Figure 1. Southern Chesapeake 2 & 3 Watershed MDPU Map

Legend
- Subcatchments

Aerial Imagery @ 2002 Commonwealth of Virginia.

See GIS for Complete Details

Homestead Outfall

Hydraulic Connection with Cooper's Ditch

Saint Brides Outfall

Hydraulic Connection with Cooper's Ditch

Southern Chesapeake Watershed MDPU Study Areas 2 & 3
City of Chesapeake, Virginia

Storm Water Management Model
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## Figure 2. Soils with Wetlands Overlay

Southern Chesapeake Watershed MDPU
Study Areas 2 & 3
City of Chesapeake, Virginia

### ID Description

1. Acredale silt loam, 0 to 1 percent slopes  
2. Acredale-Chapanoke complex, 0 to 1 percent slopes  
6. Arapahoe mucky fine sandy loam, 0 to 1 percent slopes  
8. Bripac loamy fine sand, 0 to 2 percent slopes  
12. Chesapeake sandy loam, 0 to 2 percent slopes  
14E. Covehock-Chesapeake-Tetotum complex, 0 to 40 percent slopes  
15. Dellosa mucky fine sandy loam, 0 to 1 percent slopes  
16. Dellosa-Tomotley-Nimmo complex, 0 to 1 percent slopes  
20. Dragston-Tomotley complex, 0 to 2 percent slopes  
23. Gerle silt loam, 0 to 1 percent slopes  
24. Hyde mucky silt loam, 0 to 1 percent slopes  
25. Munden fine sandy loam, 0 to 2 percent slopes  
26C. Munden-Tomotley fine sandy loam, 0 to 8 percent slopes  
30. Nawney silt loam, 0 to 1 percent slopes, frequently flooded  
34. Portsmouth mucky fine sandy loam, 0 to 1 percent slopes  
38. Tetotum fine sandy loam, 0 to 2 percent slopes  
41. Tomotley fine sandy loam, 0 to 1 percent slopes  
42. Tomotley-Bertie complex, 0 to 2 percent slopes  
43. Tomotley-Deloss complex, 0 to 1 percent slopes  
45. Tomotley-Nimmo complex, 0 to 1 percent slopes  
53. Wando loamy fine sand, 0 to 3 percent slopes  
W. Water

See GIS for Complete Details

---

Storm Water Management Model
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Figure 3. Existing Conditions Subcatchments with Shaded Imperviousness
Southern Chesapeake Watershed MDPU
Study Areas 2 & 3
City of Chesapeake, Virginia

Legend
SubcatchmentsOutlined in Red
Existing Imperviousness
1%
2% - 20%
21% - 30%
31% - 40%
41% - 55%
56% - 60%
61% - 65%
66% - 85%
86% - 90%
91% - 100%

Existing Watershed Imperviousness = 8.81%

See GIS for Complete Details
Figure 4. Future Conditions Subcatchments with Shaded Imperviousness
Southern Chesapeake Watershed MDPU
Study Areas 2 & 3
City of Chesapeake, Virginia

Future Watershed Imperviousness = 12.61%

Legend
Subcatchments Outlined in Red
Future Imperviousness
1% - 2% - 20%
21% - 30%
31% - 40%
41% - 55%
56% - 60%
61% - 65%
66% - 85%
86% - 90%
91% - 100%

See GIS for Complete Details

Storm Water Management Model
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Figure 5. Potential Increase In Imperviousness
Southern Chesapeake Watershed MDPU
Study Areas 2 & 3
City of Chesapeake, Virginia
Figure 6. Link-Node Diagram - Existing Conditions
Southern Chesapeake Watershed MDPU
Study Areas 2 & 3
City of Chesapeake, Virginia

Legend
- Existing Nodes
- Existing Links

See GIS for Complete Details

Storm Water Management Model
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Figure 7. Link-Node Diagram - Future Conditions
Southern Chesapeake Watershed MDPU
Study Areas 2 & 3
City of Chesapeake, Virginia

See GIS for Complete Details

Legend
- Future Nodes
- Future Links

Storm Water Management Model
April 2007
Figure 8. Flooding for 10-Yr and 50-Yr Storms: Existing Hydrology, Existing Drainage

Southern Chesapeake Watershed MDPU Study Areas 2 & 3
City of Chesapeake, Virginia

See GIS for Complete Details

Storm Water Management Model
April 2007
Figure 9. Flooding for 10-Yr and 50-Yr Storms: Future Hydrology, Existing Drainage

Southern Chesapeake Watershed MDPU Study Areas 2 & 3
City of Chesapeake, Virginia

<table>
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<th>50-Yr</th>
<th>10-Yr</th>
<th>50-Yr</th>
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See GIS for Complete Details

Storm Water Management Model
April 2007
Figure 10. Future Improvements with Wetlands Underlay
Southern Chesapeake Watershed MDPU
Study Areas 2 & 3
City of Chesapeake, Virginia

Legend
- Future Nodes
- Future Links
- NWI Wetlands

<table>
<thead>
<tr>
<th>Improvement Number</th>
<th>Description of Improvement</th>
<th>MDP</th>
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<td>1</td>
<td>Upper Homestead Tributary Improvements</td>
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<td>2</td>
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<td>3</td>
<td>Middle Homestead Outlet Improvements</td>
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<td>Mango Place Outlet Improvements</td>
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<td>Edinburgh Parkway BMP</td>
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<td>Willow Ford Road BMP</td>
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<td>Improvemeny BMP Buffer and Outlet Improvements</td>
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<td>Carroll Road Marsh Improvements</td>
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<td>11</td>
<td>Saint Bridges Outlet Maintenance and Improvements</td>
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See GIS for Complete Details
Future Nodes
Future Links
Relative Volume
50-year Adtl. Flood Vol., cf
10-year Flood Vol., cf

Node # 10-year 50-year Node # 10-year 50-year Node # 10-year 50-year
118 - 26,000 510 - 33,000 682 - 13,000
134 - 23,000 512 - 33,000 794 - 42,000 100,000
274 - 31,000 526 - 35,000 824 - 12,000
290 - 47,000 594 - 17,000 868 - 15,000
406 - 20,000 602 - 56,000
408 - 20,000 640 - 22,000

Nodal Flooding Volumes for Future Drainage / Future Hydrology, ft³

Figure 11. Flooding for 10-Yr and 50-Yr Storms: Future Hydrology, Future Drainage
Southern Chesapeake Watershed MDPU
Study Areas 2 & 3
City of Chesapeake, Virginia

See GIS for Complete Details

Storm Water Management Model
April 2007
Non Tidal - Light Vegetation

Wetlands or Restrictive Land Use

OHWM


Pine, Black Willow, Wax Myrtle

Non Tidal - Full Vegetation

Wetlands or Restrictive Land Use

OHWM

Class I Riprap

Filter Fabric


Bald Cypress

Tidal

Wetlands or Restrictive Land Use

MHW

Elevation 1.7 (NAVD 1988)

Elevation 0.6 to 1.1 (NAVD 1988)

-0.1 Elevation (NAVD 1988)

Slope

Spartina Patens

Salt Bush, Wax Myrtle

Spartina Alternaflora

OHWM - Ordinary High Water Mark: Nontidal (Upper limits defines COE jurisdiction)

U - Uplands or Non-wetlands

MHW - Mean High Water - Tidal: Vegetation should be planted to drain between MHW (Elevation 1.7) and MLW (-0.1) [NAVD 1988]
Figure 13. Potential Environmental Restoration and Protection Projects

Legend
- Future Nodes
- Future Links
- Riparian Habitat Corridor

<table>
<thead>
<tr>
<th>Potential Project</th>
<th>Description</th>
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<tr>
<td>A</td>
<td>Lower Sign Pine Road BMP Habitat Corridor</td>
</tr>
<tr>
<td>B</td>
<td>Edinburgh BMP Habitat Corridor</td>
</tr>
<tr>
<td>C</td>
<td>East Edinburgh Habitat Corridor</td>
</tr>
<tr>
<td>D</td>
<td>Hickory High School BMP Habitat Corridor</td>
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</tbody>
</table>

0 1,250 2,500 Feet

See GIS for Complete Details