

Go Green, Save Money:
Lowering Flood Insurance
Rates in Virginia with
Stormwater Management

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Rising Waters, Rising Rates

- Coastal Communities in Virginia are confronted with:
 - A need to restore the health of habitat, improve water quality, and save the Chesapeake Bay
 - The highest rate of relative sea level rise on the Atlantic Coast
 - Increasing risks of flooding & storm damage
- Flooding damage costs homeowners and businesses millions of dollars

Rising Waters, Rising Rates

- FEMA's National Flood Insurance Program
 - Many will see their policy premiums increase
- Biggert-Waters Act in 2012 & Homeowner Flood Insurance Affordability Act of 2014 (HFIAA)
- 18% of Virginia's 114,880 policies will see their premiums rise

Community Rating System

- Voluntary program administered by FEMA
- Can decrease flood insurance premiums for NFIP policyholders in participating communities
- In Virginia: 55,076 NFIP policyholders in CRS participating communities
 - Total savings: \$2,844,066
- Approximately 5% of all Virginia communities eligible to participate do participate

Community Rating System

- Communities receive credits for flood related activities
- As the # of CRS credits increases, flood insurance premiums decrease
- Need 500 credits to get a discount
 - Can get 1/3 by participating and managing stormwater under the Virginia Stormwater Management Act

VSMP authority

- Virginia localities must adopt model ordinances incorporating Virginia Stormwater Management Act and its program regulations
- The Act authorizes localities to adopt more stringent ordinances
- NOTE:
 - Adopting more stringent ordinances may generate more CRS credits
 - Localities need to follow statutory provisions

Stormwater Management

- Maximum of 755 CRS credits available for Activity 450: Stormwater Management
- Virginia average credit = 87
 - Ranges from 20 in Roanoke to 187 in Arlington
- Compliance with Virginia's Stormwater Management Act should generate **169 credits** for participating communities

Stormwater Management

- CRS program grants credits for managing new development in the watershed
- 4 Ways to Generate Credit
 - Stormwater Management Regulations
 - Watershed Master Planning
 - Erosion and Sediment Control
 - Water Quality

Credit Generation 1: Stormwater Management Regulations

- 4 sub-elements:
 - Size of development
 - Design storm
 - Low impact development
 - Requirements for inspection and maintenance

Sub-element 1: Size of Development

- **CRS:** Credit awarded based on the size of development that is regulated
- Maximum: 110 credits
 - All development regulated
- Minimum: 15 credits
 - All development regulated EXCEPT parcels of 5 acres or less or impervious area of 20,000 square feet or less

Sub-element 1: Size of Development

- **VA Stormwater Management Act**
 - Regulates land-disturbing activities that disturb more than 1 acre
 - **60 credits**
- **Chesapeake Bay Preservation Act**
 - Regulates land-disturbing activities equal to or greater than 2,500 square feet
 - **90 credits**

Sub-element 2: Design Storm

- A rainfall event of specified size and return frequency which is used to calculate runoff volume
- **CRS Minimum Requirements:**
 - Manage at least a 10-year storm
 - Pre- and post-development hydrology calculations
 - Post-development run-off must be limited to pre-development levels
- Maximum: 225 credits
 - 100-year storm and volume also controlled
- Minimum: 14 credits
 - 10-year storm and volume not controlled

Sub-element 2: Design Storm

- **VA Stormwater Management Act**
 - 10-year, 24-hour storm
 - Volume control optional
 - **14 credits; 21 credits if volume controlled**

Sub-element 3: Low Impact Development

- **CRS Requirement:** Regulatory language requires the implementation of LID techniques for new development
- Maximum: 25 credits
 - ALL new development and redevelopment required to use LID
- Partial credit
 - Ordinance requires all development except single-family residences to use LID

Sub-element 3: Low Impact Development

- **VA Stormwater Management Act:** regulations provide a list of best management practices (BMPs) that are approved to reduce the phosphorus load and runoff volume
- **Maximum: 25 credits**
 - VSMP authorities have authority to establish limitations on the use of specific BMPs
 - Likely that locality can only get credit if it adopts an ordinance that only allows LID BMPs
 - Credits will vary

Sub-element 4: Inspection and Maintenance

- **CRS Requirement:** Inspection and maintenance of stormwater management facilities must be required
- **VA Stormwater Act:** VSMP authorities must require the provision of long-term responsibility and maintenance of stormwater management facilities
- **Credit: 20 credits**

Summary of Credit Generation 1: Stormwater Management Regulations

- Size of Development = 60 credits
- Design Storm = 14 to 21 credits
- Low Impact Development = 0 to 25 credits
- Inspection and Maintenance = 20 credits

TOTAL = 94-126 credits

Credit Generation 2: Watershed Master Planning

- **CRS:** Adopt a watershed master plan
 - Evaluating future conditions and long-duration storms
 - Identifying wetlands and natural areas
 - Addressing the protection of natural channels
 - Providing a dedicated funding source for implementation
- Maximum: 315 credits

Credit Generation 2: Watershed Master Planning

- **VA Stormwater Management Act**
 - Does not appear to generate credit
- **VA actions that may generate credit**
 - WIPs
 - TMDL action plans
 - Regional cooperation efforts
 - Watershed studies and coordination

Credit Generation 3: Erosion and Sediment Control

- **CRS:** Credits vary depending on the size of disturbed land that is regulated
- **Credits**
 - 40 credits: disturbed land greater than 1,000 square feet
 - 30 credits: disturbed land greater than 0.5 acres
 - 10 credits: disturbed land greater than 1 acre

Credit Generation 3: Erosion and Sediment Control

- **VA Stormwater Management Act**
 - Developers must provide stormwater pollution prevention plans which include an erosion and sediment control plan consistent with VA Erosion and Sediment Control regulations
- **VA Erosion and Sediment Control Law**
 - Applies to land disturbing activities of 10,000 square feet or more (less than 0.5 acres)
- **30 Credits**

Credit Generation 4: Water Quality

- **CRS Requirements:** Community's stormwater management regulations must specify one or more measures or refer to BMPs as published in an official government reference
- Maximum: 20 credits

Credit Generation 4: Water Quality

- As of July 1, 2014, the *Virginia Stormwater Handbook* reflects changes to Virginia Stormwater BMPs
- Regulations list BMPs that reduce phosphorus load and runoff volume
 - Limit phosphorus load to achieve no net increase in nutrients
- **20 credits**

Summary

- Stormwater Management Regulations
 - Size of development: 60 credits
 - Design storm: 14 credits (21 if volume also controlled)
 - Low Impact Development: 0 to 25 credits
 - Public Inspection and Maintenance: 20 credits
- Watershed Master Plan
 - 0 to 315 credits
- Erosion and Sediment Control
 - 30 credits
- Water Quality
 - 20 credits

TOTAL: $60+14+25+20+0+30+20= 169$ credits

Thank You!

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