

# Stormwater Management and Master Plan Public Input Meeting

Village of Pinehurst  
March 23, 2022





# Introductions



Mike Apke, P.E., PS & Eng. Dir.

Jeff Batton, Asst. Village Manager

Darryn Burich, Planning & Insp. Dir.

Megan Skjellerup, Asst. PS Dir.



Michael Hanson, P.E., LEED AP

David Honeycutt, P.E.



# Project Overview

- **Village of Pinehurst (VOP) has engaged McGill Associates (McGill) to assist with the preparation of a Stormwater Management and Master Plan**
- **The VOP's 2019 Comprehensive Plan identified the expansion and enhancement of stormwater management efforts as a “Strategic Opportunity” and included several recommendations related to stormwater**



# 2019 Comprehensive Plan Recommendations



- **Prepare a comprehensive Stormwater Master Plan to identify effective stormwater management strategies**
- **Evaluate creating a local stormwater utility for planning, programming, and coordinating future stormwater infrastructure in the community**
- **Develop and implement rules for post-construction stormwater maintenance requirements**

**PLAN IMPLEMENTATION MATRIX: SUPPORTING INFRASTRUCTURE & UTILITIES**

	Implementation Strategy/Recommendation	Timeframe
<b>Supporting Infrastructure &amp; Facilities</b>		
61	Evaluate ways to partner with private entities to bring high-speed broadband Internet and wireless access to Pinehurst. Target areas of the Village that will support near-term economic recruitment initiatives for technology firms and medical-related industries.	3-5 Years
62	Implement the GIS strategic plan to leverage a wide array of GIS tools to better communicate geo-spatial data.	12 Years
63	Convert static maps to online interactive digital maps accessible on the Village website.	12 Years
64	Evaluate, identify, and purchase land for a future third fire station based on projected development patterns to ensure adequate fire emergency response times.	12 Years
65	Identify alternative locations for the Public Services Complex to allow for redevelopment of Village Place.	12 Years
66	Evaluate the capacity of Village Hall to meet the increased service needs and demands of residents.	3-5 Years
67	Evaluate the need for an additional Police Station or substation to meet the increased service needs and demands of residents.	12 Years
68	Prepare a comprehensive stormwater master plan to identify effective stormwater management strategies.	12 Years
69	Evaluate creating a local stormwater utility for planning, programming, and coordinating future stormwater infrastructure in the community.	3-5 Years
610	Develop and implement rules for post-construction stormwater maintenance requirements.	3-5 Years
611	Coordinate with Moore County Public Utilities to ensure adequate water and sewer infrastructure capacity exists to meet the needs of the community and any projected development patterns shown on the Conservation and Growth Map.	Ongoing
612	Coordinate with NC Department of Transportation (NCDOT) to ensure adequate transportation system improvements are made in a timely manner to meet the needs of the community and any projected development patterns shown on the Conservation and Growth Map.	Ongoing
613	Assess whether the community supports a Village funded library, and if so, explore options for locations and funding sources.	12 Years
614	Assess whether the community supports an indoor and/or outdoor performing arts venue, and if so, explore options for locations and funding sources.	5+ Years
615	Consider projecting long term infrastructure capital needs by infrastructure category beyond the five-year planning horizon of the annual Strategic Operating Plan.	12 Years
616	Evaluate the need for a Comprehensive Plan Consistency Statement for Capital Projects.	12 Years

# What is Stormwater?

- **Simply put, stormwater is water that naturally accumulates as a result of rain or snow**
- **Much of our stormwater infiltrates into our sandy soils, but what doesn't infiltrate typically "runs off" across land or other impervious surfaces like rooftops, streets, parking lots, etc.**
- **At times, heavy rain can result in localized flooding of streets, yards, or even basements or crawlspaces in low lying areas**



# Who is Responsible for Stormwater Management?

- **Property owners are ultimately responsible for managing stormwater across their land, including residential lots**
- **As a property owner, the Village is subject to the same rules and regulations as private property owners on our properties and right-of-way**
- **Pipes and ditches within the public right-of-way along Village-maintained streets (typically 50 or 60-foot wide) are the responsibility of the Village**
- **Village Council allocated \$337,000 in FY22 for Small Drainage projects**



**What other advice do you have?**

If you have a dispute with your neighbor about stormwater runoff onto your property, we recommend first meeting with them and try to work towards a mutually agreeable solution.

If you cannot come to an agreement and you believe the other resident's use of his or her property is unreasonable and causing stormwater to damage your property, you should consult with an attorney. An attorney will be able to advise you on your legal rights and can advise about such things as insurance agent regarding the benefits of flood insurance for your property.



Before purchasing a home, we always recommend having a home inspection, paying attention to any runoff entering the property from the site.

If you have complaints or concerns about stormwater entering your property, contact the NCEM's Fayetteville Regional Office at 910-433-3300.

If you see an issue or have a complaint about a stormwater issue within the Village's boundary or right-of-way, please contact our Public Services Department at 910-295-5621, or you can contact us through the MyVOP link on our website at [www.vopnc.org](http://www.vopnc.org).

If you have additional questions, please feel free to call our Public Services Department at 295-5621, or visit the stormwater link at [www.vopnc.org/stormwater](http://www.vopnc.org/stormwater).

#### For More Information

Village of Pinehurst Municipal Code  
[www.vopnc.org/municipalcode](http://www.vopnc.org/municipalcode)  
Pinehurst Development Ordinance  
[www.vopnc.org/ido](http://www.vopnc.org/ido)

North Carolina General Statutes  
[www.ncleg.state.nc.us](http://www.ncleg.state.nc.us)

NC Department of  
Environmental Quality  
<http://www.deq.gov>  
910-433-3300

Village of Pinehurst Stormwater Info  
[www.vopnc.org/stormwater](http://www.vopnc.org/stormwater)

MY VOP  
[www.vopnc.org/myvop](http://www.vopnc.org/myvop)

Village of Pinehurst Engineering  
Standards and Specifications Manual  
[www.vopnc.org/engineering](http://www.vopnc.org/engineering)

If you still have questions after reading this brochure, feel free to contact the Public Services Department at 910-295-5621.

Village of Pinehurst Public Services  
700 McCull Road E.  
Pinehurst, NC 28134  
910-295-5621  
[www.vopnc.org](http://www.vopnc.org)



**STORMWATER  
IN THE VILLAGE  
OF PINEHURST**



# Who is Responsible for Stormwater Management?



## Village-maintained stormwater infrastructure



# Existing Standards - ESSM



- **Engineering Standards and Specifications Manual (ESSM)**
- **Adopted by Village Council in 2004, most recently amended in 2015**
- **Includes specific design standards for new subdivisions and commercial sites**
- **Post development runoff rate shall not exceed pre-development runoff rate for a 10-year storm event**

The Village of Pinehurst  
Engineering Standards and Specifications Manual



Adopted: August 24, 2004  
Amended: September 29, 2010  
Amended: October 27, 2010  
Amended: December 8, 2015



# Existing Standards – Other Documents



- **NCDEQ Stormwater Design Manual**
- **Pinehurst Development Ordinance (PDO)**
- **Storm Drainage Policy and Procedures**
- **Flood Damage Prevention Ordinance**
- **Erosion Control for 1 acre or more by NCDEQ**

NCDEQ Stormwater BMP Manual



### C-0. Minimum Design Criteria for all SCMs



**Design Objective**

This chapter contains Minimum Design Criteria (MDC) that apply to all Stormwater Control Measures (SCMs). These MDC will apply to each and every SCM that is planned for the project. Additional MDC will be required depending on the specific type of SCM being proposed. See Part C of this Manual for SCM-specific requirements.

**Important Links**

Rule 15A NCAC 2H .1050 MDC for All Stormwater Control Measures



### Village of Pinehurst Storm Drainage Policy and Procedures

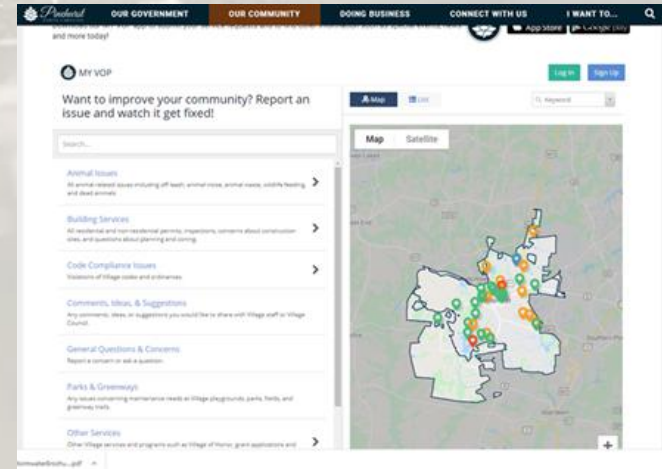
The Village of Pinehurst is to ensure sound management practices and encourage a village of Pinehurst may provide maintenance for storm drainage on right-of-ways to the extent necessary to protect the integrity and safety of storm drainage facilities in accordance with the Village's Substormwater Standards in effect at the time the project is approved for construction. Estimated at \$20,000 or less, Existing Residential Developments

It will take action to mitigate the effects of inadequate or malfunctioning within its right-of-ways reasonably necessary to ensure the continued of the adjacent roadway. All improvements shall prevent erosion and the degree that the Village Engineer deems appropriate to the conditions, all meet the standards set forth in the Village's Engineer deems appropriate improvements shall meet the standards set forth in the Village Engineering or drainage system matters that also involve private property, the Village may need to participate in improvements that meet the criteria of the Civil Share Policy, with the Village's share not to exceed 50%. The amount and type of assistance to be provided shall be determined jointly by the Village Manager, Assistant Village Manager-Operations, and the Village Engineer. This assistance may be provided to help residential consultants mitigate drainage issues as the Village Engineer determines feasible and is allowed within the Funding provided by the Village Council. All assessments required on the project shall be dedicated by the



# MyVOP

- **Link on Village website**
- **App on Smartphone**
- **Provides an immediate notification to Village staff of a specific issue, including stormwater issues**
- **169 stormwater “tickets” submitted in FY21**



# What Rules Govern Stormwater in North Carolina?



- **In 1977, the NC Supreme Court adopted the “Rule of Reasonable Use” which is based on the premise that water naturally flows downhill**
- **Private landowners have the legal right to make reasonable use of their land and the person on the lower estate must receive and pass water from the higher estate**
- **Disputes between private landowners can be resolved in civil court actions**



# What Rules Govern Stormwater in North Carolina?



- **NCGS 77-13 and 77-14 prohibit the blockage of streams, drainage ways, and easements that move water from higher elevations to lower elevations**
- **NCGS 143-214.7 notes that programs shall not require private property owners to install new or increased stormwater controls for preexisting development or redevelopment that do not remove or decrease existing stormwater controls**



# Project Successes

## Village Green Parking Lot



**Underground Chamber  
Storage and Infiltration**

# Project Successes

## Cannon Park Parking Lot



**Dry Detention**

# Project Successes Pinehurst Coins



**Dry Detention**

# Project Successes

## Royal Oak Townhomes



**Private Development  
Dry Detention**



# Stormwater Management and Master Plan Scope



- **Primary purposes of Plan are to identify effective strategies, evaluate funding mechanisms, and guide the future of stormwater management in Pinehurst**
- **Project has been divided into two (2) phases**





# Phase 1 Scope of Work



- **Review existing VOP policies, ordinances, regulations, etc.**
- **Gather sample ordinances and policies from seven (7) other communities, compare to the VOP, and discuss pros and cons of implementation in the VOP**
- **Review Work Order tickets to note trends and issues in Pinehurst**
- **Review Design Storm and Return Frequency (10-year)**





# Phase 1 Scope of Work



- **Review options/potential restrictions for stormwater discharge from existing developed and proposed development lots in single-family residential areas**
- **Assist with Public Engagement**
- **Provide recommendations for implementing standards for post-construction maintenance**



# Potential Phase 2 Scope of Work (Future)



- **Assist with solutions in “problem areas” identified in public input phase**
- **Project future funding needs and identify which problem areas may qualify for ARPA funding**
- **Assist with analyzing whether the creation of a stormwater utility is feasible and/or desirable for the Village**
- **Evaluate advantages, disadvantages, and feasibility of establishing a delegated erosion control program in lieu of using NCDEQ for these services**





# Final Deliverables

- **The project findings and recommendations will be summarized in a written document**
- **Presentation made to Village Council**



**STORMWATER MANAGEMENT AND  
MASTER PLAN**  
Phase 1

Village of Pinehurst





**Thank You For Your Time**  
**Do you have any questions?**



## **Resources:**

**[WWW.VOPNC.ORG/STORMWATER](http://WWW.VOPNC.ORG/STORMWATER)**

**[WWW.ENGAGE.VOPNC.ORG](http://WWW.ENGAGE.VOPNC.ORG)**

## **Contact Information**

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**[david.honeycutt@mcgillassociates.com](mailto:david.honeycutt@mcgillassociates.com)**