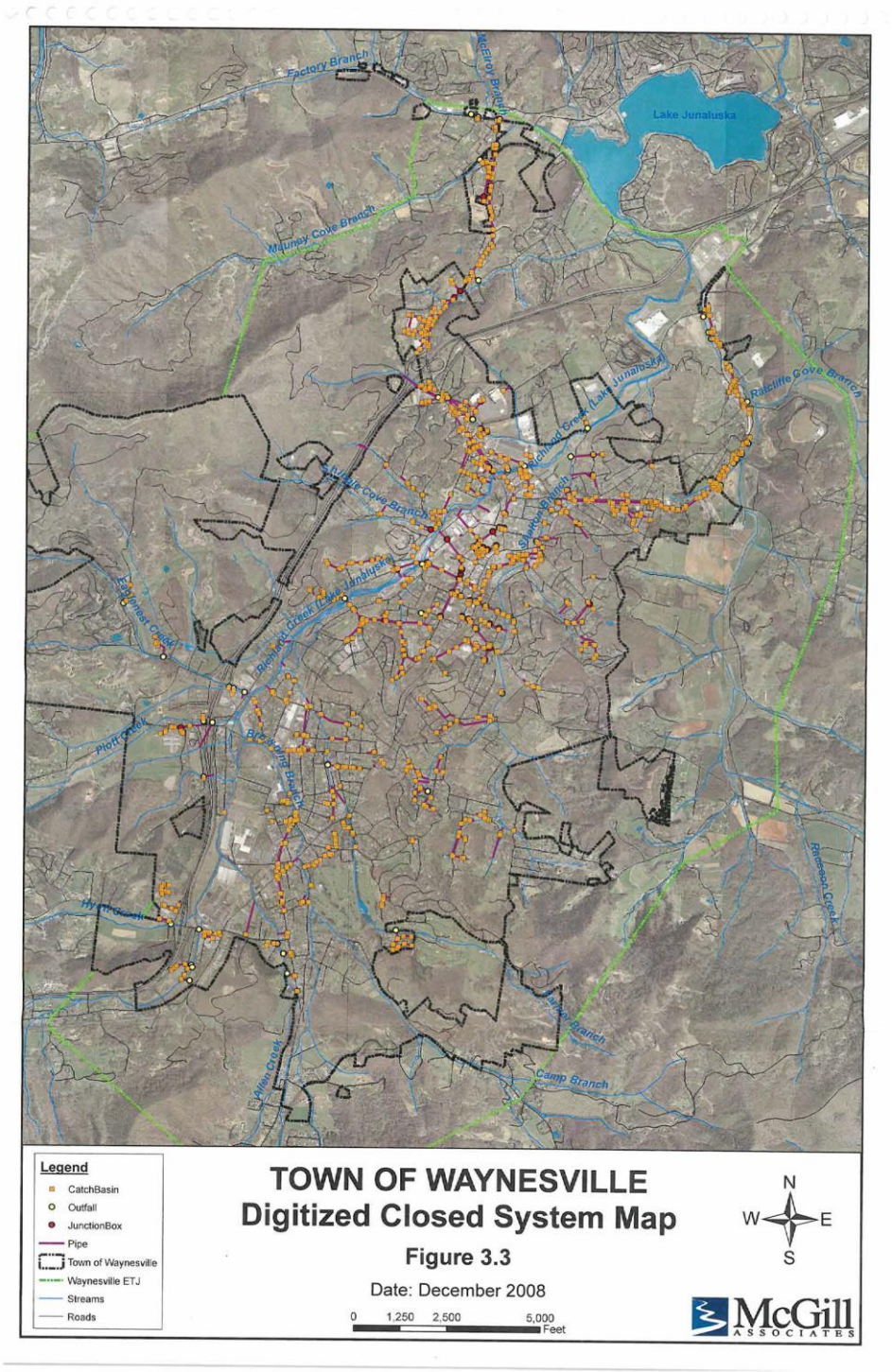


Figure 2. Town of Waynesville's Stormwater Conveyance System (Source: Town of Waynesville Stormwater Master Plan 2008, McGill Associates)

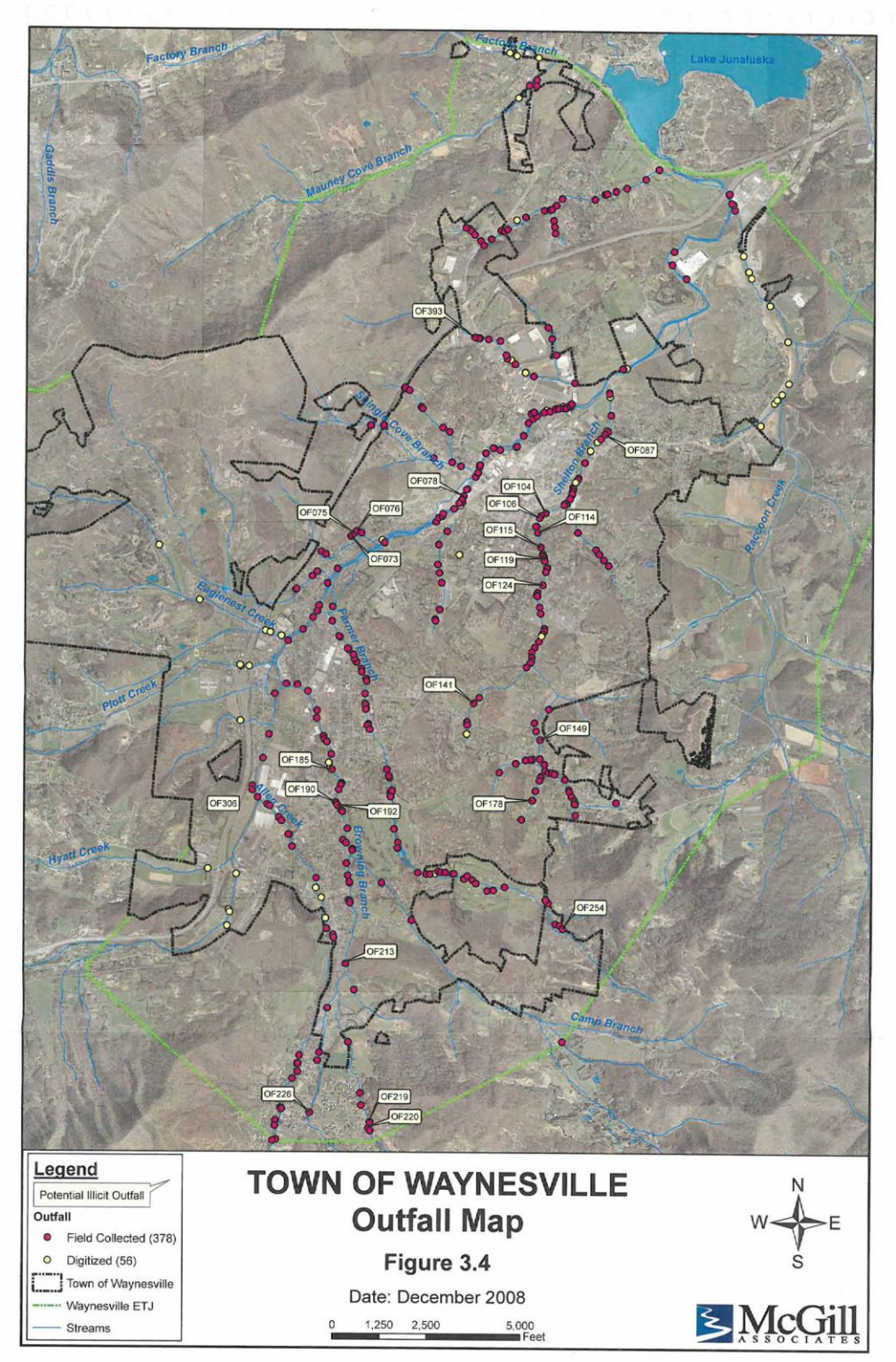


Figure 3. Town of Waynesville's Outfall Map (Source: Town of Waynesville Stormwater Maser Plan 2008, McGill Associates)

Table 1. Summary of MS4 Mapping

Percent of MS4 Area Mapped	100%	
Stormwater conveyance pipes	1,202	Town of Waynesville 2003 Survey
Catch basins	1,035	Town of Waynesville 2003 Survey
Major outfalls*	378	McGill Associates 2008 survey
Illicit discharges detected	24	McGill Associates 2008 survey

** A major outfall is a 36-inch diameter pipe or discharge from a drainage area > 50-acres; and for industrial zoned areas a 12-inch diameter pipe or a drainage area ≥ 2-acres.*

3.3 Receiving Waters

The Town of Waynesville is in the Pigeon River subbasin of the French Broad River watershed. The town's stormwater conveyance system discharges into the primary receiving waters listed in Table 2. Applicable water quality standards were compiled from the following NCDEQ sources:

- 2018 Final 303(d) List,
- Surface Water Classifications Map, and
- Impaired Waters and TMDL Map.

Table 2. Summary of MS4 Receiving Water

Receiving Water Name	Stream Index / AU Number	Water Quality Classification	303(d) Listed Parameter(s) of Interest
Richland Creek	5-16-(1)	B	Fecal coliform bacteria (GM 200/400, REC, FW)
Unnamed tributary to Richland Creek @ Golf Course Rd.		B	
Hyatt Creek	5-16-6b	C	
Allens Creek	5-16-7-(8.5)	C, Tr	
Browning Branch	5-16-8	C, Tr	
Camp Branch	5-16-8-2	C, Tr	
Plott Creek	5-16-9	C, Tr	
Eaglenest Creek	5-16-10	C, Tr	
Farmer Branch	5-16-11	B	
Shingle Cove Branch	5-16-12	B	
Shelton Branch	5-16-13	B	
Raccoon Creek	5-16-14	B	
Factory Branch	5-16-15	B	
Mauney Cove Branch	5-16-15-2	B	

3.4 MS4 Interconnection

The Town of Waynesville MS4 is not interconnected with another regulated MS4.

3.5 Total Maximum Daily Loads (TMDLs)

No total maximum daily loads have been established in the MS4

3.6 Endangered and Threatened Species and Critical Habitat

There are no federally threatened or endangered species and/or critical habitat within the regulated MS4 urbanized area, as determined by a review of the U.S. Fish & Wildlife Service's document Endangered and Threatened Species and Species of Concern by County for North Carolina.

3.7 Industrial Facility Discharges

The Town of Waynesville's jurisdictional area includes the following industrial facilities which hold NPDES Industrial Stormwater Permits, as determined from the NCDEQ Active NPDES Stormwater Permit List and/or Active Stormwater Permits Map.

Table 3. NPDES Stormwater Permitted Industrial Facilities

Permit Number	Facility Name
NCG050401	Sonoco Plastics
NCG080969	Southeast Bulk, LLC
NCG140394	Southern Concrete Materials - Waynesville
NCG140153	Southern Concrete Materials - Haywood
NCS000504	Town of Waynesville small MS4

3.8 Non-Stormwater Discharges

The water quality impacts of unpermitted and non-stormwater discharges have been evaluated by the Town of Waynesville and are summarized in Table 4. Most of the non-stormwater flows are considered incidental and are not expected to significantly impact water quality.

The Town of Waynesville has evaluated residential and charity car washing and street washing for possible significant water quality impacts. Wash water associated with car washing that does not contain detergents or does not discharge directly into the MS4 is considered incidental. However, there is possibility that discharges containing detergents may significantly impact water quality.

Street washing discharges are addressed under the Pavement Management Program in Part 10 of this SWMP. The Division has not required that other non-stormwater flows be specifically controlled by the Town of Waynesville.

Table 4. Non-Stormwater Discharges

Non-Stormwater Discharge	Water Quality Impacts
Landscape irrigation	Incidental
Uncontaminated groundwater infiltration	Incidental
Uncontaminated potable water sources	Incidental
Foundation drains	Incidental
Air conditioning condensate	Incidental
Uncontaminated ground water /springs	Incidental
Water from crawl space pumps	Incidental
Footing drains	Incidental
Lawn watering	Incidental
Residential and charity car washing	**Possible**
Dechlorinated swimming pool discharges	Incidental
Street wash water	**Not Possible**
Flows from firefighting activities	Incidental

3.9 Target Pollutants and Sources

There are several water quality pollutants of concern that may originate from the town's stormwater conveyance system, NPDES permit holders, or non-stormwater discharges. Table 5 includes a summary these pollutants as well as the likely activities/sources attributed to each pollutant, and identifies the associated SWMP program(s) that address each.

1. Sediment: This is the most significant water quality issue in the Richland Creek basin. Contractors engaged in earth moving activities, primarily in residential home and road construction, are major sources. Other sources include eroding streambanks and unmaintained roads and ditches within the town limits. Erosion and sediment control plans required by the state for over one acre do not effectively reach small house sites. Town staff has contact with builders via permitting and inspection activities and receive additional training and educational materials to pass along to property owners and builders. Workshops on erosion and sediment control training are infrequently held for builders.

2. Household pollutants: Residential is the predominate land use and the town can educate residents about how to prevent household cleaners and products, oil, antifreeze, yard waste, fertilizers, pesticides, trash and other waste from getting into storm drains and waterways. Proper storage and use of pesticides and fertilizers educational materials are readily available and can be distributed. The town's solid waste education materials deal with many issues for proper disposal of pet wastes, paints, oil, etc. Signage in parks inform residents on proper disposal of pet wastes.

3. Parking lot pollutants: Commercial parking lot pollutants include thermal stress, chemicals from leaking cars, and trash. Best management practices for parking lot runoff controls can be identified and explained in workshops and other educational materials.

4. Bacteria: Richland Creek is currently on the state list of impaired waterways due to fecal coliform bacteria. Primary sources include leaking septic systems and cracked or broken sewer lines that leach raw sewage to the surface. Other sources include wildlife and pets. Workshops and educational materials about the proper care and maintenance of septic systems are regularly provided to the community.

Table 5. Summary of Target Pollutants and Sources

Target Pollutant(s)	Likely Source(s)/Target Audience(s)	SWMP Program Addressing Target Pollutant(s)/Audience(s)
Sediment	Residential homes - Residents Construction sites - Contractors Streambanks - All Mountainside roads and ditches – Residents, contractors Town properties	Permit process – Contractors Public Education & Outreach – All Stormwater collection and treatment BMPs - All Construction site BMPs - Contractors
Household waste	Residents - Residents	Public Education & Outreach – Residents Recycling Program – Residents Waste Disposal Program – Residents
Thermal Stress	Parking lots –property owners, businesses	Public Outreach & Education- All Stormwater collection and treatment BMPs - All Required construction site BMPs – Contractors Landscaping & Buffer ordinances
Leaking automobile fluids	Parking lots - Residents, property owners, businesses	Public Education & Outreach - All Stormwater collection and treatment BMPs – Property owners
Trash	Parking lots - Residents, property owners, businesses	Public Education & Outreach - All
Bacteria	Leaking septic systems - Residents Cracked sewer lines - Town of Waynesville Pet waste – Residents	Permit process – Contractors Public Education & Outreach – All

PART 4: STORMWATER MANAGEMENT PROGRAM ADMINISTRATION

4.1 Organizational Structure

The SWP is coordinated by Waynesville's Town Manager (Rob Hites). The Town uses a team approach to delegate responsibilities (Table 6, Figure 4).

Table 6. Summary of Responsible Parties

SWMP Component	Responsible Position	Staff Name	Department
Stormwater Program Administration	Town Manager	Rob Hites	Town Manager
SWMP Management	Director	Elizabeth Teague	Development Services
Public Education & Outreach	Executive Director	Eric Romaniszyn	Haywood Waterways Assn
Public Involvement & Participation	Executive Director	Eric Romaniszyn	Haywood Waterways Assn
Illicit Discharge Detection & Elimination	Director Code Compliance Executive Director	[2]Town Engineer Tom Maguire Eric Romaniszyn	Public Services Development Services Haywood Waterways Assn
Construction Site Runoff Control[1]	Land Development Administrator Code Compliance	Byron Hickox Tom Maguire	Development Services Development Services
Post-Construction Stormwater Management	Land Development Administrator Code Compliance Town Engineer	Byron Hickox Tom Maguire [2]Town Engineer	Development Services Development Services Public Services
Pollution Prevention/Good Housekeeping for Municipal Operations	Director Director	Jonathan Yates [2]Town Engineer	Outdoor Facilities Public Services
Municipal Facilities Operation & Maintenance Program	Director Director	Jonathan Yates [2]Town Engineer	Outdoor Facilities Public Services
Spill Response Program	Director Director	Jonathan Yates [2]Town Engineer	Fire Department
MS4 Operation & Maintenance Program	Director Director	Jonathan Yates [2]Town Engineer	Outdoor Facilities Public Services
Municipal SCM Operation & Maintenance Program	Director Director	Jonathan Yates [2]Town Engineer	Outdoor Facilities Public Services
Pesticide, Herbicide & Fertilizer Management Program	Town Manager	Rob Hites	Town Manager
Vehicle & Equipment Cleaning Program	Director Director	Jonathan Yates [2]Town Engineer	Outdoor Facilities Public Services
Pavement Management Program	Director Director	Jonathan Yates [2]Town Engineer	Outdoor Facilities Public Services
Total Maximum Daily Load (TMDL) Requirements	Executive Director	Eric Romaniszyn	Haywood Waterways Assn

[1] Haywood County is the authorized authority for DEQ, but current 1 plus acre projects are being permitted and inspected by DEQ Regional Office.

[2] The Town Engineer position is currently open; the town is seeking candidates to fill the position or be contracted.

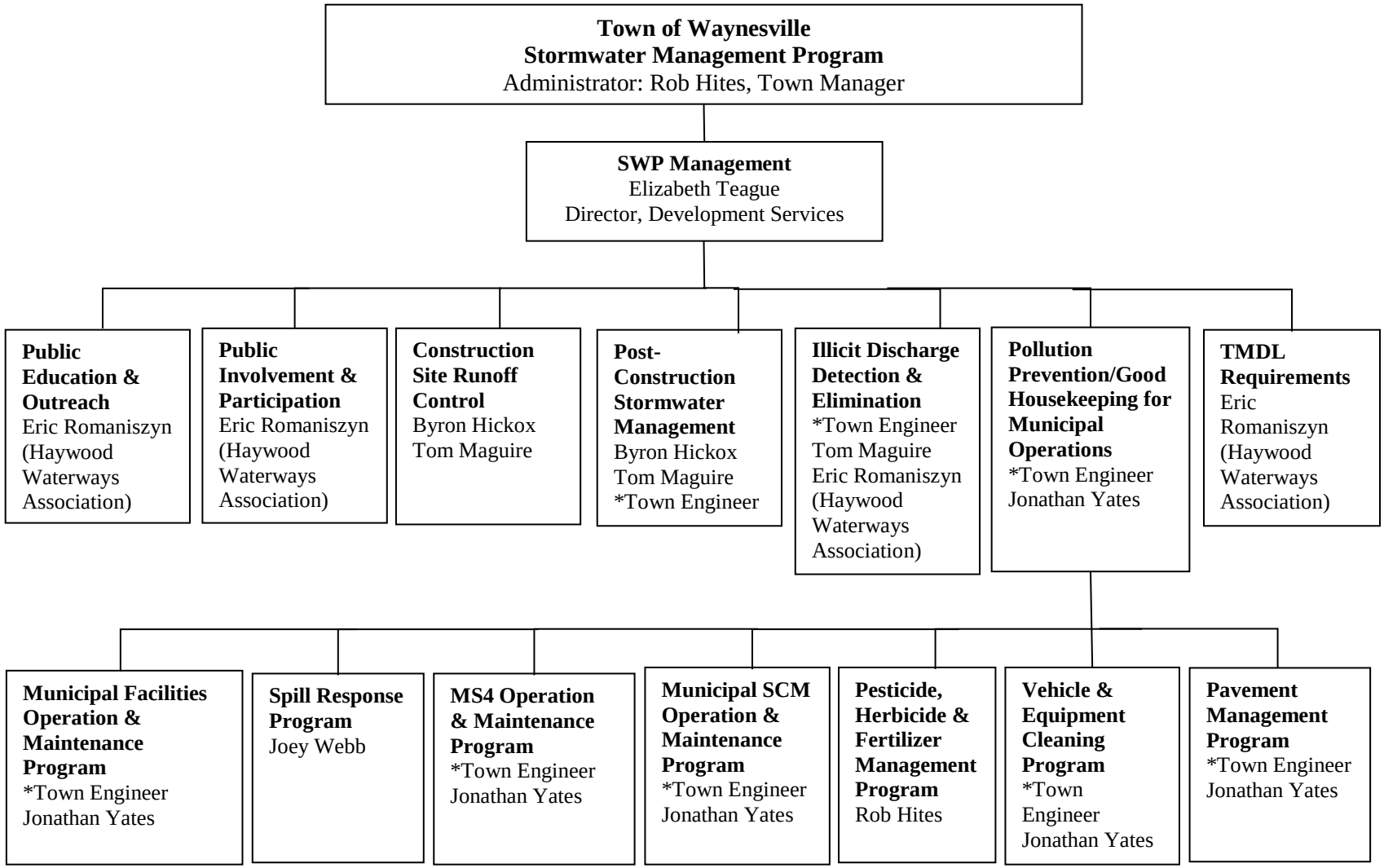


Figure 4. Town of Waynesville Stormwater Management Program Organizational Chart (* = the Town Engineer position is currently open; the town is seeking candidates to fill the position or be contracted.)

4.2 Program Funding and Budget

In accordance with the issued permit, the Town of Waynesville will maintain adequate funding and staffing to implement and manage the provisions of the SWMP and comply with the requirements of the NPDES MS4 Permit. The budget includes the permit administering and compliance fee, which is billed by the Division annually.

The Town is depending on the General Fund to fund its storm water activities. It currently cleans the streets and storm water catch basins weekly with a combination of a street sweeper, jet truck and hand labor. The Town's storm sewers open into active trout waters and we make every attempt to keep the streams as free of silt, leaves and debris as possible. Waynesville contracts with Haywood Waterways to perform storm water related educational outreach including cleanup days, exploration of aquatic life, and water quality testing. Over the past three years the Town has expended $81,512, $86,859.04 and $89,295.97 respectively on its storm water program.

With new development and growth of the last three years, the Town Manager developed a recommendation to implement a stormwater fee in FY 19-20 to assist with increasing costs. As a new program initiative, the staff has carried out a study to determine the average area of a residential lot and its accompanying impervious surface (ERU). The staff measured the area of impervious surfaces in all the commercial, educational and industrial parcels within the Town limits and determined their equivalent ERUs. We recommended to the Board a $2.00 per month storm water fee for residential parcels. It applied the $2.00 per month rate to the impervious surfaces in the commercial and industrial parcels to determine their fee. The staff recommended an enhanced street cleaning and educational program as well as funding to help catch floating debris in Richland Creek as it enters Lake Junaluska. The Board asked that the discussion be taken up by the Board that is seated in December of 2019. The fee is estimated to raise between $213,000 and $300,000 annually depending on the action of the Board.

4.3 Shared Responsibility

The Town of Waynesville will share the responsibility to implement the following minimum control measures, which are at least as stringent as the corresponding NPDES MS4 Permit requirement. The Town of Waynesville remains responsible for compliance if the other entity fails to perform the permit obligation, and may be subject to enforcement action if neither the Town of Waynesville nor the other entity fully performs the permit obligation. Table 7 summarizes who will be implementing the component, what the component program is called, the specific SWMP BMP or permit requirement that is being met by the shared responsibility, and whether or not a legal agreement to share responsibility is in place.

Table 7. Shared Responsibilities

SWMP BMP or Permit Requirement	Implementing Entity & Program Name	Legal Agreement (Y/N)
Public Education & Outreach BMPs	Haywood Waterways Association Phase II Assistance	Y
Public Involvement & Participation BMPs	Haywood Waterways Association Phase II Assistance	Y
Construction Site Runoff BMPs	Bell Engineering Plan Review Assistance	Y

4.4 Co-Permittees

The are no other entities applying for co-permittee status under the NPDES MS4 permit number NCS000501 for the Town of Waynesville.

4.5 Measurable Goals for Program Administration

The Town of Waynesville will manage and report the following Best Management Practices (BMPs) for the administration of the Stormwater Management Program.

Table 8. Program Administration BMPs

Permit Ref.	**2.1.2 and Part 4: Annual Self-Assessment** Measures to evaluate the performance and effectiveness of the SWMP program components at least annually. Results shall be used by the permittee to modify the program components as necessary to accomplish the intent of the Stormwater Program. The self-assessment reporting period is the fiscal year (July 1 – June 30).			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#1.	**Annual Self-Assessment**			
	Perform an annual evaluation of SWMP implementation, suitability of SWMP commitments and any proposed changes to the SWMP utilizing the NCDEQ Annual Self-Assessment Template.	1. Prepare, certify and submit the Annual Self-Assessment to NCDEQ prior to August 31 each year.	1. Annually, Permit Years 1 to 4 FY21 to 24	1. Annual Self-Assessment received by NCDEQ no later than August 31 each year.
Permit Ref.	**1.6: Permit Renewal Application** Measures to submit a permit renewal application no later than 180 days prior to the expiration date of the NPDES MS4 permit.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#2.	**Permit Renewal Application**			
	Audit stormwater program implementation for compliance with the permit and approved SWMP, and utilize the results to prepare and submit a permit renewal application package.	1. Participate in an NPDES MS4 Permit Compliance Audit, as scheduled and performed by EPA or NCDEQ.	1. Once – Permit Year 4 FY24	1. N/A
		2. Self-audit and document any stormwater program components not audited by EPA or NCDEQ utilizing the DEQ Audit Template.	2. Once, Permit Year 5 FY25	2. Submit Self-Audit to DEMLR (required component of permit renewal application package).
		3. Certify and submit the stormwater permit renewal application (NOI, Self-Audit, and Draft SWMP for the next 5-year permit cycle).	3. Once, Permit Year 5 FY25	3. Permit renewal application package received by DEQ at least 180 days prior to permit expiration.

Part 5: Public Education and Outreach Program

The Town of Waynesville will implement a Public Education and Outreach Program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies. These will include steps the public can take to reduce pollutants in storm water runoff.

The target audiences and identified pollutants listed in Part 3.9 of this SWMP, which will be addressed by the Public Education and Outreach Program, are summarized in Table 9. In addition, the Town of Waynesville is required to inform businesses and the general public of the hazards associated with illicit discharges, illegal dumping and improper disposal of waste.

The public education and outreach BMPs will be implemented through a contract with Haywood Waterways Association (renewed annually). See Appendix A for a copy of the contract for fiscal year 2020. Haywood Waterways has been assisting the town with this measure since 2007. The town and Haywood Waterways will use a variety of resources to make sure the BMPs goals and objectives are met. Consultation with DEQ for this minimum measure will occur, as needed.

Table 9. Summary of Target Pollutants & Audiences

Target Pollutants/Sources	Target Audience(s)
Sediment/Residential, construction	Residents, contractors
Household waste/Residents	Residents
Thermal stress/Parking lots	General Public, Businesses, Municipal Employees
Automobile fluids/Parking lots	General Public, Businesses, Municipal Employees
Trash/Residents and other property owners	General Public, Businesses, Municipal Employees
Bacteria/Pet waste, sewer system, septic systems	General Public, Municipal Employees

Table 10: Public Education and Outreach BMPs				
Permit Ref.	**3.2.2 and 3.2.4: Outreach to Targeted Audiences** Measures to identify the specific elements and implementation of a Public Education and Outreach Program to share educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and how the public can reduce pollutants in stormwater runoff. The permittee shall provide educational information to identified target audiences on pollutants/sources identified in Table 9o above, and shall document the extent of exposure of each media, event or activity, including those elements implemented locally or through a cooperative agreement.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#3.	**Postcards**			
	Postcards with information pertaining to stormwater issues will be mailed to town residents. Five topics will be addressed; general stormwater awareness, proper waste disposal (trash, pet), erosion and sedimentation, vehicle maintenance and household runoff.	1. Develop and distribute a postcard about general stormwater awareness.	1. Once, Permit Year 1 FY21	1. Report the number of postcards mailed.
		2. Develop and distribute a postcard about proper waste disposal	2. Once, Permit Year 2 FY22	2. Report the number of postcards mailed.
		3.Develop and distribute a postcard about erosion and sedimentation.	3. Once, Permit Year 3 FY23	3. Report the number of postcards mailed.
		4.Develop and distribute a postcard about vehicle maintenance.	4. Once, Permit Year 4 FY24	4. Report the number of postcards mailed.
		5. Develop and distribute a postcard about household runoff.	5. Once, Permit Year 5 FY25	5. Report the number of postcards mailed.
#4.	**Informative Display**			
	Develop an informative display to be displayed at the Haywood County Public Library, Waynesville, NC. Five topics will be addressed; general stormwater awareness, thermal stress, proper waste disposal (trash, pet), erosion and sedimentation, vehicle maintenance and household runoff.	1. Create display about general stormwater awareness.	1. Once, Permit Year 1 FY21	1. Report dates of display
		2. Create display about proper waste disposal.	2. Once, Permit Year 2 FY22	2. Report dates of display
		3. Create display about erosion and sedimentation.	3. Once, Permit Year 3 FY23	3. Report dates of display
		4. Create display about vehicle maintenance.	4. Once, Permit Year 4 FY24	4. Report dates of display
		5. Create display about thermal stress and household runoff.	5. Once, Permit Year 5 FY25	5. Report dates of display

Table 10: Public Education and Outreach BMPs				
#5.	**Press Release**			
	Publish stormwater related press release in the local newspaper, with a minimum of one article per year.	1. Publish one article about pet waste.	1. Once, Permit Year 1 FY21	1. Report date of publication and distribution
		2. Publish one article about vehicle maintenance.	2. Once, Permit Year 2 FY22	2. Report date of publication and distribution
		3. Publish one article about yard waste	3. Once, Permit Year 3 FY23	3. Report date of publication and distribution
		4. Publish one article about thermal stress and household runoff.	4. Once, Permit Year 4 FY24	4. Report date of publication and distribution
		5. Publish one article about trash.	5. Once, Permit Year 5 FY25	5. Report date of publication and distribution
#6.	**Social Media Campaign**			
	Facebook accounts for the Town of Waynesville and Haywood Waterways Association will be used to reach the residential target audience and share stormwater related information. Postings will be repeated as necessary.	1. Post four articles: yard waste, trash, washing cars, pet waste.	1. Once, Permit Year 1 FY21	1. Report the day of the post
		2. Post four articles: fertilizers, leaking vehicles, illicit discharges, pet waste.	2. Once, Permit Year 2 FY22	2. Report the day of the post
		3. Post four articles: yard waste, fertilizers, illicit discharges, pet waste.	3. Once, Permit Year 3 FY23	3. Report the day of the post
		4. Post four articles: trash, leaking vehicles, thermal stress, washing cars.	4. Once, Permit Year 4 FY24	4. Report the day of the post
		5. Post four articles: yard waste, fertilizers, illicit discharges, pet waste.	5. Once, Permit Year 5 FY25	5. Report the day of the post
#7.	**Public presentation**			
	Give public presentations about local stormwater issues, with a minimum of one presentation per year..	1. Give a presentation about general stormwater issues.	1. Once, Permit Year 1 FY21	1. Report day of presentation, audience, and number of attendees.
		2. Give a presentation about proper waste disposal (trash, pet waste)	2. Once, Permit Year 2 FY22	2. Report day of presentation, audience, and number of attendees.
		3. Give a presentation about erosion and sedimentation.	3. Once, Permit Year 3 FY23	3. Report day of presentation, audience, and number of attendees.
		4. Give a presentation about thermal stress and household runoff.	4. Once, Permit Year 4 FY24	4. Report day of presentation, audience, and number of attendees.

Table 10: Public Education and Outreach BMPs				
		5. Give a presentation about general stormwater issues.	5. Once, Permit Year 5 FY25	5. Report day of presentation, audience, and number of attendees.
Permit Ref.	**2.1.7, 3.2.3 and 3.6.5(c): Web Site** Measures to provide a web site designed to convey the program's message(s) and provide online materials including ordinances, or other regulatory mechanisms, or a list identifying the ordinances or other regulatory mechanisms, providing the legal authority necessary to implement and enforce the requirements of the permit and SWMP. The web page shall also provide developers with all relevant post-construction requirements, design standards, checklists and/or other materials.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#8.	**Stormwater Web Page**			
	The web page will provide information on the town's stormwater program including the MS4 permit, SWMP, Annual Self-Assessment Reports and ordinances. The web page will include a stormwater issue reporting mechanism. It will also include links to other information resources such as the EPA stormwater web page, NCDEQ stormwater web page, WNC Stormwater Partnership webpage, and Haywood Waterways' stormwater education web page.	1. Establish the stormwater web page.	1. Once, Permit Year 1 FY21	1. Report the date the web page was established
		2. Maintain and update the webpage by posting the MS4 Annual Self-Assessment, verifying all links and contact information are current/active, and posting educational information	2. Annually, once established.	2. Report date of web page review and update, as well as what updates are made.
		3. Establish a hit counter to monitor web page engagements.	3. Annually, once established.	3. Report the number of hits.
		4. Add one new educational component to the web page that addresses a target pollutant/audience.	4. Annually, once established.	4. Report the topic and date posted.
		5. Add Stormwater Hotline contact on the web page.	5. Once, Permit Year 1 FY21 See also BMP #10.	5. Report the date the information was added.
#9.	**Haywood Waterways Web page**			
	Provide stormwater information and links to the Town of Waynesville web page.	1. Establish links from HWA web page to the Town of Waynesville's web page.	1. Once, Permit Year 1 FY21	1. Report the date the link was established.

Table 10: Public Education and Outreach BMPs				
		2. Maintain the link and update stormwater information as needed.	2. Annually, once established.	2. Report date of web page review and update, as well as what updates are made.
Permit Ref.	**3.2.5: Stormwater Hotline** Measures for a stormwater hotline/helpline for the purpose of public education and outreach.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#10.	**Stormwater hotline**			
	A hotline will be established and maintained for citizens to ask stormwater questions and report stormwater issues. It will include NC DEQ's 1-800-STOP-MUD hotline. (See also BMP #26 IDDE Reporting).	1. Establish and maintain hotline phone number and responsible party	1. Continuously, Permit Years 1 to 5 FY21 to 25	1. Report date hotline established and if hotline is maintained in years 2 to 5 (yes/no/status)
		2. Identify specific staff member(s)/position(s) who will serve as stormwater education and hotline contact(s).	2. Once, Permit Year 1 FY21	2. Yes/no/status
		3. Train hotline contact(s) in general stormwater awareness, complaint call protocols and appropriate contacts for referral of typical stormwater issues.	3. Continuously, Permit Years 1 to 5 FY21 to 25	3. Report number of staff trained, training date(s) and topics covered.
		4. Publicize hotline information in educational materials and on town's stormwater web page.	4. Continuously, Permit Years 1 to 5 FY21 to 25	4. Yes/no/status
		5. Establish a tracking mechanism to document the number and type of contacts received.	5. Once, Permit Year 1 FY21	5. Report the number of inquiries received, the general type of inquiry (education, outreach, complaint), and the contact mechanism (phone, email, webpage, walk-in).

PART 6: PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM

The Town of Waynesville will implement a Public Involvement and Participation Program to engage the public in stormwater mitigation efforts. These public engagement BMPs will be implemented through a contract with Haywood Waterways Association (renewed annually). See Appendix A for a copy of the contract for fiscal year 2020. Haywood Waterways has been assisting the town with this measure since 2007. The town and Haywood Waterways will use a variety of resources to make sure the BMPs goals and objectives are met. Consultation with DEQ for this minimum measure will occur, as needed.

Table 11: Public Involvement and Participation BMPs

Permit Ref.	**3.3.1: Public Input** Mechanisms for public involvement that provide for input on stormwater issues and the stormwater program.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#11.	**Public Meetings**			
	Provide platform for public to provide input on stormwater related issues at Public Hearings, Planning Board meetings, and Steering Committee meetings; these will comply with public notice requirements and involve applicable stakeholders.	1. Include agenda item for town staff and citizens to report on stormwater concerns and provide public input	1. Continuously, Permit Years 1 to 5 FY21 to 25	1. Report date of public notice, date of meeting, stormwater topics discussed, and number of comments received.
#12.	**Stormwater Web Page**			
	The web page will provide information on the town's stormwater program including the MS4 permit, SWMP, Annual Self-Assessment Reports and ordinances. The web page will include a stormwater issue reporting mechanism. It will also include links to other information resources such as the EPA stormwater web page, NCDEQ stormwater web page, WNC Stormwater Partnership webpage, and Haywood Waterways' stormwater education web page.	1. See BMP #8	1. See BMP #8	1. See BMP #8
#13.	**Stormwater Hotline**			
	A hotline will be established and maintained for citizens to ask stormwater questions and report stormwater issues.	1. See BMP #10	1. See BMP #10	1. See BMP #10

Table 11: Public Involvement and Participation BMPs				
Permit Ref.	**3.3.2: Volunteer Opportunities** Measures to provide volunteer opportunities designed to promote ongoing citizen participation.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#14.	**Stream cleanups**			
	Invite the public to assist with stream cleanups	1. Identify public areas that could be cleaned by volunteers.	1. Continuously, Permit Years 1 to 5 FY21 to 25	1. Potential areas identified? Yes/no/status
		2. Coordinate clean-up of target area(s)	2. Continuously, Permit Years 1 to 5 FY21 to 25	2. Report the date of event, number of volunteer participants and pounds of trash removed.
#15.	**Adopt-A-Stream Program**			
	Provide an Adopt-A-Stream Program for businesses, school clubs, organizations, and individuals to participate in.	1. Recruit Adopt-A-Stream participation	1. Continuously, Permit Years 1 to 5 FY21 to 25	1. Report the group/individuals and miles of stream adopted.
		2. Provide support to Adopt-A-Stream groups	2. Continuously, Permit Years 1 to 5 FY21 to 25	2. Report number of groups, total number of volunteers and total pounds of trash removed.
#16.	**Stormdrain stenciling**			
	Organize a stormdrain stenciling event for individuals, organizations, school clubs, or businesses. The stencil will say “Don’t Dump, Drains to Stream”	1. Conduct one stormdrain stenciling event each year.	1. Annually, Permit Years 1 to 5 FY21 to 25	1. Report date of event(s), number of participants, and number of stormdrains stenciled.

Part 7: Illicit Discharge Detection and Elimination Program

The Town of Waynesville will develop, manage, implement, document, report and enforce an Illicit Discharge Detection and Elimination Program (IDDE) which shall, at a minimum, include the BMPs outlined in Table 12. Consultation with DEQ for this minimum measure will occur, as needed.

Table 12: Illicit Discharge Detection and Eliminate BMPs

Permit Ref.	**3.4.1: MS4 Map** Measures to develop, update and maintain a municipal storm sewer system map including stormwater conveyances, flow direction, major outfalls and waters of the United States receiving stormwater discharges.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#17.	**Update Storm drain system map**			
	A comprehensive infrastructure map of the MS4 has not been updated since 2008. Once completed, this map will aid the municipality in targeting outfalls with dry weather flows and other suspicious discharges for more in-depth inspection and monitoring, and will help coordinate management activities to remove illicit connections and track storm drain system maintenance.	1. Update storm drain system map, to include new major outfalls, flow directions, and receiving waters	1. Continuously, Permit Years 1 to 5 FY21 to 25	1. Report dates of update(s), what updates were made, and number of new major outfalls identified.
#18.	**Update Land Use Map**			
	The town's Land Use map aids in predicting and identifying illicit discharges. https://www.waynesvillenc.gov/sites/default/files/2019-08/official-land-development-map.pdf	1. Update land use map	1. Continuously, Permit Years 1 to 5 FY21 to 25	1. Report dates of update(s) and what updates were made.

Permit Ref.	**3.4.2: Regulatory Mechanism** Measures to provide an IDDE ordinance or other regulatory mechanism that provides legal authority to prohibit, detect, and eliminate illicit connections and discharges, illegal dumping and spills into the MS4, including enforcement procedures and actions.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#19.	**Maintain Legal Authority**			
	Review existing ordinances in order to maintain legal authority to prohibit, detect, and eliminate illicit connections and discharges, illegal dumping, and spills into the MS4. Update ordinances, if required. Refer to 12.5.9 Illicit Discharges and Connections. https://library.municode.com/nc/waynesville/codes/code_of_ordinances?nodeId=PTIICOOR_APXALADEST_CH12ENCOST_12.5STMA	1. Review ordinance and update if revision is required to maintain legal authority	1. Continuously, Permit Years 1 to 5 FY21 to 25	1. Report if a revision is required and if a revision is made.
#20.	**Enforce IDDE Ordinances**			
	A mechanism to track the issuance of notices of violation and enforcement actions as administered by the permittee will be implemented. This mechanism shall include the ability to identify chronic violators for initiation of actions to reduce noncompliance.	1. Establish mechanism to track NOVs	1. Once, Permit Year 1 FY21	1. Report date mechanism was established.
		2. Track NOVs	2. Continuously, Permit Years 1 to 5 FY21 to 25	2. Report number of NOVs issued and chronic violators

Permit Ref.	**3.4.3: IDDE Plan** Measures to maintain and implement a written IDDE Plan to detect and address illicit discharges, illegal dumping and any non-stormwater discharges identified as significant contributors of pollutants to the MS4. The plan shall provide standard procedures and documentation to: a) Locate priority areas likely to have illicit discharges, b) Conduct routine dry weather outfall inspections, c) Identify illicit discharges and trace sources, d) Eliminate the source(s) of an illicit discharge, and e) Evaluate and assess the IDDE Program.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#21.	**Develop IDDE plan**			
	Develop IDDE plan to include standard operating procedures and documentation for investigation of potential illicit discharges, illicit connections, and illegal dumping.	1. Develop a plan and submit to DEQ for approval.	1. Once, Permit Year 1 FY21	1. Report date submitted to DEQ for review.
		2. Update plan annually	2. Annually, Permit Years 2 to 5 FY22 to 25	2. Yes/no/status - report dates of updates and what was updated.
#22.	**Outfall Inspections**			
	Conduct regular dry weather (no rain in previous 72 hours) screening and targeted video inspection. Also supplement inspections with use existing utility data.	1. Train inspections staff	1. See BMP #25	1. See BMP 25
		2. A survey of 20% of the storm drain system outfalls per year will be conducted to identify non-storm water flows and document any potential violations using the forms and procedure developed in BMP #21	2. Annually, beginning in Permit Year 2 FY 21	2. Report number of outfalls inspected and number of potential illicit discharges identified.
		3.Use existing utility data to identify illicit discharges and illicit connections.	3. Annually, beginning in Permit Year 2 FY22	3. Yes/No/status

		4. Once each year's survey is complete, areas with suspicious discharges will be inspected with video cameras to detect suspected direct connections to the wastewater system and identify areas where wastewater might be leaking into adjacent storm drain pipes.	4. Annually, beginning in Permit Year 2 FY22	4. Yes/No/status
#23.	**IDDE Program Evaluation**			
	Annual evaluation of IDDE program to continue procedures that work and improve those that are deficient, and identify areas that have high potential for illicit discharges.	1. Hold evaluation meeting with stakeholders	1. Annually, in conjunction with annual assessment	1. Report proposed changes
		2. Review IDDE reports and identification of chronic violators, issues, and areas of concern.	2. Annually, in conjunction with annual assessment	2. Report number of potential illicit discharge found, number verified, number resolved or removed, and enforcement actions taken.
Permit Ref.	**3.4.4: IDDE Tracking** Measures for tracking and documenting the date(s) an illicit discharge, illicit connection or illegal dumping was observed, the results of the investigation, any follow-up of the investigation, the date the investigation was closed, the issuance of enforcement actions, and the ability to identify chronic violators.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#24.	**Develop database tracking system**			
	A tracking system for IDDE violations and resulting actions will be developed and implemented (to be used for BMP #19.2	1. Develop a "Potential Illicit Discharge Report" form to include observed illicit discharge indicators, dates, location, and contacts made.	1. Once, Permit Year 1 FY21	1. Yes/no/status

		2. Develop a tracking spreadsheet to collect data from "Potential Illicit Discharge Report" and results of investigation, follow-up actions, date of closure, and enforcement actions taken.	2. Once, Permit Year 1 FY21	2. Yes/no/status
Permit Ref.	**3.4.5: Staff IDDE Training** Measures to provide training for municipal staff and contractors who, as part of their normal job responsibilities, may observe an illicit discharge, illicit connection, illegal dumping or spills. Training shall include how to identify and report illicit discharges, illicit connections, illegal dumping and spills. Each staff training event shall be documented, including the agenda/materials, date, and number of staff participating.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#25.	**Attend IDDE Training**			
	The permittee will use existing workshops to train staff about indicators of potential illicit discharges/connections and illegal dumping and the appropriate avenues through which to report suspected illicit discharges.	1. Attend one training event about IDDE detection and reporting	1. Annually, Permit Years 1 to 5 FY21 to 25	1. Report number of staff trained, training date(s) and topics covered.
		2. Attend one training event about erosion and sediment control	2. Annually, Permit Years 1 to 5 FY21 to 25	2. Report number of staff trained, training date(s) and topics covered.
Permit Ref.	**3.4.6: IDDE Reporting** Measures for the public and staff to report illicit discharges, illegal dumping and spills. The mechanism shall be publicized to facilitate reporting and shall be managed to provide rapid response by appropriately trained personnel.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#26.	**Stormwater Hotline**			
	A hotline will be established and maintained for citizens to ask stormwater questions and report stormwater issues.(see BMP #10)	1. See BMP #10	1. See BMP #10	1. See BMP #10
#27.	**Stormwater Web Page**			
	The web page will provide information on the town's stormwater program It will include a stormwater issue reporting mechanism.	1. See BMP #8	1. See BMP #8	1. See BMP #8

PART 8: CONSTRUCTION SITE RUNOFF CONTROL PROGRAM

In accordance with 15A NCAC 02H .0153, the Town of Waynesville relies upon the North Carolina Sedimentation Pollution Control Act (SPCA) of 1973 and the NCG010000 permit for construction activities as qualifying alternative programs to meet the NPDES MS4 Permit requirements for all construction site runoff control measures to reduce pollutants in stormwater runoff from construction activities that result in land disturbance of greater than or equal to one acre and any construction activity that is part of a larger common plan of development that would disturb one acre or more.

The Town of Waynesville will implement the BMPs outlined below to meet NPDES MS4 Permit requirements for the construction site runoff minimum measure (Table 13). It will be implemented with assistance from private engineering firms, as needed, to review construction plans. The current firm is Bell Engineering (see Appendix B). In addition, consultation with the recommended state contact will occur, as needed.

The Town is currently and will continue to meet this requirement be ensuring permitting through the State Erosion and Sediment Control Program and the DWQ general stormwater permit for construction activities for land disturbance over one acre. For any land disturbance under one acre but over 1,000 square feet, a property owner must have a local permit in accordance with Town Ordinance Section 12.4 of the Land Development Standards (formerly Section 154.401). The Town regulates development on steep slopes (Section 12.6), and flood damage prevention (Section 12.3). Consultation with DEQ for this minimum measure will occur, as needed.

Table 13. Qualifying Alternative Program Components for Construction Site Runoff Control Program

Permit Reference	State or Local Program Name	Legal Authority	Implementing Entity	Meets Whole or Part of Requirement
3.5.1 - 3.5.4	State Implemented SPCA Program	15A NCAC Chapter 04	NCDEQ	Whole

* The local delegated SPCA Program ordinance(s)/regulatory mechanism(s) can be found at https://www.haywoodcountync.gov/184/Land-Disturbing-Activities

Table 14: Construction Site Runoff Control BMPs				
Permit Ref.	**3.5.6: Public Input** Measures to provide and promote a means for the public to notify the appropriate authorities of observed erosion and sedimentation problems.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#28.	**Municipal Staff Training**			
	Train municipal staff who receive calls from the public on the protocols for referral and tracking of construction site runoff control complaints.	1. Train municipal staff on proper handling of construction site runoff control complaints.	1. Annually, Permit Years 1 to 5 FY21 to 25	1. Report number of staff trained, training date(s) and topics covered.
#29.	**Stormwater/Stop Mud Hotline**			
	A hotline will be established and maintained for citizens to ask stormwater questions and report stormwater issues. Include a "Stop Mud" hotline number for the public to report sediment issues	1. See BMP #10	1. See BMP #10	1. See BMP #10
#30.	**Public Meetings**			
	Provide platform for public to provide input on stormwater related issues at Public Hearings, Planning Board meetings, and Steering Committee meetings; these will comply with public notice requirements and involve applicable stakeholders.	1. See BMP #11	1. See BMP #11	1. See BMP #11
Permit Ref.	**3.5.5: Waste Management** Measures to require construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impact to water quality.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#31.	**Construction Site Waste Disposal**			
	Enforce Article I. General Sec. 44-2. - Accumulation of solid wastes prohibited.	1. Site inspections	1. Continuously, Permit Years 1 to 5 FY21 to 25	1. Report the number of inspections and number of violations.

PART 9: POST-CONSTRUCTION SITE RUNOFF CONTROL PROGRAM

The Town of Waynesville does not implement any State Qualifying Alternative Programs. The town's ordinances allow for alternative compliance measures to be considered for implementation of the NPDES Phase II MS4 post-construction program requirements. The requirements are codified in local ordinance(s), and implementation is further defined in guidance, manuals and/or standard operating procedure(s) as summarized in Table 15 below.

This SWMP identifies the minimum elements to develop, implement and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that are located within the Town of Waynesville and discharge into the MS4. These elements are designed to minimize water quality impacts using a combination of structural Stormwater Control Measures (SCMs) and/or non-structural BMPs appropriate for the community, and ensure adequate long-term operation and maintenance of SCMs. The annual reporting metrics for the post construction program are provided in Table 16. Consultation with DEQ for this minimum measure will occur, as needed.

Table 15. Summary of Existing Post-Construction Program Elements (From Town of Waynesville ordinances- Appendix A, Land Development Standards)

Permit Requirements for **Plan Review and Approval**	Municipal Ordinance/Code Reference(s) and/or Document Title(s)	Date Adopted
3.6.2(a) Authority	Ch. 12.5 – Stormwater Management	April 2011
3.6.3(a) & 15A NCAC 02H.0153(c) Federal, State & Local Projects	Ch. 12.5 – Stormwater Management	April 2011
3.6.3(b) Plan Review	Ch. 12.5 – Stormwater Management	April 2011
3.6.3(c) O&M Agreement	Ch. 12.5 – Stormwater Management	April 2011
3.6.3(d) O&M Plan	Ch. 12.5 – Stormwater Management	April 2011
3.6.3(e) Deed Restrictions/Covenants	Ch. 12.5 – Stormwater Management	April 2011
3.6.3(f) Access Easements	Ch. 12.5 – Stormwater Management	April 2011
Permit Requirements for **Inspections and Enforcement**	Municipal Ordinance/Code Reference(s) and/or Document Title(s)	Date Adopted
3.6.2(b) Documentation	Ch. 12.5 – Stormwater Management	April 2011
3.6.2(c) Right of Entry	Ch. 12.5 – Stormwater Management	April 2011
3.6.4(a) Pre-CO Inspections	Ch. 12.5 – Stormwater Management	April 2011
3.6.4(b) Compliance with Plans	Ch. 12.5 – Stormwater Management	April 2011
3.6.4(c) Annual SCM Inspections	Ch. 12.5 – Stormwater Management	April 2011
3.6.4(d) Low Density Inspections	Ch. 12.5 – Stormwater Management	April 2011
3.6.4(e) Qualified Professional	Ch. 12.5 – Stormwater Management	April 2011
Permit Requirements for **Fecal Coliform Reduction**	Municipal Ordinance/Code Reference(s) and/or Document Title(s)	Date Adopted
3.6.6(a) Pet Waste	None	
3.6.6(b) On-Site Domestic Wastewater Treatment	Ch. 6.11 – Utilities	April 2011

Table 16: Post Construction Site Runoff Control BMPs				
Permit Ref.	**3.6.5(a), 3.6.5(b), and 4.1.3: Minimum Post-Construction Reporting Requirements** Measures to document activities over the course of the fiscal year (July 1 – June 30) including appropriate information to accurately describe progress, status, and results.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#32.	**Standard Reporting**			
	Implement standardized tracking, documentation, inspections and reporting mechanisms to compile appropriate data for the annual self-assessment process. Data shall be provided for each Post-Construction/ Qualifying Alternative Program being implemented as listed in Tables 18 and 19 (see BMP #37).	1. Track number of low density and high density plan reviews performed.	1. Continuously, Permit Years 1 to 5 FY21 to 25	1. Report number of plan reviews performed for low density and high density.
		2. Track number of low density and high density plans approved.	2. Continuously, Permit Years 1 to 5 FY21 to 25	2. Report number of plan approvals issued for low density and high density.
		3. Maintain a current inventory of low density projects and constructed SCMs including SCM type or low density acreage, location and last inspection date.	3. Continuously, Permit Years 1 to 5 FY21 to 25	3. Report summary of number and type of SCMs added to the inventory; and number and acreage of low density projects constructed.
		4. Track number of SCM inspections performed.	4. Continuously, Permit Years 1 to 5 FY21 to 25	4. Report number of SCM inspections.
		5. Track number of low density inspections performed.	5. Continuously, Permit Years 1 to 5 FY21 to 25	5. Report number of low density inspections.
		6. Track number and type of enforcement actions taken.	6. Continuously, Permit Years 1 to 5 FY21 to 25	6. Report number and type of enforcement actions taken.

Permit Ref.	**3.6.2: Legal Authority** Measures to maintain adequate legal authorities through ordinance or other regulatory mechanism to: (a) review designs and proposals for new development and redevelopment to determine whether adequate stormwater control measures will be installed, implemented, and maintained, (b) request information such as stormwater plans, inspection reports, monitoring results, and other information deemed necessary to evaluate compliance with the Post-Construction Stormwater Management Program, and (c) enter private property for the purpose of inspecting at reasonable times any facilities, equipment, practices, or operations related to stormwater discharges to determine whether there is compliance with the Post-Construction Stormwater Management Program.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#33.	**This permit requirement is fully met by the existing post-construction program, see references in Table 14.**			

Permit Ref.	**3.6.3: Plan Review and Approval** Measures to maintain plan review and approval authority, standards and procedures to: (a) Require Federal, State, and local government projects to comply with Post-Construction Program requirements throughout the entire MS4 permitted area, unless the entity is subject to its own NPDES MS4 permit or a qualifying alternative program, (b) Conduct site plan reviews of all new development and redeveloped sites that disturb greater than or equal to one acre, and sites that disturb less than one acre that are part of a larger common plan of development or sale for compliance with 15A NCAC 02H .1017 and the qualifying alternative programs that apply within your jurisdiction, (c) Ensure that each project has an Operation and Maintenance Agreement that complies with 15A NCAC 02H .1050(12), (d) Ensure that each project has an Operation and Maintenance Plan that complies with 15A NCAC 02H .1050(13), (e) Ensure that each project has recorded deed restrictions and protective covenants, that require the project to be maintained consistent with approved plans, and (f) Ensure that each SCM and associated maintenance accesses be protected in a permanent recorded easement per 15A NCAC 02H 1050 (9) and (10).			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#34.	**O&M Plan Reviews**			
	Conduct site plan reviews of all new development and redeveloped sites that disturb greater than or equal to one acre (including sites that disturb less than one acre that are part of a larger common plan of development or sale). The site plan review shall address how the project applicant meets the performance standards and how the project will ensure long-term maintenance.	1. Conduct site plan reviews.	1. Continuously, Permit Years 1 to 5 FY21 to 25	1. Report number of site plan reviews and dates.
#35.	**Deed Restrictions and Protective Covenants**			
	Recorded deed restrictions and protective covenants ensure development activities maintain the project consistent with approved plans.	1. Enable the use of recorded deed restrictions and protective covenants.	1. Continuously, Permit Years 1 to 5 FY21 to 25	1. Report the number of recorded deed restrictions and protective covenants..

Permit Ref.	**3.6.4: Inspections and Enforcement** Measures to maintain inspection and enforcement authority, standards and procedures to: (a) Conduct post-construction inspections prior to issuing a Certificate of Occupancy or a Temporary Certificate of Occupancy. Alternatively, the project owner may provide a surety bond to guarantee compliance with the approved plan(s), (b) Ensure that the project has been constructed in accordance with the approved plan(s), (c) Ensure annual inspection of each permitted SCM to ensure compliance with the approved Operation and Maintenance Agreement, (d) Ensure inspection of low density projects at least once during the permit term, and (e) Require that inspections be conducted by a qualified professional.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#36.	**Inventory of projects**			
	An inventory will be maintained of projects with post-construction structural SCMs and low density projects, including both public and private sector sites located within the corporate limits that are covered by post-construction ordinance requirements.	1. Create inventory of existing structural SCMs and low-density projects.	1.Once Permit Year 1 FY21	1. Yes/no/status
		2. Update inventory as new projects are completed.	2. See BMP #32.3	2. See BMP #32.3
		3. Document projects	3. Continuously, Permit Years 1 to 5 FY21 to 25	3. Report number of projects with SCMs, number of post construction SCMs installed
#37.	**Perform Inspections and Enforcement**			
	To ensure that each stormwater control measures is being maintained as required pursuant to its operation and maintenance agreement, the permittee shall establish a tracking mechanism for inspections, conduct and document inspections of each project site covered under performance standards. This includes inspections before issuing a certificate of occupancy or temporary certificate of occupancy.	1. Establish inspection tracking system to meet all requirements of BMP #32.	1. Once, Permit Year 1 FY21	1. Yes/no/status
		2. Issue letter of notification to owners making them aware of upcoming inspections	2. Once, Permit Year 2 FY22	2. Report number of letters sent.
		3. Perform inspections at least one time during the permit term.	3. Continuously, Permit Years 1 to 5 FY21 to 25	3. Report number of inspections, NOVs, and enforcement actions
		4. Update tracking system	4. Continuously, Permit Years 1 to 5 FY21 to 25	4. Yes/no/status
#38	**Inspection of low-density projects**			
	Establish legal authority for inspection of low-density projects at least once during the permit term; and carry out the inspections.	1. Establish legal authority through code revision.	1. Once, Permit Year 2 FY22	1. Report code reference and date adopted.
		2. Conduct inspection of 20% of low-density projects each year (See BMP # 32.5)	2. See BMP #32.5 and 32.6.	2. See BMP #32.5 and 32.6

Permit Ref.	**3.6.6: Fecal Coliform Reduction** Measures to control, to the maximum extent practicable, sources of fecal coliform per 15A NCAC 02H .1017(7). At a minimum, the program shall include: (a) A pet waste management component, which may be achieved by revising an existing litter ordinance, and (b) An on-site domestic wastewater treatment system component, if applicable, which may be coordinated with local county health department, to ensure proper operation and maintenance of such systems.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#39.	**Pet Waste Management Program**			
	The town will educate the public about pet waste issues and solutions. The town will also maintain waste disposal stations for litter bags and trash disposal.	1. See BMPs #3, 4, 5, 6, and 7	1. See BMPs #3, 4, 5, 6, and 7	1. See BMPs #3, 4, 5, 6, and 7
		2. Maintain pet waste disposal stations.	2. Continuously, Permit Years 1 to 5 FY21 to 25	2. Report number of stations maintained, number of litter bags refilled.
#40.	**Support Haywood Waterways work to eliminate surface water bacterial contamination**			
	Haywood Waterways monitors fecal coliform bacteria throughout the town limits and county. They use the data to identify potential sources (septic systems, sewer system, livestock) and hot-spot areas (see Appendix C). The town will help Haywood Waterways reduce bacteria loadings by monitoring and improving their sewer system.	1. Compile list of sample locations, results, and hot spots of potential human bacteria sources.	1. Continuously, Permit Years 1 to 5 FY21 to 25	1. Yes/no/status; report number of hot spots identified.
		2. Perform testing of town sewer system to determine where repairs are needed and locations of stormwater infiltration.	2. Continuously, Permit Years 1 to 5 FY21 to 25	2. Report number of issues found.
		3. Perform sewer system maintenance and repairs.	3. Continuously, Permit Years 1 to 5 FY21 to 25	3. Report number and length of sewer system maintenance and repair activities.

PART 10: POLLUTION PREVENTION AND GOOD HOUSEKEEPING PROGRAMS

This SWMP provides a comprehensive pollution prevention and good housekeeping strategy for the Town of Waynesville municipal facilities and operations. Pollution prevention and good housekeeping is accomplished through the implementation of seven required programs, which collectively address the ultimate goal of preventing or reducing pollutant runoff from municipal operations such as parks and open space maintenance, fleet and building maintenance, new construction and land disturbances, and municipal storm sewer system maintenance:

1. Municipal Facilities Operation and Maintenance Program,
2. Spill Response Program,
3. MS4 Operation and Maintenance Program,
4. Municipal SCM Operation and Maintenance Program,
5. Pesticide, Herbicide and Fertilizer Management Program,
6. Vehicle and Equipment Maintenance Program, and
7. Pavement Management Program.

The Town of Waynesville will manage, implement and report the pollution prevention and good housekeeping BMPs as specified in Table 17 below for each required program. Consultation with DEQ for this minimum measure will occur, as needed.

Table 17: Pollution Prevention and Good Housekeeping BMPs

Permit Ref.	**3.7.1: Municipal Facilities Operation and Maintenance Program** Measures to manage facilities that are owned and operated by the permittee and have the potential for generating polluted stormwater runoff. The permittee shall maintain a current inventory of municipal facilities; perform facility inspections and routine maintenance; establish specific frequencies, schedules, and standard documentation; provide staff training on general stormwater awareness and implementing pollution prevention and good housekeeping practices.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#41.	**Inventory of Municipal Facilities**			
	Maintain a current inventory of facilities owned and operated by the permittee with the potential for generating polluted stormwater runoff.	1. Compile list of existing town-owned facilities.	1. Once, Permit Year 1 FY21	1. Number of facilities inventoried; date list completed
		2. Perform initial inspection of facilities; classify facilities as having high or low potential for stormwater pollution.	2. Once, Permit Year 2 FY22	2. Report number of inspections performed and classification.
		3. Determine which facilities require a SPCC.	3.Once, Permit Year 2 FY22	3. Number of SPCC Plans required.
		4. Identify and permit municipal facilities that require, but do not have, a NPDES Stormwater Permit, if any.	4. Once, Permit Year 1 FY21, by July 31, 2022	4. Report number of facilities that require a NPDES permit; date permit received.

Table 17: Pollution Prevention and Good Housekeeping BMPs				
		5. Update inventory as needed when facilities are added or closed	5. Continuously, Permit Years 1 to 5 FY21 to 25	5. Number of facilities added/revisions made
#42.	**Facility Inspections**			
	Inspections of facilities to confirm good housekeeping practices are being followed.	1. Establish SOP for facility inspections, including an inspection schedule, report documentation, and tracking system.	1.Once, Permit Year 2 FY22	1, Yes/no/status
		2. Implement annual facility inspections for high stormwater pollution potential facilities and once per permit term inspections for low potential facilities, following SOP established in BMP #42.1	2. Annually, Permit Year 3 FY23	2. Report number of inspections of high potential and low potential facilities performed.
		3. Perform maintenance tasks identified in inspection.	3. Continuously, Permit Years 1 to 5 FY21 to 25	3. Report maintenance tasks performed.
#43.	**Staff Training**			
	Develop or identify a staff training program for stormwater pollution prevention and provide to Public Works Department employees.	1. See BMP #48	1. See BMP #48	1. See BMP #48
Permit Ref.	**3.7.2: Spill Response Program** Measures for facilities and operations that store and/or use materials that have the potential to contaminate stormwater runoff if spilled. The permittee shall maintain written spill response procedures and train staff on spill response procedures.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#44.	Develop or identify appropriate training program.			
	Provide written spill response procedures for municipally owned and operated facilities.	1. Develop a written spill response procedure for municipal operations.	1. Once, Permit Year 1 FY21	1. Yes/no/status
		2. Maintain and update written a spill response procedure for municipal operations.	2. Annually, beginning Permit Year 2 FY22	2. Report date of updates and what the updates are..

Table 17: Pollution Prevention and Good Housekeeping BMPs				
#45	**Inventory of Facilities with Spill Potential**			
	Maintain a list of facilities and operations storing materials that would be a pollutant if spilled and introduced to the stormwater system and classify by hazard and quantity (See BMP #41.2)	1. Create inventory of town facilities and operations with spill potential when facilities or operations are changed	1. Once, Permit Year 1 FY21	1. Yes/no/status. Report the number of facilities in the inventory.
		2. Update inventory	2. Continuously, when necessitated by changes in facilities or operations	2. Report number of additions or revisions
#46.	**Staff Training**			
	Training for staff on proper spill procedures	1. See BMP #48	1. See BMP #48	1. See BMP #48
Permit Ref.	**3.7.3: MS4 Operation and Maintenance Program** Measures to minimize pollutants in the stormwater collection system. The permittee shall provide operation and maintenance staff training on stormwater awareness and pollution prevention, perform MS4 inspections, maintain the collection system including catch basins and conveyances; and establish specific frequencies, schedules, and standard documentation.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#47.	**MS4 System Operations and Maintenance**			
	Develop and implement a plan for operations and maintenance of municipally-owned stormwater collection systems, including streets, roads, and public parking lots.	1. Develop a SOP that includes inspection schedules, methods of documentation, staff responsibilities, and proper maintenance training.	1. Once, Permit Year 2 FY22	1.Yes/no/status
		2. Perform regular inspections in accordance with the SOP.	2. Continuously, following schedule established in SOP.	2. Document number of inspections.
		3. Verify, document, and prioritize maintenance activities identified by inspections or citizen reports.	3. Continuously, as maintenance activities are identified.	3. Record number of maintenance activities performed.
		4. Develop an inspection and maintenance tracking system to be used in accordance with the SOP and to identify “hot spot” locations for system maintenance.	4. Once, Permit Year 2 FY22	4. Yes/no/status

Table 17: Pollution Prevention and Good Housekeeping BMPs				
#48	**Staff Training**			
	Develop or identify a staff training program for stormwater pollution prevention and provide to Public Works Department employees.	1. Develop or identify appropriate training program.	1.Once, Permit Year 1 FY21	1. Yes/no/status
		2. Provide initial training for all employees.	2. Annually, beginning in Permit Year 2 FY22.	2. Number of employees trained and topics covered in training.
		3. Provide training for new employees.	3. Annually, beginning in Permit Year 2 FY22, as needed by staffing changes.	3. Number of new employees trained and topics covered in training.
Permit Ref.	**3.7.4: Municipal SCM Operation and Maintenance Program** Measures to manage municipally-owned, operated, and/or maintained structural SCMs that are installed for compliance with the permittee's post-construction program. The permittee shall maintain a current inventory of SCMs, perform SCM inspections and maintenance, and shall establish specific frequencies, schedules, and documentation.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#49.	**Inventory Municipal Structural SCMs**			
	Develop and maintain a current inventory of municipally-owned or operated structural SCMs .	1. Create inventory of existing structural SCMs with information including type, year built, date of last inspection, and maintenance actions.	1. Once, Permit Year 1 FY21	1. Yes/no/status; report number of municipal structural SCMs
		2. Compile, and develop as needed, O&M Plans for all town-owned SCMs	2. Once, Permit Year 2 FY22	2. Report number of O&M Plans developed.
		3. Update inventory as needed with new development.	3. Continuously, Permit Years 1 to 5 FY21 to 25	3. Report number of updates to list.
#50.	**SCM Inspection and Maintenance**			
	Performance and documentation of regular inspection and maintenance of municipally owned structural SCMs. Permittee shall maintain and implement an O&M program for municipally-owned or maintained structural stormwater controls installed for compliance with the	1. Locate municipally owned SCMs and add to MS4 map with type of SCM indicated.	1. Once, Permit Year 1 FY21	1. Report number and type of SCMs on map.
		2. Update map when new municipally owned SCMs are constructed	2. Continuously, Permit Years 1 to 5 FY21 to 25	2. Report number and type of SCMs added to map.

Table 17: Pollution Prevention and Good Housekeeping BMPs				
	permittee's post-construction ordinance.	3. Maintain NC SCM Inspections and Maintenance Certification for appropriate personnel.	3. Continuously, beginning in Permit Year 2 FY22	3. Report number of staff members with active certification.
		4. Develop SCM inspection form.	4. Once, Permit Year 2 FY22	4. Yes/no/status
		5. Inspect each SCM using inspection form.	5. Annually, beginning in Permit Year 3 FY23	5. Report number of inspections, number passing inspection, and number requiring maintenance.
		6 Perform maintenance tasks identified in inspection.	6. Continuously, Permit Years 1 to 5 FY21 to 25	5. Number of SCMs maintained.
		7. Develop a tracking document (see BMP #49).	7. Once Permit Year 2 FY22	7. Yes/no/status
Permit Ref.	**3.7.5: Pesticide, Herbicide and Fertilizer Management Program** Measures to minimize water quality impacts from the use of landscape chemicals. The permittee shall provide routine pollution prevention and chemical use, storage and handling training, and shall ensure compliance with permits and applicator certifications.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#51.	**Staff Training**			
	Per state requirement provide staff training on pollution prevention, and proper application, storage, and handling of pesticides, herbicides, and fertilizers.	1. Develop or identify training program	1. Once, Permit Year 1 FY21	1. Yes/no/status
		2. Provide staff training	2. Annually, Permit Years 2 to 5 FY22 to 25	2. Report number of staff trained, date of training, name of training workshop, and topics covered.

Permit Ref.	**3.7.6: Vehicle and Equipment Maintenance Program** Measures to prevent and minimize contamination of stormwater runoff from areas used for municipal vehicle and equipment maintenance and/or cleaning. The permittee shall ensure that municipal industrial facilities subject to NPDES industrial permitting comply with those permit requirements, provide routine pollution prevention training to staff, perform routine inspections, and establish specific frequencies, schedules, and documentation.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#52.	**Vehicle and Equipment Cleaning and Maintenance Facility Inspection**			
	Perform routine inspections as part of general facility inspections (see BMP #42) to ensure that vehicle and equipment facilities are following guidelines to minimize stormwater pollution from vehicle cleaning and/or maintenance.	1. Develop inspection checklist.	1. Once, Permit Year 1 FY21	1. Yes/no/status
		2. Perform inspections and notify facility manager of any corrective actions required.	2. Annually, beginning Permit Years 2 to 5 FY22 to 25	2. Report number of inspections.
		3. Perform re-inspections of any facility that required corrective action.	3. Continuously, As required by correction actions issued.	3. Report number of facilities requiring corrective action, number of resolutions.
#53	**Staff Training**			
	Provide general stormwater awareness training and pollution prevention training to employees working in vehicle maintenance and cleaning areas (see BMP #48)	1. See BMP #48	1. See BMP #48	1. See BMP #48
Permit Ref.	**3.7.7: Pavement Management Program** Measures to reduce pollutants in stormwater runoff from municipally-owned streets, roads, and parking lots within the permittee's corporate limits. The permittee shall implement measures to control litter, leaves, debris, particulate and fluid pollutants associated with vehicles, and establish specific frequencies, schedules, and documentation.			
BMP No.	**A**	**B**	**C**	**D**
	Description of BMP	**Measurable Goal(s)**	**Schedule for Implementation**	**Annual Reporting Metric**
#54.	**Street Sweeping**			
	Street sweeping to reduce pollutants from town owned and operated streets, curbs, and gutters.	1. Develop a SOP, including a schedule and plan to document.	1. Once, Permit Year 1 FY21	1. Yes/no/status

		2. Implement SOP and documentation, to including a dedicated sanitation worker, abundant trash receptacles available to the public, and twice weekly sweeping of the central business district and monthly sweeping of all other streets, unless significant rainfall events require increased frequency	2. Continuously, beginning Permit Years 2 to 5 FY22 to 25	1. Report number of trash receptacles, number of street sweeps, and miles of streets swept.
#55.	**Incorporate road salt alternatives for roadway deicing**			
	Using road salt alternatives, such as salt brine, will reduce impacts of road salt on aquatic ecosystems.	1. Reduce amount of road salt applied to roadways by 50% through the use of less-toxic alternatives, such as salt brine.	1. Once, Permit Year 1 FY21	1. Report number of days deicing was used and amount used.
		2. Maintain usage of road salt alternatives.	2. Continuously, beginning Permit Years 2 to 5 FY22 to 25	2. Report number of days deicing was used and amount used.
#56	**Leaf Collection**			
	To reduce pollutants from residential and public areas entering storm drain systems and to prevent clogging of storm drains.	1. Develop a SOP, including a schedule and plan to document.	1. Once, Permit Year 1 FY21	1. Yes/no/status
		2. Implement SOP and documentation	2. Continuously, beginning Permit Years 2 to 5 FY22 to 25	2. Report volume of leaves collected and number of storm drains unclogged.
#57	**Vehicle Spill Cleanup**			
	To prevent pollutant from vehicle accidents from entering storm drain systems.	1. Maintain spill response procedures (see BMP #44)	1. see BMP #44)	1. see BMP #44)
		2. Provide public education about stopping vehicle leaks (see BMPs #3, 4, 5, 6, and 7)	2. see BMP #3, 4, 5, 6, and 7)	2. see BMP #3, 4, 5, 6, and 7)

Appendix A

Contract with Haywood Waterways Association for implementation of Public Education & Outreach and Public Involvement & Participation minimum measures

May 27, 2020

Rob Hites, Town Manager
Town of Waynesville
PO Box 100
Waynesville, NC 28786

Re: Phase II Stormwater Management Plan Implementation, Education and Outreach

Haywood Waterways Association is pleased to submit this proposal to assist the Town of Waynesville implement your Phase II Stormwater Management Plan. Haywood Waterways has been contracted to help implement the Public Education and Outreach and Public Participation and Involvement Minimum Control Measures since Fiscal Year 2007. This proposal outlines tasks that would be completed, if accepted, in Fiscal Year 2020.

The tasks listed below would help you distribute education materials to the community and engage citizens in water quality protection work. The tasks and costs are estimates and because Haywood Waterways would be working on a fee basis, we would only charge for the actual hours worked with costs set as "not to exceed". We would also take advantage of all opportunities to reduce costs, such as using existing material and programs of Haywood Waterways and other organizations. Our current billing rate is $35.00 per hour, plus travel at the federal standard mileage rate and printing costs, if necessary.

Haywood Waterways currently implements many education, outreach and public participation activities in the community. Haywood Waterways supports Waynesville's use of those activities to satisfy the town's Phase II permit. If Haywood Waterways needs to supplement those activities with stormwater related materials to satisfy Waynesville's permit, Waynesville would only be billed for costs above and beyond those normally required. For example, we would not charge Waynesville for the normal operation of our display at a community event. We would only bill for such tasks as time spent gathering stormwater brochures or obtaining a stormwater poster for display.

1. Minimum Measure #1: Public Education and Outreach
Haywood Waterways will implement the following best management practices for this minimum measure:

- Write quarterly press releases and distribute to the press and town officials;
- Distribute education materials through the newspapers, the schools and placement at strategic locations throughout Waynesville, such as in community buildings, realty offices and other businesses;
- Produce stormwater related topic to be mailed as a post card to at least 3,000 residents;
- Setup special displays at community festivals and local library; and
- In addition, Waynesville can support HWA's premier education event, Kids in the Creek, by purchasing waders and other supplies to replace old and deteriorated waders.

PO BOX 389 • WAYNESVILLE, NC • 28786
PHONE: 828-476-4667
INFO@HAYWOODWATERWAYS.ORG

2. Minimum Measure #2: Public Involvement and Participation

Haywood Waterways will implement the following best management practices for this minimum measure:

- Support stream clean-up events, such as Big Sweep, and expand the Adopt-A-Stream Program started in FY 2008-2009;
- Work with schools, youth groups and other local organizations to post storm drain markers to inform citizens that dumping into storm sewers can pollute local waterways;
- Through public press releases, promotional giveaways, sign posting and coordinating with local groups, develop or expand community recycling/collection programs for used oil, household hazardous wastes and other potential pollutants;
- Provide 'Build a Rain Barrel' workshop for public participation;
- Advertise opportunities for public participation and involvement in newspapers, posters around town, in neighborhood newsletters, at civic organization meetings, through mass mailings, promotional giveaway, or any other method; and
- Disseminate the results of the Volunteer Water Information Network Program, a program monitoring the water quality at 13 sites on seven streams in the Waynesville area.

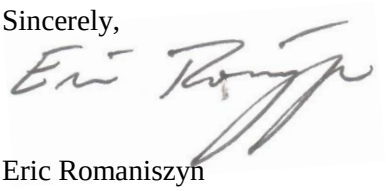
The total costs "not to exceed" for implementing both measures are found in Table 1. Itemized costs are found in Tables 2 and 3

Table 1. Total Costs for Phase II Assistance

Task	Cost
Education and Outreach Program	**$2,310.00 (time) + $3,150.00 (material) = $5,460.00**
Public Participation and Involvement	**$1,312.50 (time) + $605.00 (material) = $1,917.50**
Quarterly Reports (4 reports @ $35/hr x 2 hrs)	**$280.00**
Total Cost (Not to Exceed)	**$7,657.50**

The Haywood Waterways Association thanks you for this opportunity to offer our services. Please contact us any time if you have any questions. If you agree with this proposal, please sign and return the attached agreement page to Haywood Waterways Association, PO Box 389, Waynesville, NC 28786

Sincerely,



Eric Romaniszyn
Executive Director

Cc.:
Amie Owens, Administrative Services Director
David Foster, Director of Public Services
Eddie Caldwell, Finance Director

Table 2. Estimated Costs for Implementing Education and Outreach Measures

Goals	Tasks	Materials & Time Estimate	Total Number of Hours	Total Materials	Cost for 1 year
Press releases	Press releases: stormwater issues	0.5 hrs. x 6 events/yr	3		$105
Quarterly presentations	Preparation Presentation	.5 hrs x 4 events/yr 1.5 hrs x 4 events/yr	8		$280
Displays at community festivals Stormwater display/ local library	Collect existing materials Display preparation Materials	2 hrs 4.5 hrs 2 events/yr $30	11	 $30	$385 $30
Mail postcards: Storm water issues	Preparation & mailing (2 events) Coordinate with Stakeholders Materials	21 hrs x 2 events/yr 1 hrs x 2 events/yr 3,000 postcards & labels Postage x 2 mailings	44 hrs	 $800 $2,040	$1,540 $2,870
Kids in the Creek supplies	Purchase waders and/or supplies	4 units per year		$250	$250
Total Cost for Education and Outreach Program Measure $2,310.00 (time) + $3,120.00 (material) =					**$5,430.00**

Table 3. Estimated Costs for Implementing Public Participation and Involvement Measures.

Goals	Tasks	Materials & Time Estimate	Total Number of Hours	Total Materials	Cost for 1 year
Stream clean-up support	Adopt a Stream tasks (organization, recruitment, stream activity, etc.) Event preparation/press releases Purchase trash bags, gloves & signs	2.5 hrs 5 x events/yr 1hrs. x 4 events/yr	16.5	$255	$577.50 $255
Build a rain barrel workshop	Workshop Preparation Supplies	3 hrs. x 1 event/yr 2 hrs. x 1 event/yr	5	$50	$175 $50
Storm drain stenciling	Preparation Drain marking Stormwater press releases Supplies (paint, masks, etc.)	1 hrs. x 2 events/yr 2 hrs. x 2 events/yr .5 hrs. x 2 events/yr	7	$70	$245 $70
"Recycle be a Winner" **Promote Proper Disposal of Household Hazardous Waste & recycling**	Preparation Coordinating w/stakeholders Supplies (update banner & handouts) Promotional Giveaways – 2 events	2.5 hrs. x 2 events/yr 1 hrs. x 2 events/yr	7	$230	$245 $230
VWIN program support	Press release & articles	2 hours	2		$70
Total cost for Public Participation and Involvement Measure = $1,312.50 (time) + $605.00 (material) = $1,952.50					

Phase II Stormwater Management Plan Implementation
Agreement Form

This agreement is made between the Town of Waynesville and the Haywood Waterways Association, Inc. This agreement will be active from July 1, 2020 and will continue in effect through June 30, 2021 (Fiscal Year 2020).

Haywood Waterways, in collaboration with the Town of Waynesville and outside experts, will determine the method, details, and means of performing each task listed in the proposal. Haywood Waterways and the Town of Waynesville understand not all tasks may be completed depending on available resources.

Haywood Waterways agrees to submit quarterly progress reports and invoices within seven days of completion of each three-month quarter between July and March. These dates correspond to October 7, 2020; January 7, 2021; and April 7, 2021. For the fourth quarter ending in June 2021, Haywood Waterways will submit the report and invoice by June 24. The town agrees to pay Haywood Waterways within thirty days after each invoice is submitted.

Haywood Waterways and the Town of Waynesville agree to hold each other harmless and indemnify for all claims of personal injury, illness, disability or death arising out of and in the course of this agreement.

As representative for the Town of Waynesville, I have read, understand and approve of the tasks outlined in the proposal and the above terms.

_____ _____
Signature of Town of Waynesville Representative Date

For Haywood Waterways Association, Inc.:

_____ _____
Signature of Representative Date

PO BOX 389 • WAYNESVILLE, NC • 28786
PHONE: 828-476-4667
INFO@HAYWOODWATERWAYS.ORG

Appendix B

Contract with Bell Engineering for implementation of the Construction Site Runoff Minimum Measure

August 16, 2018

Ms. Elizabeth Teague, Development Services Director
Town of Waynesville
9 South Main Street
Waynesville, NC 28786

Re: On-Call Stormwater Review Proposal

Dear Ms. Teague:

Thank you for considering Bell Engineering to provide civil engineering services for the review of stormwater drainage and management plan applications. We understand that the requested services will be of a periodic on-call nature as you determine that assistance with the review of applications is needed. We also understand that the applications and associated stormwater drainage and management plans are to be reviewed for adherence to the Town ordinances governing development and stormwater management, particularly Section 12.5 Stormwater Management, and the North Carolina Division of Environmental Quality (NCDEQ) Stormwater Design Manual.

We propose to provide the following services for each application review:

- Bell Engineering will review the application package for completeness and notify you if any additional information is necessary to perform a review;
- Bell Engineering will review the plans, calculations and supporting details for conformance to the requirements of Section 12.5 of the Town Code of Ordinances and the NCDEQ Stormwater Design Manual;
- Should any deficiencies with respect to Town ordinance or Stormwater Design Manual be noted, Bell Engineering will provide you a memorandum identifying the specific deficiencies. The memorandum will be in a form suitable for you to present to the applicant for their use in amending the permit application package and design;
- If no deficiencies are noted, Bell Engineering will provide you a memorandum stating that no deficiencies were noted and recommending that the permit be issued if all other related requirements are found to be met;
- Re-review of amended application packages/plans will be provided as requested and will follow the same procedures outlined above.

1278 hendersonville road, suite d, asheville, north carolina 28803
phone: 828.774.5499 www.hkbell.com
engineering lic. F-1383 landscape architecture lic. C-508
creating, improving, planning for the future.

Payment for the above described services will be on an hourly basis. The fees will be in accordance with the attached "Bell Engineering 2018 Hourly Rates" as revised. Bell Engineering will provide you an updated rate sheet annually prior to assessing charges based on revised rates. All work will be performed in accordance with our attached Standard Terms and Conditions.

On behalf of Bell Engineering, we would like to thank you for the opportunity to submit our proposal for on-call stormwater review services. If you would like to discuss the proposed scope of services, please contact either of us at your convenience. If this proposal is acceptable to you, please sign below and return one copy to us.

Sincerely,

Bell Engineering

Dana J. Bolden, P.E.
Senior Project Manager

Joshua T. Karrick, PLA, ASLA, AICP
Regional Office Manager

Authorized: _____ Date: 2/19/2019
Town of Waynesville

Authorized: _____ Date: August 16, 2018
Robert L. Pickerill, P.E.
Vice President
Bell Engineering

BELL ENGINEERING
2018 HOURLY RATES

	Hourly Rates
Principal IV	202.00
Principal III	200.00
Principal I	193.00
Consultant	185.00
Associate II	176.00
Engineer VI	151.00
Engineer V	146.00
Engineer IV	133.00
Engineer III	109.00
Engineer II	100.00
Engineer I	82.00
Landscape Architect	123.00
Designer/Planner IV	106.00
Designer/Planner III	79.00
Designer/Planner II	73.00
Engineering Tech I	48.00
Inspector II	75.00
Draftsman III	74.00
Draftsman I	73.00
Accountant/Econ. II	121.00
Admin. Assist. III	90.00
Admin. Assist. II	56.00
Secretary III	69.00

BELL ENGINEERING
STANDARD TERMS AND CONDITIONS
FOR ENGINEERING SERVICES

Scope: Engineer shall provide, or cause to be provided, the services set forth in the proposal and in accordance with these terms and conditions.
General: Owner shall have the responsibilities set forth herein and as noted in the proposal. Owner shall pay Engineer as set forth in the proposal and defined herein. Owner shall be responsible for, and Engineer may rely upon, the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by Owner to Engineer pursuant to this Agreement. Engineer may use such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement.
Commencement: Engineer shall begin rendering services as of the Effective Date of the Agreement, unless specified otherwise.
Time for Completion: Engineer shall complete its obligations within a reasonable time. Specific periods of time for rendering services are set forth or specific dates by which services are to be completed shall be as defined in the proposal and are hereby agreed to be reasonable. If, through no fault of Engineer, such periods of time or dates are changed, or the orderly and continuous progress of Engineer's services is impaired, or Engineer's services are delayed or suspended, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably. If Owner authorizes changes in the scope, extent, or character of the Project, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably. Owner shall make decisions and carry out its other responsibilities in a timely manner so as not to delay the Engineer's performance of its services. If Engineer fails, through its own fault, to complete the performance required in this Agreement within the time set forth, as duly adjusted, then Owner shall be entitled to the recovery of direct damages resulting from such failure.
Compensation and Methods of Payment: The method of payment and amount of compensation shall be as noted in the proposal/agreement and shall be based on one of the following methods of payment:
Lump Sum. A fixed price for engineer's services and reimbursable expenses.
Standard Hourly Rates Plus Expenses. Shall be based on the cumulative hours charged to the Project during the billing period by each class of Engineer's employees times standard hourly rates for each applicable billing class, plus reimbursable expenses and Engineer's consultant's charges. The standard hourly rates and reimbursable expense schedule shall be revised annually as of January 1 unless noted otherwise in the proposal.
Additional Services: For engineering services beyond the Scope of Services and/or time period defined in the proposal, Engineer shall furnish additional services only as authorized by the Owner. The method of payment and amount of compensation shall be as mutually agreed to by the Owner and Engineer as defined herein.
Invoices: *Preparation and Submittal of Invoices.* Engineer shall prepare invoices in accordance with its standard invoicing practices. Engineer shall submit its invoices to Owner on a monthly basis. Invoices are due and payable within 30 days of receipt.
Payments: *Application to Interest and Principal.* Payment will be credited first to any interest owed to Engineer and then to principal.
Failure to Pay. If Owner fails to make any payment due Engineer for services and expenses within 30 days after receipt of Engineer's invoice, then:

1. Amounts due Engineer will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said thirtieth day; and
2. Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement until Owner has paid in full all amounts due for services, expenses, and other related charges. Owner waives any and all claims against Engineer for any such suspension.

Disputed Invoices. If Owner contests an invoice, Owner may withhold only that portion so contested, and must pay the undisputed portion.

Opinions of Probable Construction Cost: Engineer's opinions of probable Construction Cost are to be made on the basis of Engineer's experience and qualifications and represent Engineer's best judgment as an experienced and qualified professional generally familiar with the construction industry. However, since Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by Engineer. If Owner wishes greater assurance as to probable Construction Cost, Owner shall employ an independent cost estimator.
Opinions of Total Project Costs: The services, if any, of Engineer with respect to Total Project Costs shall be limited to assisting the Owner in collating the various cost categories which comprise Total Project Costs. Engineer assumes no responsibility for the accuracy of any opinions of Total Project Costs.
Standards of Performance: The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with Engineer's services. Owner shall not be responsible for discovering deficiencies in the technical accuracy of Engineer's services. Engineer shall correct any such deficiencies in technical accuracy without additional compensation except to the extent such corrective action is directly attributable to deficiencies in Owner-furnished information. Engineer may employ such Consultants as Engineer deems necessary to assist in the performance or furnishing of the services, subject to reasonable, timely, and substantive objections by Owner. Subject to the standard of care set forth herein, Engineer and its Consultants may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards. Engineer and Owner shall comply with applicable Laws and Regulations and Owner-mandated standards that Owner has provided to Engineer in writing. This Agreement is based on these requirements as of its Effective Date. Changes to these requirements after the Effective Date of this Agreement may be the basis for modifications to Owner's responsibilities or to Engineer's scope of services, times of performance, and compensation. Engineer shall not be required to sign any documents, no matter by whom requested, that would result in the Engineer having to certify, guarantee, or warrant the existence of conditions whose existence the Engineer cannot ascertain. Owner agrees not to make resolution of any dispute with the Engineer or payment of any amount due to the Engineer in any way contingent upon the Engineer signing any such documents. Engineer shall not at any time supervise, direct, or have control over Contractor's work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by Contractor, for security or safety at the Site, for safety precautions and programs incident to the Contractor's work in progress, nor for any failure of Contractor to comply with Laws and Regulations applicable to Contractor's furnishing and performing the Work. Engineer neither guarantees the performance of any contractor nor assumes responsibility for any contractor's failure to furnish and perform the Work in accordance with the Contract Documents. Engineer shall not be responsible for the acts or omissions of any contractor, subcontractor, or supplier, or of any of their agents or employees or of any other persons (except Engineer's own employees and its Consultants) at the Site or otherwise furnishing or performing any Work; or for any decision made on interpretations or clarifications of the Contract Documents given by Owner without consultation and advice of Engineer.

Design Without Construction Phase Services: If Engineer's Basic Services under this Agreement do not include Project observation, or review of the Contractor's performance, or any other Construction Phase services, then Owner waives any claims against the Engineer that may be connected in any way thereto.

Use of Documents: All Documents are instruments of service in respect to this Project, and Engineer shall retain an ownership and property interest therein (including the copyright and the right of reuse at the discretion of the Engineer) whether or not the Project is completed. Owner shall not rely in any way on any Document unless it is in printed form, signed or sealed by the Engineer or one of its Consultants. Files in electronic media format of text, data, graphics, or other types that are furnished by one party to the other are furnished only for convenience, not reliance by the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. Owner may make and retain copies of Documents for information and reference in connection with use on the Project by Owner. Engineer grants Owner a license to use the Documents on the Project, extensions of the Project, and other projects of Owner, subject to the following limitations: (1) Owner acknowledges that such Documents are not intended or represented to be suitable for use on the Project unless completed by Engineer, or for use or reuse by Owner or others on extensions of the Project or on any other project without written verification or adaptation by Engineer; (2) any such use or reuse, or any modification of the Documents, without written verification, completion, or adaptation by Engineer, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Engineer or to Engineer's Consultants; (3) Owner shall indemnify and hold harmless Engineer and Engineer's Consultants from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from any use, reuse, or modification without written verification, completion, or adaptation by Engineer; (4) such limited license to Owner shall not create any rights in third parties.

Insurance and Liability: Engineer shall maintain the following insurance and coverage limits during the period of service. The Owner will be named as an additional insured on the Commercial General Liability and Automobile Liability insurance policies.

Worker's Compensation. As required by applicable state statute.

Commercial General Liability. $1,000,000 per occurrence for bodily injury, including death and property damage, and $2,000,000 in the aggregate.

Automobile Liability. $1,000,000 combined single limit for bodily injury and property damage.

Professional Liability (E&O). $1,000,000 each claim and $2,000,000 in the aggregate.

The Owner shall make arrangements for Builder's Risk, Protective Liability, Pollution Prevention, and other specific insurance coverage warranted for the Project in amounts appropriate to the Project value and risks. The Engineer shall be a named insured on those policies where Engineer may be at risk. The Owner shall obtain the counsel of others in setting insurance limits for construction contracts.

Suspension and Termination:

Suspension

By Owner: Owner may suspend the Project upon seven days written notice to Engineer.

By Engineer: If Engineer's services are substantially delayed through no fault of Engineer, Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement.

Termination. The obligation to provide further services under this Agreement may be terminated:

1. For cause, by either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.

   By Engineer: upon seven days written notice if Owner demands that Engineer furnish or perform services contrary to Engineer's responsibilities as a licensed professional; or upon 7 days written notice if the Engineer's services for the Project are delayed or suspended for more than 90 days for reasons beyond Engineer's control. Engineer shall have no liability to Owner on account of such termination.

   Notwithstanding the foregoing, this Agreement will not terminate for cause if the party receiving such notice begins, within seven days of receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. For convenience, by Owner effective upon Engineer's receipt of notice from Owner.

Effective Date of Termination. The terminating party may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Engineer to demobilize personnel and equipment from the Site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.

Payments Upon Termination. In the event of any termination, Engineer will be entitled to invoice Owner and to receive full payment for all services performed or furnished and all Reimbursable Expenses incurred through the effective date of termination. Upon making such payment, Owner shall have the limited right to the use of Documents, at Owner's sole risk, subject to the provisions of these Terms and Conditions. In the event of termination by Owner for convenience or by Engineer for cause, Engineer shall be entitled, in addition to invoicing for those items identified in the paragraph above, to invoice Owner and to payment of a reasonable amount for services and expenses directly attributable to termination, both before and after the effective date of termination, such as reassignment of personnel, costs of terminating contracts with Engineer's Consultants, and other related close-out costs, using methods and rates for Additional Services as set forth herein.

Controlling Law: This Agreement is to be governed by the law of the state in which the Project is located.

Successors, Assigns, and Beneficiaries: Owner and Engineer each is hereby bound and the partners, successors, executors, administrators and legal representatives of Owner and Engineer are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, moneys that are due or may become due) in this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement. Unless expressly provided otherwise in this Agreement, nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Contractor, Contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party. Owner agrees that the substance of the provisions of this paragraph shall appear in the Contract Documents.

Dispute Resolution: Owner and Engineer agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice prior to invoking the procedures of mediation or other provisions of this Agreement, or exercising their rights under law.

Environmental Condition of Site: Owner has disclosed to Engineer in writing the existence of all known and suspected Asbestos, PCBs, Petroleum, Hazardous Waste, Radioactive Material, hazardous substances, and other Constituents of Concern located at or near the Site, including type, quantity, and location. Owner represents to Engineer that to the best of its knowledge no Constituents of Concern, other than those disclosed in writing to Engineer, exist at the Site. If Engineer encounters an undisclosed Constituent of Concern, then Engineer shall notify (1) Owner and (2) appropriate governmental officials if Engineer reasonably concludes that doing so is required by applicable Laws or Regulations. It is acknowledged by both parties that Engineer's scope of services does not include any services related to Constituents of Concern. If Engineer or any other party encounters an undisclosed Constituent of Concern, or if investigative or remedial action, or other professional

services, are necessary with respect to disclosed or undisclosed Constituents of Concern, then Engineer may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until Owner: (1) retains appropriate specialist consultant(s) or contractor(s) to identify and, as appropriate, abate, remediate, or remove the Constituents of Concern; and (2) warrants that the Site is in full compliance with applicable Laws and Regulations. If the presence at the Site of undisclosed Constituents of Concern adversely affects the performance of Engineer's services under this Agreement, then the Engineer shall have the option of (1) accepting an equitable adjustment in its compensation or in the time of completion, or both; or (2) terminating this Agreement for cause on 30 days' notice. Owner acknowledges that Engineer is performing professional services for Owner and that Engineer is not and shall not be required to become an "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, which are or may be encountered at or near the Site in connection with Engineer's activities under this Agreement.

Indemnification and Mutual Waiver:

Indemnification. To the fullest extent permitted by law, Engineer and Owner shall indemnify and hold harmless the officers, directors, partners, agents, consultants, and employees of each party from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Project, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of each party or its officers, directors, partners, employees, or Consultants.

Percentage Share of Negligence. To the fullest extent permitted by law, a party's total liability to the other party and anyone claiming by, through, or under the other party for any cost, loss, or damages caused in part by the negligence of the party and in part by the negligence of the other party or any other negligent entity or individual, shall not exceed the percentage share that the party's negligence bears to the total negligence of Owner, Engineer, and all other negligent entities and individuals.

Mutual Waiver. To the fullest extent permitted by law, Owner and Engineer waive against each other, and the other's employees, officers, directors, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to the Project.

Limitation of Liability: To the fullest extent permitted by law, Owner and Engineer (1) waive against each other, and the other's employees, officers, directors, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to the Project, ~~and (2) agree that Engineer's total liability to Owner under this Agreement shall be limited to $25,000 or the total amount of compensation received by Engineer, whichever is less.~~

3/15/19

Miscellaneous Provisions:

Notices. Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, by facsimile, by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.

Survival. All express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.

Severability. Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Engineer, who agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

Waiver. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.

Accrual of Claims. To the fullest extent permitted by law, all causes of action arising under this Agreement shall be deemed to have accrued, and all statutory periods of limitation shall commence, no later than the date of Substantial Completion.

Designated Representatives: With the execution of this Agreement, Engineer and Owner shall designate specific individuals to act as Engineer's and Owner's representatives with respect to the services to be performed or furnished by Engineer and responsibilities of Owner under this Agreement. Such individuals shall have authority to transmit instructions, receive information, and render decisions relative to the Project on behalf of each respective party.

Permits and Approvals: Engineer will assist Owner in preparing applications for permits and approvals from the authority having jurisdiction. The Owner shall pay all fees associated with any permits or review processes.

Appendix C
Microbial Source Tracking Bacteria Data

Microbrial source tracking results (gene copies/ml)

Site	Date	Human	Rating	Cow/sheep/ deer/horse	Rating	Cow/sheep	Rating
Allens Ck @ Grandview	4/11/2019	<5.4	ND	<5.4	ND	<5.4	ND
Allens Ck @ Grandview	5/7/2019	373	M	<5.3	ND	<5.3	ND
Allens Ck @ Main Street	4/11/2019	458	M	<5.4	ND	<5.4	ND
Allens Ck @ Main Street	5/7/2019	<5.2	ND	<5.2	ND	<5.2	ND
Browning Br @ Camp Branch Rd.	5/7/2019	8,280	H	2.4	L	23.9	L
Browning Br @ Camp Branch Rd.	4/11/2019	340	M	7.4	L	62.4	L
Browning Br @ Mosaic	4/11/2019	533	M	1.4	L	14.1	L
Browning Br @ Mosaic	5/7/2019	69.9	L	1	L	14.2	L
Eaglenest Ck @ Little Mtn. Rd.	4/11/2019	<4.8	ND	<4.8	ND	<4.8	ND
Eaglenest Ck @ Little Mtn. Rd.	5/7/2019	<4.7	ND	<4.7	ND	<4.7	ND
Eaglenest Ck, Lower	5/7/2019	8.1	L	<4.6	ND	<4.6	ND
Eaglenest Ck, Lower	4/11/2019	84.4	L	<4.8	ND	<4.8	ND
Factory Br @ Nathaniel	2/5/2019	39.3	L	<4.8	ND	<4.8	ND
Factory Br @ Lake Junaluska	2/5/2019	583	M	4	L	13.9	L
Factory Br @ Lake Junaluska	9/7/2018	72.5	L	0.6	L	4.6	L
Farmers Br @ Waynes. Country Club	5/7/2019	<6.3	ND	<6.3	ND	<6.3	ND
Farmers Br @ Waynes. Country Club	4/11/2019	<6.0	ND	<6.0	ND	<6.0	ND
Farmers Br @ Dutch Fisher Park	5/7/2019	833,000	VH	<7.1	ND	<7.1	ND
Farmers Br @ Dutch Fisher Park	4/11/2019	83,400	VH	<6.1	ND	<6.1	ND
Hyatt Ck @ Richland Creek	9/7/2018	237	M	14	L	173	M
Oxner Cove Branch, Lower	9/7/2018	<4.7	ND	14.9	L	212	M
Owl Ridge Br, Upper	2/5/2019	<5.2	ND	<5.2	ND	<5.2	ND
Owl Ridge Branch, Lower	2/5/2019	<4.8	ND	322	M	18,800	VH
Owl Ridge Branch, Lower	9/7/2018	<4.9	ND	9.8	L	105	M
Plott Ck @ Winchester property	4/11/2019	105	M	<4.9	ND	<4.9	ND
Plott Ck @ Winchester property	5/7/2019	44.4	L	<4.7	ND	<4.7	ND
Plott Ck, Lower	4/11/2019	33	L	7.3	L	61.2	L
Plott Ck, Lower	5/7/2019	<4.8	ND	0.3	L	16.4	L
Raccoon Ck @ round-about	9/7/2018	91.4	L	14.7	L	151	M
Ratcliff Cove Br @ Cemetery Rd.	2/4/2019	296	M	3.6	L	31	L
Ratcliff Cove Br @ Lake J Elementary	2/4/2019	108	M	72.4	L	2,070	H
Ratcliff Cove Br @ Lake J Elementary	9/7/2018	<11.1	ND	2,520	H	25,400	VH
Ratcliff Cove Br, Unnamed Tributary	5/7/2019	5	L	0.3	L	8.6	L
Richland Ck @ Saunook	4/11/2019	368	M	74	L	1,300	H
Richland Ck @ Saunook	5/7/2019	37.7	L	6.9	L	23.6	L
Richland Ck @ Dutch Fisher Park	5/7/2019	<5	ND	<5	ND	8.7	L
Richland Ck @ Dutch Fisher Park	4/11/2019	459	M	2.4	L	31.9	L

Site	Date	Human	Rating	Cow/sheep/ deer/horse	Rating	Cow/sheep	Rating
Richland Ck @ Waynesville Rec	4/11/2019	5,870	H	1.2	L	78.9	L
Richland Ck @ Waynesville Rec	5/7/2019	2,880	H	1.7	L	15.8	L
Richland Ck @ Lake Junaluska	5/7/2019	646	M	3.0	L	22.1	L
Richland Ck @ Lake Junaluska	4/11/2019	608	M	2	L	59.4	L
Richland Ck below Lake Jun. Dam	5/7/2019	6,870	H	29.3	L	<7.9	ND
Richland Ck below Lake Jun. Dam	4/11/2019	102	M	4.9	L	135	M
Shelton Br @ Crymes	2/4/2019	21.6	L	<4.9	ND	<4.9	ND
Shelton Br @ Duckett	2/4/2019	3.2	L	<4.7	ND	<4.7	ND
Shelton Br @ Howell St.	9/7/2018	1,290	H	<5	ND	0.8	ND
Shelton Br @ McCracken St	2/4/2019	43.6	L	<4.7	ND	<4.7	ND
Shelton Br @ Oakdale	2/4/2019	145	M	<4.9	ND	<4.9	ND
Shelton Br, Lower @ Vance St Park	2/4/2019	1,640	H	<4.7	ND	<4.7	ND

VH =Very High, E+04
H = High, E+03
M = Medium, E+02
L = Low, E+01
ND = Not detectible (<)

Stream concerns based on microbial source tracking data

Stream	Primary concern	Secondary concern
Allens Creek	Human	None
Browning Branch	Human	Cow/sheep
Eaglenest Creek	Human	None
Factory Branch	Human	Cow/sheep
Farmers Branch	Human	None
Hyatt Creek	Human	Cow/sheep
Owl Ridge Branch	Cow/Sheep	None
Oxner Cove Branch	Cow/sheep	None
Raccoon Creek	Cow/Sheep	Human
Ratcliff Cove Creek	Cow/Sheep	Human
Richland Creek ups	Human	Cow/sheep
Richland Creek at Waynesville	Human	Cow/sheep
Richland Creek dws Lake Junaluska	Human	Cow/sheep
Shelton Branch	Human	None

Microbial source tracking sampling sites