



MEMORANDUM

Town of Nags Head

Planning & Development Department

To: Planning Board

From: Michael Zehner, Director of Planning & Development
Kelly Wyatt, Deputy Director of Planning & Development
Kate Jones, Engineering Technician

Date: February 14, 2020; updated March 13, 2020; **updated June 11, 2020**

Subject: Discussion of Residential Stormwater Regulations

Updated content in **bold underline, deleted material in ~~strikethrough~~**

OVERVIEW

Given the continued importance and focus on stormwater, the Board of Commissioners asked the Director of Planning & Development to attend their retreat on January 23, 2020 to discuss the Town's residential stormwater regulations; these regulations can be found in Article 11, *Environmental Regulations* (https://www.nagsheadnc.gov/DocumentCenter/View/2777/Article-11_Environmental-Regulations) of the UDO, within Part I, *Stormwater, Fill, and Runoff Management*, Section 11.5, *General Standards for Residential or Duplex Development on Individual Lots*. A copy of the PowerPoint presentation (without referenced attachments) is attached **was previously distributed to the Planning Board**. Following the Board of Commissioners' discussion, the Board directed Staff to present the Board's perspectives and the options identified by Staff (provided under CONSIDERATIONS) to the Planning Board for review and consideration of any recommended actions.

The Board discussed this item at their meeting on February 18, 2020, however, only brief questions and perspectives were considered, with the Board committing to discussing further at their March meeting. **Due to the Pandemic, the Planning Board was not able to revisit consideration of the regulations until their meeting on May 19, 2020. The Board provided feedback to Staff, supporting further consideration of steps intended to improve education and the availability of resources and the enhancement of ordinance incentives for preferred outcomes, and asked Staff to return with some more concrete actions related to these focus areas. Staff also indicated that they would provide a list of projects permitted under the Ordinance so that the Board could see examples of the results of the regulations; the attached list of Residential Stormwater Projects was previously emailed to the Board on June 9.**

HOW DOES THE ORDINANCE WORK?

Essentially, the regulations and ordinance requirements are triggered by the following development activities:

- The construction of new detached single-family and duplex residential properties;
- The construction of more than 500 sq. ft. of new built-upon area on properties with existing single-family and duplex residential dwellings; and
- The removal and replacement of driveways; in instances where an existing driveway and parking area not meeting the standards of this section is being removed and replaced, the new driveway and/or parking area shall be designed so as to limit the discharge of stormwater into the right-of-way or onto adjacent properties.

When triggered, a stormwater management plan meeting the standards required by the ordinance must be submitted. In general, the standards of the ordinance require stormwater control measures (SCMs) to be provided, with storage volume equal to 15 cubic feet for every 100 square feet of built-upon area. For example, 1,000 square feet of built-upon area would require SCMs with 150 cubic feet of storage volume. The regulations do provide options to reduce the calculated built-upon area, incentivizing preferred outcomes, and thereby reducing the necessary sizing (storage volume) of SCMs.

CONSIDERATIONS

During their discussion at the retreat, the Board of Commissions noted the following guiding principles for further review and consideration of the residential stormwater regulations:

- Can our rules acknowledge that there are different conditions – a system with flexibility?
- Retain form of landscape/minimize impact to landscape.
- Look for common sense solutions.
- Don't place unjust burden on property owner.
- Can we offer a "carrot" to go with a stick?
- Do we as a Board need to define flooding – separate between "Nuisance" and "Problem Stormwater" issues.
- Should not create additional problems.
- Should define problem we are trying to solve.

In their consideration and any recommendation to the Board of Commissioners, Staff would suggest that the Planning Board focus on whether the regulations and any potential changes address these perspectives and principles.

In their review, the Board of Commissioners also asked that the Planning Board consider the following options identified by Staff, to determine whether related actions may be necessary so that the regulations are more consistent with the aforementioned principles. The options presented by Staff to the Commissioners are in bold, Staff has expanded on each of these items for consideration and discussion by the Planning Board.

- **Improve education and availability of resources**
 - Education:
 - In the near term, publish social media and website news flashes related to the benefits of stormwater management at the lot level.
 - Publish a brochure, similar to materials for the Septic Health Initiative, can be mailed out to homeowners focusing on the benefits of stormwater management.
 - Engage with stakeholders and focused groups (Green Drinks, contractors, homeowners) on Town stormwater efforts, stormwater management, and Low-Impact Development (LID) techniques.
 - Coordinate with CSI, North Carolina Coastal Federation, and others to share resources and increase capacity.
 - LID Pilot Project: Look for opportunities on Town property to install pilot projects highlighting LID stormwater control measures; incorporate signage and coordinate public education opportunities.
 - Availability of Resources:
 - Is there a way to cost share or subsidize costs of required improvements? This would require a budget allocation or grants.
 - There are existing grants that could be used, such as the Dare Soil and Water grant, which can provide \$5,000 per homeowner, but there is a cap on total funding.
 - Could the stormwater ad valorem tax be expanded to include residential stormwater management funding?
 - Consider a water bill credit for installing LID stormwater measures such as cisterns and rain barrels.
- **Enhance ordinance incentives for preferred outcomes**
 - Expand available credits to reduce built upon area.
 - Do not cap tree and open space preservation credits to a maximum of 30% reduction of built upon area; provide the option to eliminate the need for stormwater management if you have enough open space and sizable trees to retain.
 - Provide a credit for reducing site disturbance, lot clearing, or filling.
 - Offer additional credit for not filling Army Corp of Engineers wetland areas.
 - Offer an incentive for the use of native plants in the SCMs.
 - Reduce the number of required SCMs (from 3 to 2) for a built upon area credit.
- **Provide an administrative option for engineering analysis to exempt or reduce requirements**
 - This may be an option, but conditions or standards allowing for exemption would need to be identified.

- Consideration for water quality impacts, need to be considered, not just water quantity.
- **Provide more alternatives**
 - The regulations provide a variety of options and currently allow for the approval of alternative SCMs; we should continue to defer to the State for accepted SCMs, but continue to explore new technologies.
- **Provide for administrative waiver/variance**
 - Will require conditions and circumstances that warrant waiver to be identified. Would these be soil conditions, topography, lot size, amount of disturbance?
 - Who would make this decision and what information is required to be submitted?
- **Standardize dimensions and volume of BMP's**
 - Perhaps a standard set would relate to lot size, and the lot coverage allowed by zoning.
 - May result in more predictability, but less relation to actual impacts and existing conditions.
- **Create a points-type program for BMP's and/or preferred outcomes, similar to design guidelines**
 - Needs further thought, but could be designed such that points are received for various LID components. This would open up predevelopment LID concepts for points such as siting development in lower impact portions of the site, choosing greater setbacks and smaller building footprint, retaining natural hydrological features (i.e. wetlands).
 - SCMs with greater impacts would receive more points. The BUA would determine the amount of points needed; for example, SCMs with native plants would receive more points than infiltration trenches and French drains, large cisterns would receive more points than standard rain barrels, etc.
 - Signing a maintenance agreement could also generate points.
 - May be an *overcorrection*, significantly revising a regulatory program that has been in place for only 14 months.

POLICY CONSIDERATIONS

As noted in the previously attached PowerPoint, the Town's Comprehensive Plan includes the following policies and actions related to stormwater:

- **LU-14b: [Review] Existing lot coverage incentives for providing engineered stormwater management.**
- **MS-15: Ensure that stormwater runoff is properly managed to reduce nuisance flooding and pollution of sensitive environmental areas.**
- **MS-17b: Seek additional funding opportunities from local, state and federal agencies to assist with future stormwater planning and construction efforts.**
- **MS-18: Educate and involve the public in stormwater management.**

STAFF RECOMMENDATION

~~Staff recommends that the Planning Board discuss the residential stormwater regulations, identifying their own perspectives regarding the intent of the regulations and whether the regulations achieve their intended purpose, align with the Commissioners' principles, and/or require adjustment. Generally, Staff believes that positive results would be generated by pursuing options identified above to improve education and availability of resources and to enhance ordinance incentives for preferred outcomes.~~

Based upon the Board's input at the May 19 meeting, Staff would suggest that the Board consider support for the following actions and activities in any recommendation to the Board of Commissioners:

- **Improve education and availability of resources**
 - **Develop focused educational opportunities**
 - **In conjunction with Septic Health, develop educational videos on stormwater and water quality, to include interviews with staff, information on resources, and demonstrations.**
 - **Publish a brochure to be mailed to property owners discussing the importance of installing and maintaining stormwater measures, such as rain gardens, vegetative swales, and cisterns. Also focus on practices to implement at home, with or without a stormwater plan in place, such as ways to reduce irrigation with rain sensors, reduction of water consumption, rerouting downspouts to vegetated areas, vegetation of bare areas, and the use of permeable pavements.**
 - **Engage with stakeholders and focused groups (Green Drinks, contractors, homeowners) on Town stormwater efforts, stormwater management, and Low-Impact Development (LID) techniques.**
 - **Hold workshops for contractors, landscapers, and homeowners on Low Impact Development ("LID") practices**

and the installation and maintenance of Stormwater Control Measures.

- **Create visible projects in the community**
 - **Incorporate LID improvements within beach accesses, such as the Huron Street Beach Access**
 - **Incorporate plantings in the current retention area at the June Street Beach Access, along with educational signage.**
 - **Develop a plan for LID improvements at Town Hall, to possibly include permeable paving in the circle with signage, gutters and cistern, and rain garden.**

- **Establish financial resources to support the installation of stormwater measures:**
 - **Develop a program to off-set the cost of SCM installation, supported by expansion of the existing stormwater ad valorem tax.**
 - **Establish a water bill credit for installing SCMs that allow for water reuse, such as cisterns and rain barrels.**
 - **Pursue grant funding (such as the Dare Soil and Water Grant) to provide funds to homeowners for the installation of SCMs.**

- **Enhance ordinance incentives for preferred outcomes**
 - **Expand available credits to reduce built upon area by:**
 - **Eliminating the cap for tree and open space preservation credits at a maximum of 30% reduction of built upon area; provide the option to eliminate the need for stormwater management if you have enough open space and sizable trees to retain;**
 - **Offer additional credit for not filling Army Corp of Engineers wetland areas; and**
 - **Reduce the number of required SCMs (from 3 to 2) for the multiple stormwater measure built upon area credit.**

 - **Establish storage volume methodology to count preserved trees as an SCM.**

 - **Consider amending the engineering calculation/storage volume basis for the regulations and develop a performance/points-based system. Potential options could include:**
 - **Establishing a system of pre-development site planning points that could exempt a project from the requirement of a stormwater plan; perhaps a minimum of 12 points could be**

required for the exemption, with the following qualifying for points:

- **Lot coverage is less than the maximum (how much less?) - 3 points**
 - **Minimal elevation changes to development area (less than 1' elevation change, exempt footprint of septic area?) - 3 points**
 - **Retain mature vegetation (trees over 6" caliper, open space equal to 30% of lot size, combination of both) - 3 points**
 - **Retain 100% ACOE wetlands on site - 3 points**
 - **75%-100% use of permeable/pervious hardscaping - 3 points**
- **Establishing a system of post-development site planning points; perhaps a minimum of 12 points could be required, with the following qualifying for points:**
- **Permeable Paving**
 - **4 points for 100% composition of hardscape**
 - **3 points for 75%**
 - **2 points for 50%**
 - **1 point 1-50%**
 - **Vegetated Swale**
 - **3 points per 40' swale, 1' depth**
 - **2 points per 40' swale, 6" depth**
 - **Rain Garden**
 - **2 points per garden (at least 25 SF, 6" depth)**
 - **Gutters with cistern or rain barrel - 2 points**
 - **Infiltration Trench**
 - **2 points per 40' trench, 1' depth**
 - **1 point per 40' trench, 6" depth**
 - **Use native plants in stormwater measures - 1 additional point per measure**
 - **Signed Maintenance Agreement - 2 points**

Previously Distributed Attachments:

1. PowerPoint - Town of Nags Head Residential Stormwater Ordinance Discussion, Board of Commissioners Retreat, January 23, 2020

Attachments:

1. Residential Stormwater Projects, updated June 9, 2020

Residential Stormwater Projects (Updated 6.9.20)

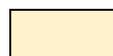
Project	Old Ordinance	New Ordinance	In Progress	Complete
511 Soundside Rd (Surles)	X E			X
112 Lone Cedar (Colson)	X E			X
4207 S. Roanoke Way (ACS Contracting)	X E			X
204 W Lost Colony (Aria)	X E			X
2517 S Bridge Ln (Aria)	X E			X
405 Bridge Ln (James)	X E	X		X
323 Ridgeview Way (Maione)	X E	X		X
4207 SVDT (Jackson)		X		X
6205 SVDT (Fulcher)		X		X
103 Sound Breeze Ln (Michiels)		X	X	
8530/8528 (CAM Realty)		X		X
9918 Sandy Ct (Soundside Pools)		X		X
203 W Outlook Ct (Caribbean Pools)		X		X
9906 SOOIR (Caribbean Pools)		X		X
3208 Salada Ln (C'ville Ventures)	X E	X		X
Marina Dr (Overton)		X E		X
209 Carolinian Circle (All County Bldrs.)		X		X
305 Soundside Rd (Amini)		X	X	
417 Ridgeview Way (Hunter Homes)		X		X
4107 S Thirteenth St (NH Construction)		X	X	
Lot 11 Ridgeview Way (NH Construction)		X		X
425 Ridgeview Way (Sandy Bottom/Soles)		X		X



Old Ordinance



New Ordinance



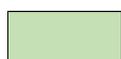
Submitted under old ordinance, reworked under new ordinance

Project	Old Ordinance	New Ordinance	In Progress	Complete
2607 SVDT (SAGA)		X	X	X
W Seawatch Ct (Overton/Haddon)		X E	X	
0 S Linda Lane (Croatan Custom Homes)		X	X	
2702 S Lost Colony Dr (Reliant Construction)		X		X
4129 Duppies Ct (Southernscape Pools)		X	X	X
6201 Baymeadow (MK Construction)		X		X
8400 SOOIR (Bluewater Construction)		X E	X	
2517 SVDT (SAGA Pool Addition)		X	X	
217 Woodhill Dr (Esnbach driveway)		X	X	
2508 S Memorial (Victor Pugh)		X	X	
8120 SOOIR (Carolina Pools)		X	X	
107 E Morningview Pl (Godfrey)		X	X	
2115 S Memorial (Downs)		X	X	
6812 SVDT (McVeary)		X	X	
0 13th St (Seal)		X	X	
Lot 13 Ridgeview Way (NH Construction)		X	X	
Danube St (Kane)		X	X	
2912 S Memorial Ave (J Duboy Cons)			X	
Lot 17 Ridgeview Way (NH Construction)		X	X	
Lot 12 Ridgeview Way (NH Construction)		X	X	

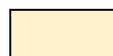
"E" = Submitted Engineered SW Plan



Old Ordinance



New Ordinance



Submitted under old ordinance, reworked under new ordinance