



# MEMORANDUM

## Town of Nags Head

### Planning & Development Department

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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**

Subject: Discussion of Residential Stormwater Regulations

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**\*\*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](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. 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,

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.

**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.**

## CONSIDERATIONS

During their discussion at the retreat, the Board of Commissioners 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.

## 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.**

## Attachments:

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

# Town of Nags Head Residential Stormwater Ordinance Discussion

Board of Commissioners Retreat

January 23, 2020

# Residential Stormwater Ordinance - Background

- The regulation of stormwater on residential lots became a consideration in the Fall of 2012, the result of excessive rainfall and flooding that occurred over the preceding late-Spring and Summer months.
- On January 8, 2014, the BoC adopted an update to Chapter 34, *Stormwater, Fill and Runoff Management*, of the Town Code (*Attachment A*) which codified a stormwater plan requirement for single-family and duplex development triggered by fill and/or grading activities; adoption of this ordinance was preceded by the work of a stormwater subcommittee and coordination with the Planning Board and BoC (*Attachment B and Attachment C*)
- Between 2014 and the end of 2018, there was continued discussion and consideration of stormwater and the Residential Stormwater Ordinance; on December 5, 2018, the BoC adopted amendments to Chapter 34 (*Attachment D*) intended to simplify the requirements and plan approval process (*Attachment E*).
- Within 2019, Staff continued to work with representative of the Outer Banks Home Builders on fill requirements (*Attachment F*); Staff committed to proposing amendments to fill requirements in conjunction with adoption of an updated Flood Prevention Ordinance. Chapter 34 was codified as Part I of Article 11, Environmental Regulations, of the UDO (*Attachment G*); the complimentary Recommended Standard Details Manual may be accessed here: <https://www.nagsheadnc.gov/938/Recommended-Standard-Details-Manual--Sto>

# Residential Stormwater Ordinance - Purpose & Intent; Policy Goals

- As provided in the UDO, the purpose and intent of the overall *Stormwater, Fill and Runoff Management* Ordinance is to proactively protect, maintain and enhance the public health, safety, environment and general welfare by establishing requirements and procedures to control the adverse effects of fill, land disturbance and increased post-development stormwater runoff for the purposes of both water quantity management for flood prevention and water quality protection with the goals to:
  - Control and minimize impacts associated with stormwater runoff from all development and redevelopment.
  - Mitigate current stormwater problems and prevent future problems associated with stormwater runoff.
  - Preserve water quality through proactive management practices.
  - Facilitate public understanding of stormwater management.
  - Encourage the use of pilings and open foundations and minimize the use of fill, consistent with FEMA's coastal construction recommendations.
  - Improve stormwater management through use of low impact development techniques.
  - Establish requirements for on-going management and maintenance of stormwater management practices.
  - Establish application and enforcement procedures that address land disturbance, sedimentation and erosion control, the use of fill, and stormwater management practices consistent with associated Town ordinances and state and federal laws and regulations, to include:
    - Soil erosion and sedimentation control provisions (Article 11, Part II);
    - Excavations (Chapter 18 of the Town Code of Ordinances);
    - Flood damage prevention provisions (Article 11, Part III);
    - NCDEQ stormwater management (NCAC T15: 02H .1000);
    - NCDEQ soil erosion and sedimentation control (G.S. 113A-50 - 113A-71);
    - NCDEQ and Dare County Health Department subsurface, ground-absorption wastewater effluent disposal (NCAC T15A: 18A. 1900).
  - Establish public awareness of potential surface and subsurface water drainage problems recognizing that development potential of some land may be limited.
  - Regulate development and redevelopment which may create additional stormwater related burdens to the Town or adjacent properties.
  - Cause every development and redevelopment employing stormwater management practices to develop a maintenance plan, and place responsibility for maintenance with the property owners.

# Residential Stormwater Ordinance - Purpose & Intent; Policy Goals

- As established in the adoption ordinance for the 2018 Ordinance amendments, the basis for the adoption of the amendments were that:
  - the Town acknowledges that stormwater poses a threat to the public health, safety, and welfare;
  - the Town has experienced significant localized flooding during heavy and/or frequent rain events that in many cases can be attributed to stormwater and;
  - it is the Town's intent to preserve residential neighborhoods and to support local businesses;
  - the Town finds that the improper use of fill and lack of maintenance of stormwater management practices contributes to stormwater run-off;
  - the 2017 Comprehensive Plan states that the Town will "Ensure that stormwater runoff is properly managed to reduce nuisance flooding and pollution of sensitive environmental areas (p. 205)";
  - the Town finds that to protect coastal waters we should limit non-point source pollution attributed to run-off from impervious surfaces such as parking lots and roof tops;
  - the Town finds that as more lots are developed and the built upon area is increased throughout Nags Head, stormwater collection and conveyance systems within the public rights-of-way are being overburdened and must be supplemented with additional management practices on private property;
  - the Town manages resources to protect the public infrastructure, quality of life, environment, and property of the citizens of Nags Head through fair and equitable, cost effective means, and the Stormwater Ordinance seeks to improve, enhance, and protect the quality of life for the citizens of Nags Head;



# Residential Stormwater Ordinance - Purpose & Intent; Policy Goals

- 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.

# Residential Stormwater Ordinance - Continued and Additional Considerations

- As noted on Slide 2, since adoption of the amendments in Dec. 2018, Staff continued to work with representative of the Outer Banks Home Builders on fill requirements; Staff committed to proposing amendments to fill requirements in conjunction with adoption of an updated Flood Prevention Ordinance. As noted in *Attachment G*, there was not consensus on all issues between Staff and the Home Builders; Staff did receive feedback from the BoC at their September 2019 Retreat that will inform the forthcoming draft amendments associated with fill and the Flood Prevention Ordinance.
- Since January 2019, there have been 25 stormwater plans submitted for residential projects (6 for pool projects); of those, 3 were prepared by a licensed engineer, compared with 8 of 8 projects active at that time under the previous iteration of the ordinance having been prepared by a licensed engineer (3 of those 8 were subsequently redesigned under the new ordinance).

# Residential Stormwater Ordinance - Continued and Additional Considerations

- Options to consider:
  - Repeal the residential stormwater requirements;
  - Improve education and availability of resources;
  - Enhance ordinance incentives for preferred outcomes;
  - Provide an administrative option for engineering analysis to exempt or reduce requirements;
  - Provide more alternatives;
  - Provide for administrative waiver/variance;
  - Standardize dimensions and volume of BMP's;
  - Create a points-type program for BMP's and/or preferred outcomes, similar to design guidelines;
  - Other options?