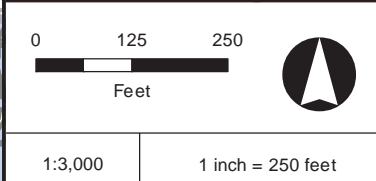
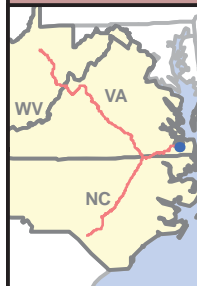
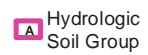


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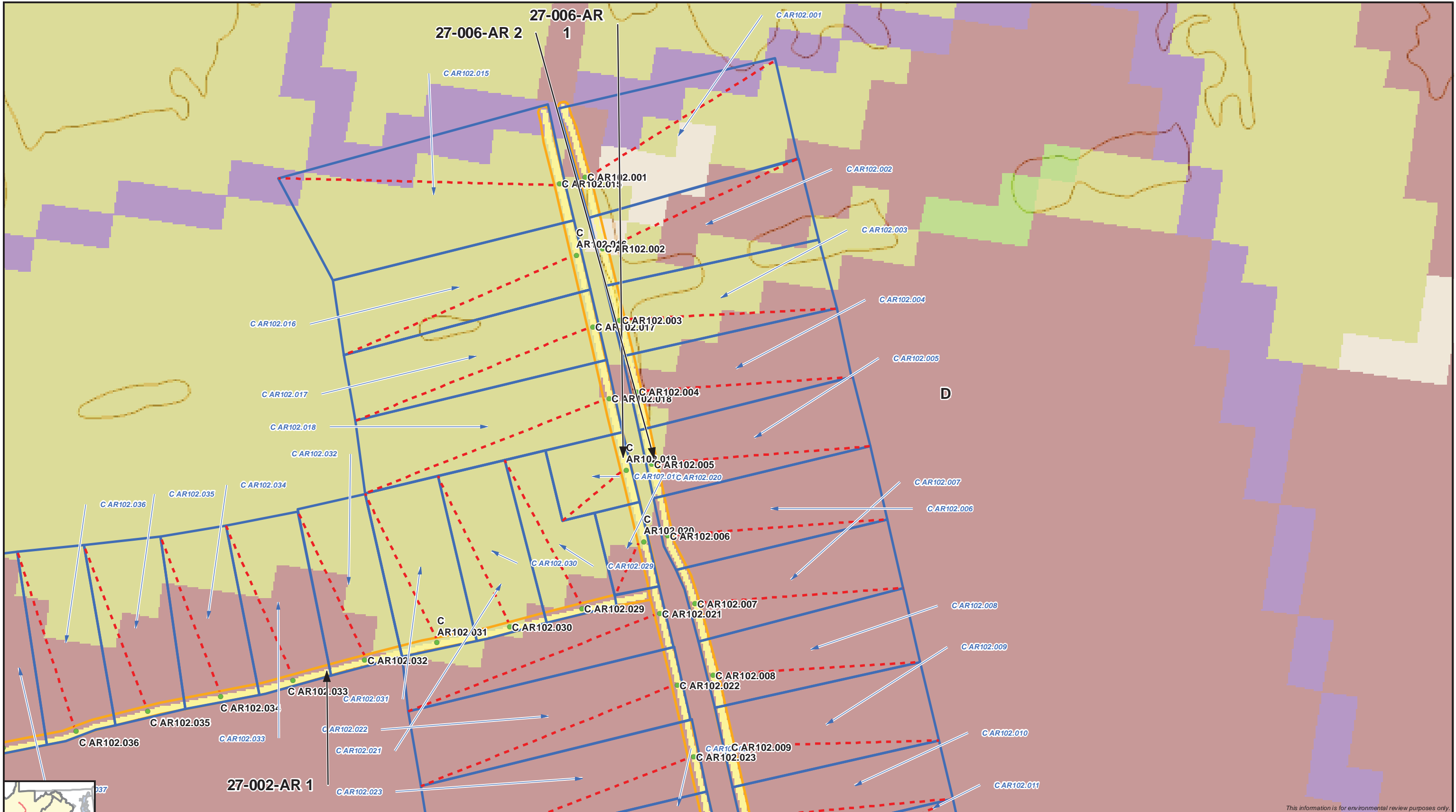


- Milepost
- ▭ Permanent Access Road ROW
- ▭ Pipeline ROW
- ▭ Culvert Drainage Area
- Culvert
- Flow Path
- Land Cover**
- ▭ Agriculture
- ▭ Developed, Open Space
- ▭ Forest
- ▭ Gravel
- ▭ Shrub
- ▭ Wetlands

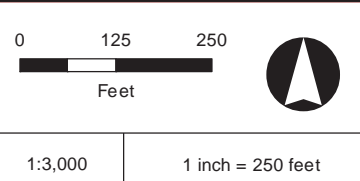
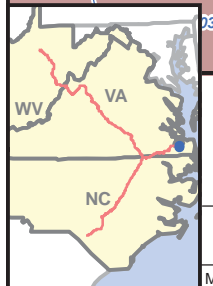


Virginia
Culvert and Ditch Analysis
 Permanent Access Roads
 Post-Development Conditions





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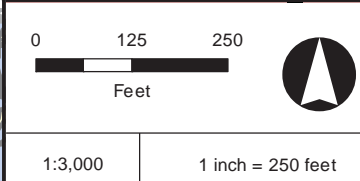
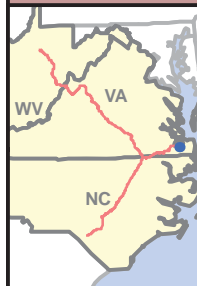
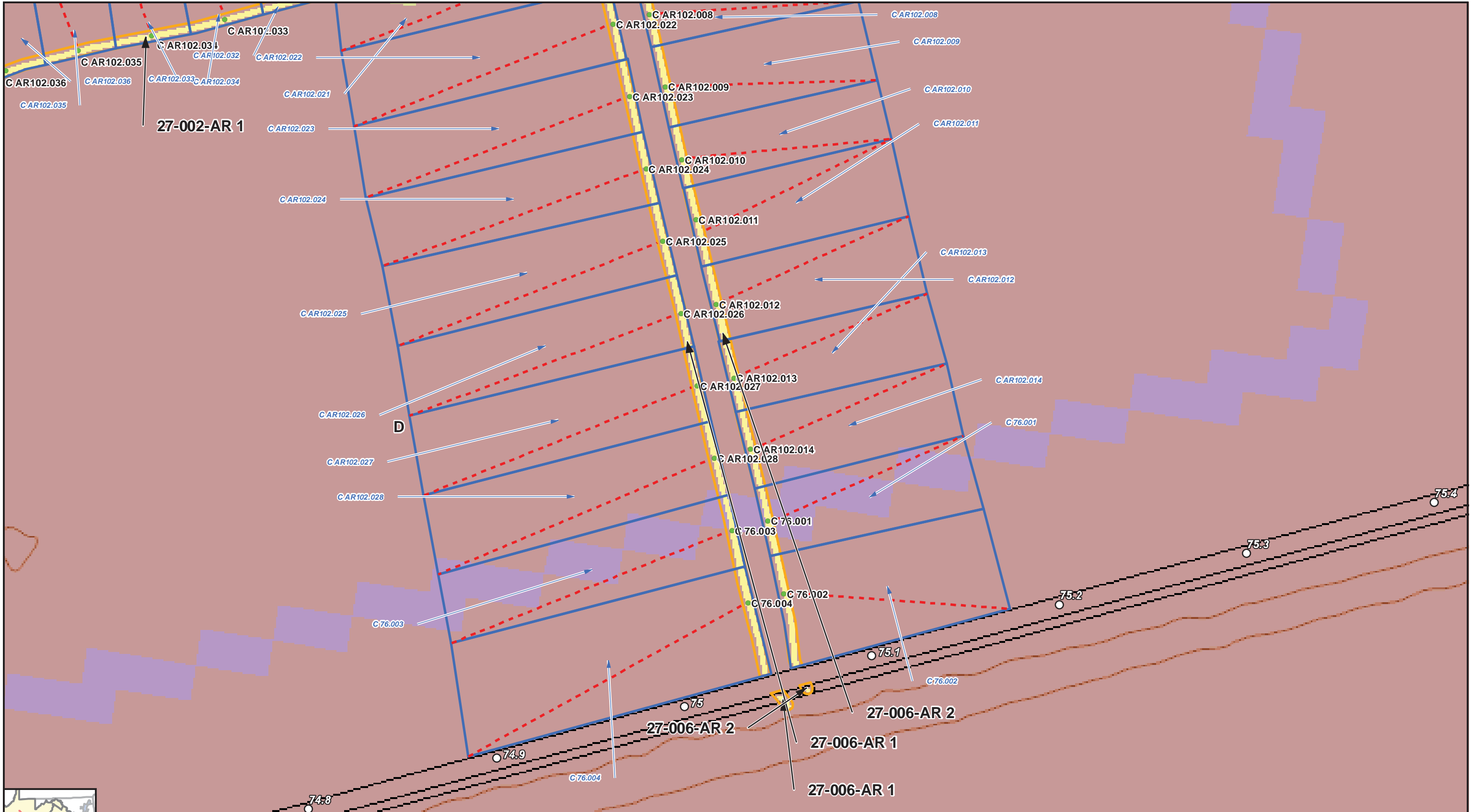
Permanent Access Road ROW	Land Cover	Shrub
Culvert Drainage Area	Agriculture	Wetlands
Culvert	Developed, Open Space	
Flow Path	Forest	
	Gravel	

Hydrologic Soil Group



Virginia
Culvert and Ditch Analysis
 Permanent Access Roads
 Post-Development Conditions





- Milepost
- Permanent Access Road ROW
- Pipeline ROW
- Culvert Drainage Area
- Culvert
- Flow Path
- Land Cover
 - Agriculture
 - Developed, Open Space
 - Gravel
- Wetlands

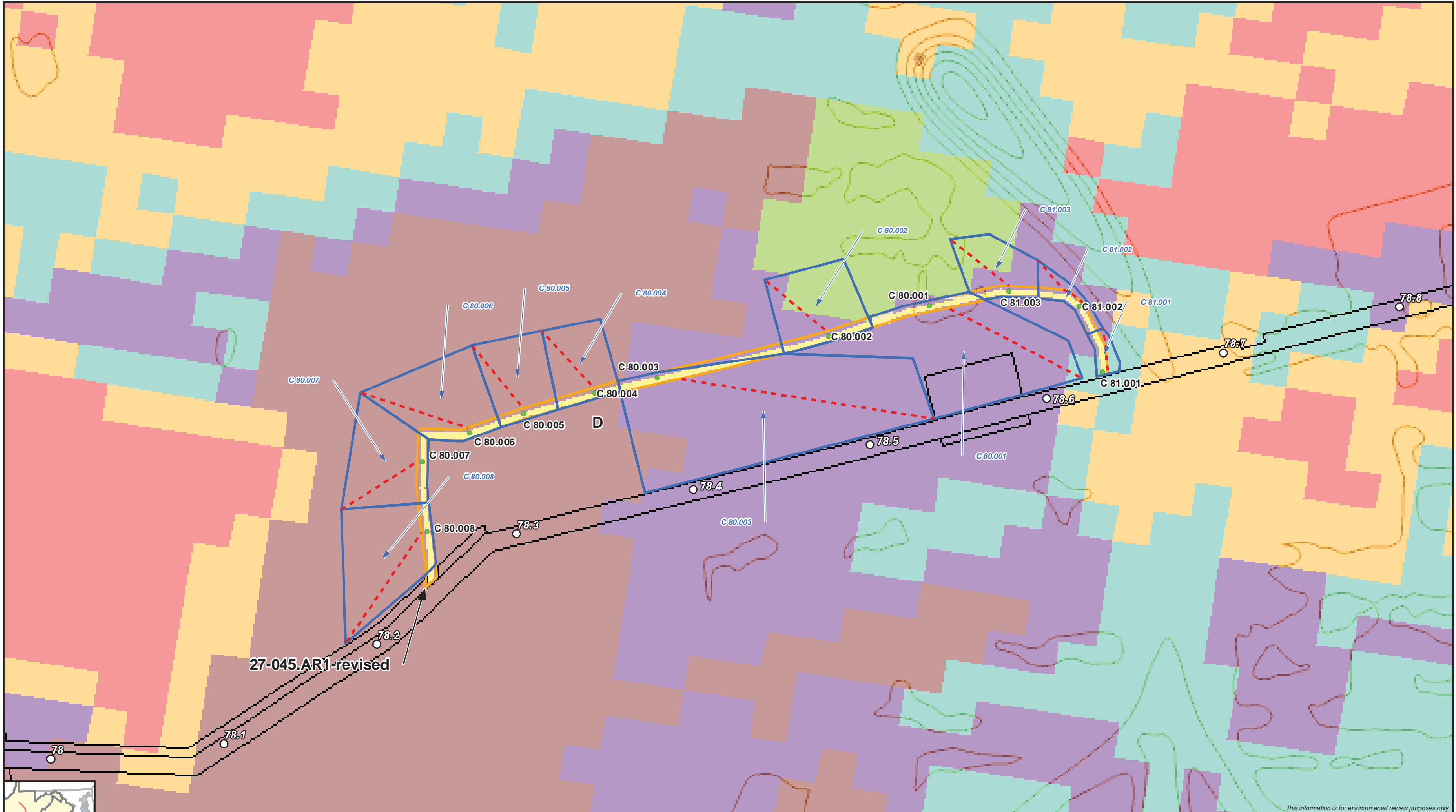
Hydrologic Soil Group



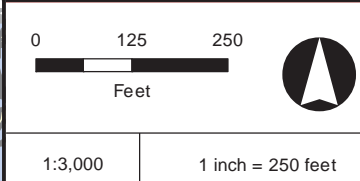
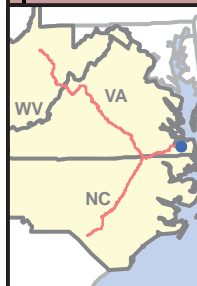
Virginia
Culvert and Ditch Analysis
 Permanent Access Roads
 Post-Development Conditions



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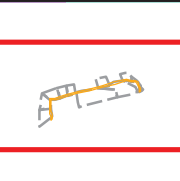


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○ Milepost	--- Flow Path	■ Developed, Open Space
▭ Permanent Access Road ROW	Land Cover	■ Forest
▭ Pipeline ROW	■ Developed, High Intensity	■ Gravel
▭ Culvert Drainage Area	■ Developed, Low Intensity	■ Shrub
● Culvert	■ Developed, Medium Intensity	■ Wetlands
		■ Hydrologic Soil Group

Access Road Key →

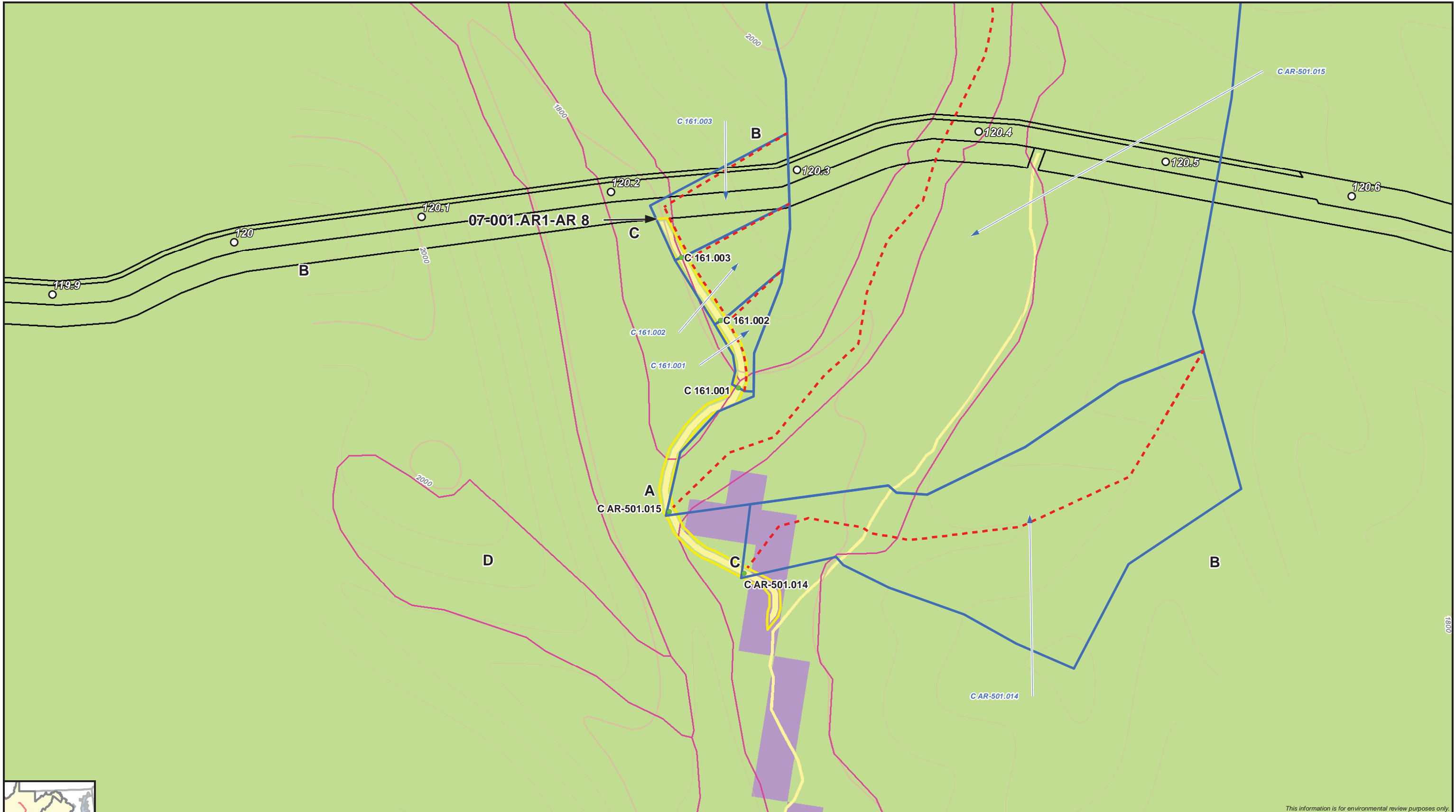


Virginia
Culvert and Ditch Analysis
 Permanent Access Roads
 Post-Development Conditions

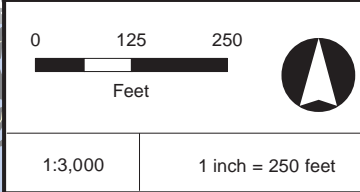
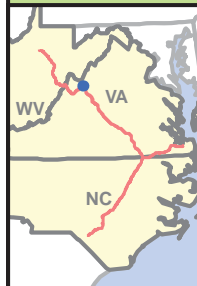


FIGURE 2.3

Culvert and Ditch Analysis Map Book for Temporary Access Roads, Development
Conditions

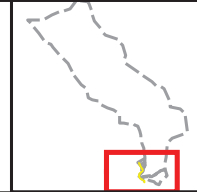


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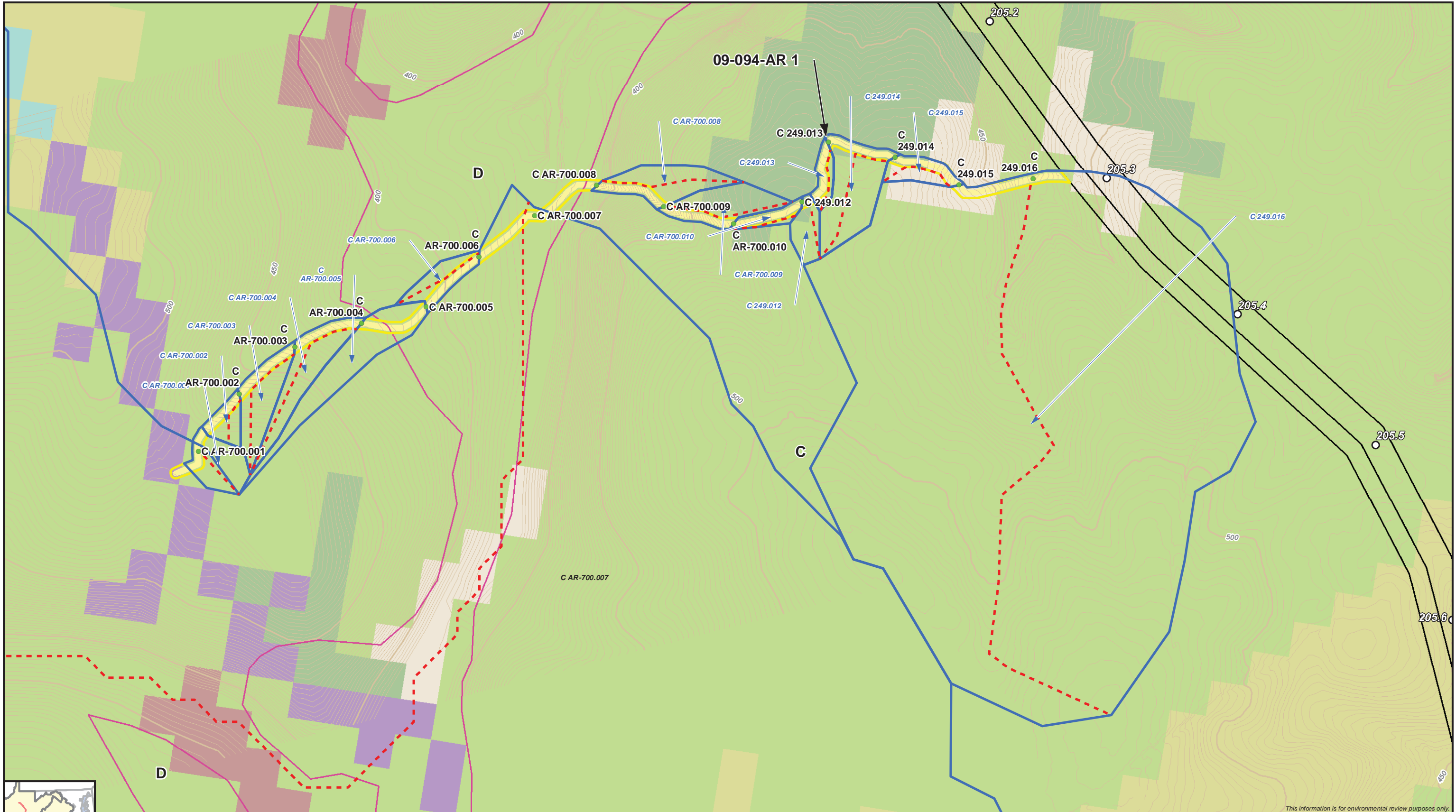
- Milepost
- ▭ Temporary Access Road ROW
- ▭ Pipeline ROW
- ▭ Culvert Drainage Area
- Culvert
- Flow Path
- Major Contour
- Minor Contour
- Ⓜ Hydrologic Soil Group
- Land Cover**
- ▭ Developed, Open Space
- ▭ Forest
- ▭ Gravel

Access Road Key →

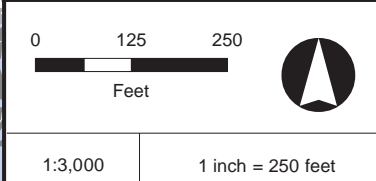


Virginia
Culvert and Ditch Analysis
 Temporary Access Roads
 Construction Conditions





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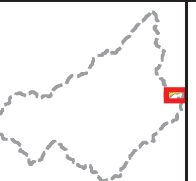


- Milepost
- ▭ Temporary Access Road ROW
- ▭ Pipeline ROW
- ▭ Culvert Drainage Area
- Culvert

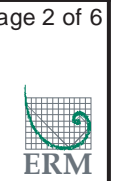
- - - Flow Path
- Major Contour
- Minor Contour
- Ⓜ Hydrologic Soil Group

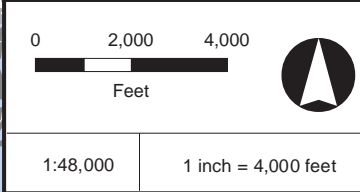
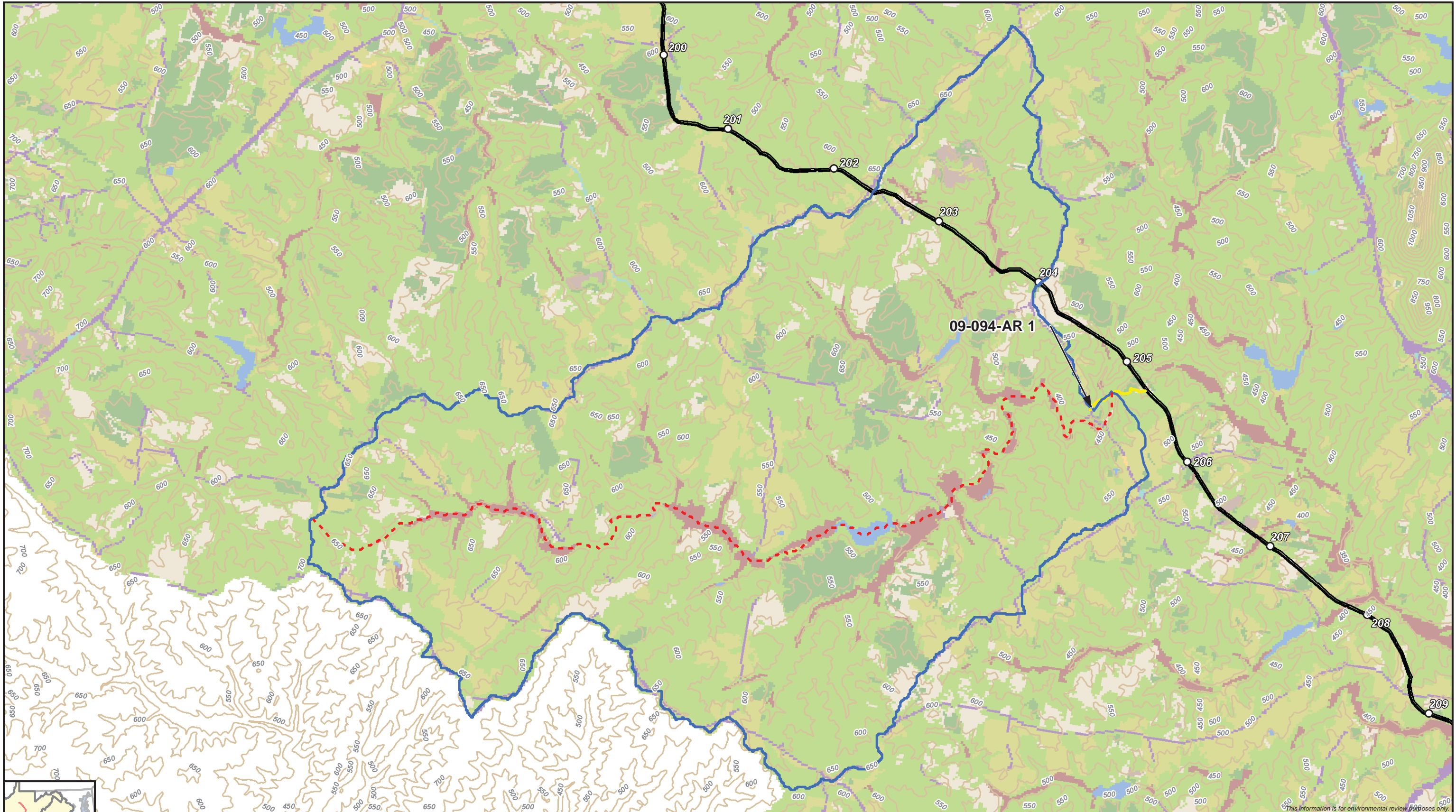
- Land Cover**
- ▭ Agriculture
 - ▭ Developed, Low Intensity
 - ▭ Developed, Open Space
 - ▭ Forest
 - ▭ Grassland
 - ▭ Gravel
 - ▭ Shrub
 - ▭ Wetlands

Access Road Key →



**Virginia
Culvert and Ditch Analysis**
Temporary Access Roads
Construction Conditions





- Milepost
- ▭ Temporary Access Road ROW
- ▭ Pipeline ROW
- ▭ Culvert Drainage Area

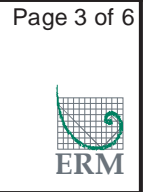
- - - Flow Path
- 25 ft. Contour
- Ⓐ Hydrologic Soil Group

- Land Cover**
- ▭ Agriculture
 - ▭ Barren Land
 - ▭ Developed, Low Intensity
 - ▭ Developed, Medium Intensity
 - ▭ Developed, Open Space
 - ▭ Forest
 - ▭ Grassland
 - ▭ Gravel
 - ▭ Open Water
 - ▭ Shrub
 - ▭ Wetlands

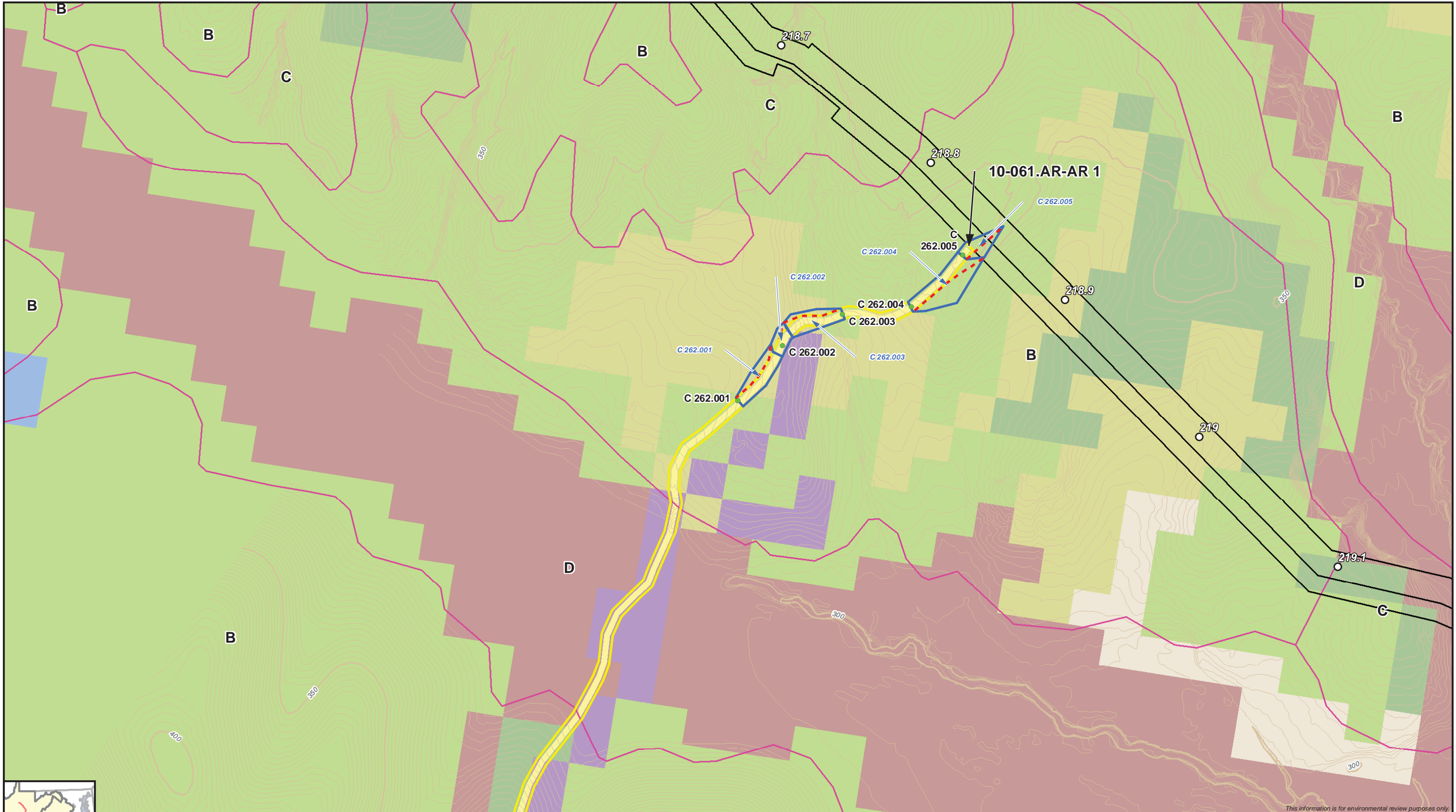
Access Road Key →



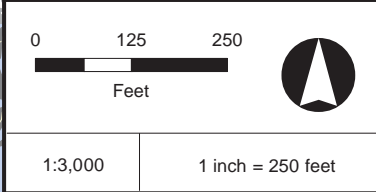
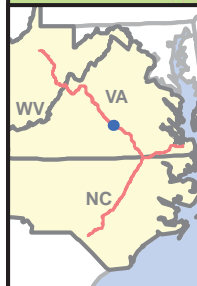
Virginia
Culvert and Ditch Analysis
 Temporary Access Roads
 Construction Conditions
 Full Extent of Drainage Basin C AR-700.007



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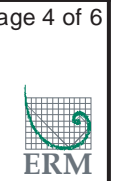
- Milepost
- ▭ Temporary Access Road ROW
- ▭ Pipeline ROW
- ▭ Culvert Drainage Area
- Culvert

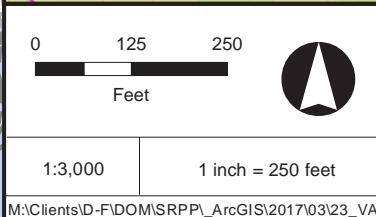
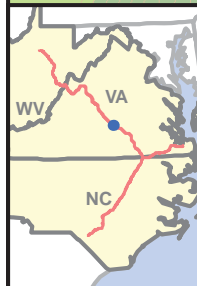
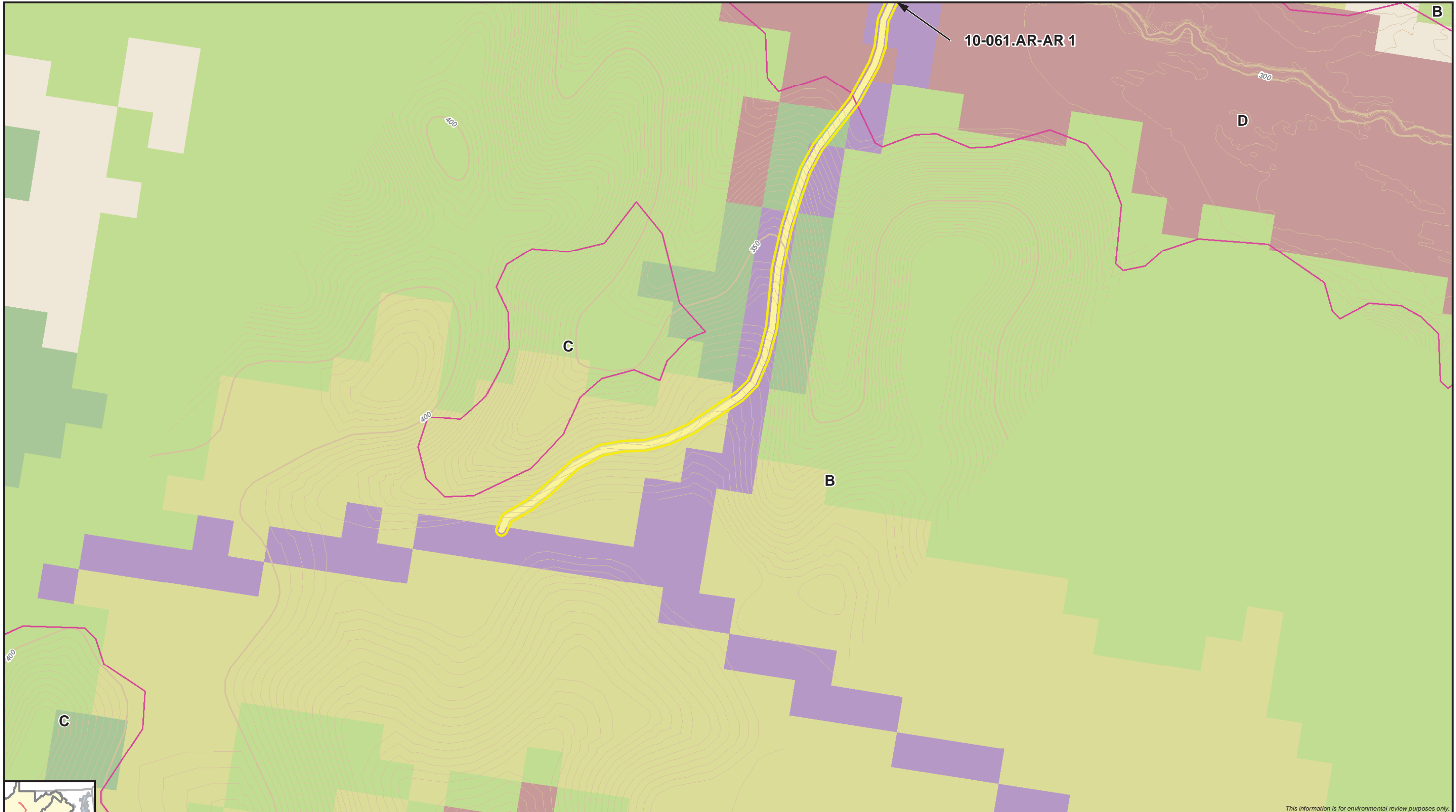
- Flow Path
- Major Contour
- Minor Contour
- ⓐ Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Developed, Open Space
 - Forest
 - Grassland
 - Gravel
 - Open Water
 - Shrub
 - Wetlands

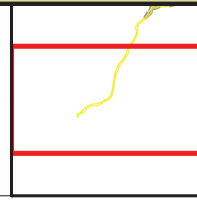
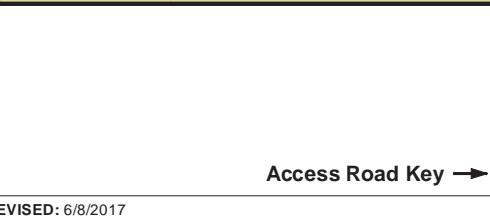


Virginia
Culvert and Ditch Analysis
 Temporary Access Roads
 Construction Conditions





Temporary Access Road ROW	Land Cover	Grassland
Major Contour	Agriculture	Gravel
Minor Contour	Developed, Open Space	Shrub
	Forest	Wetlands
	Hydrologic Soil Group	

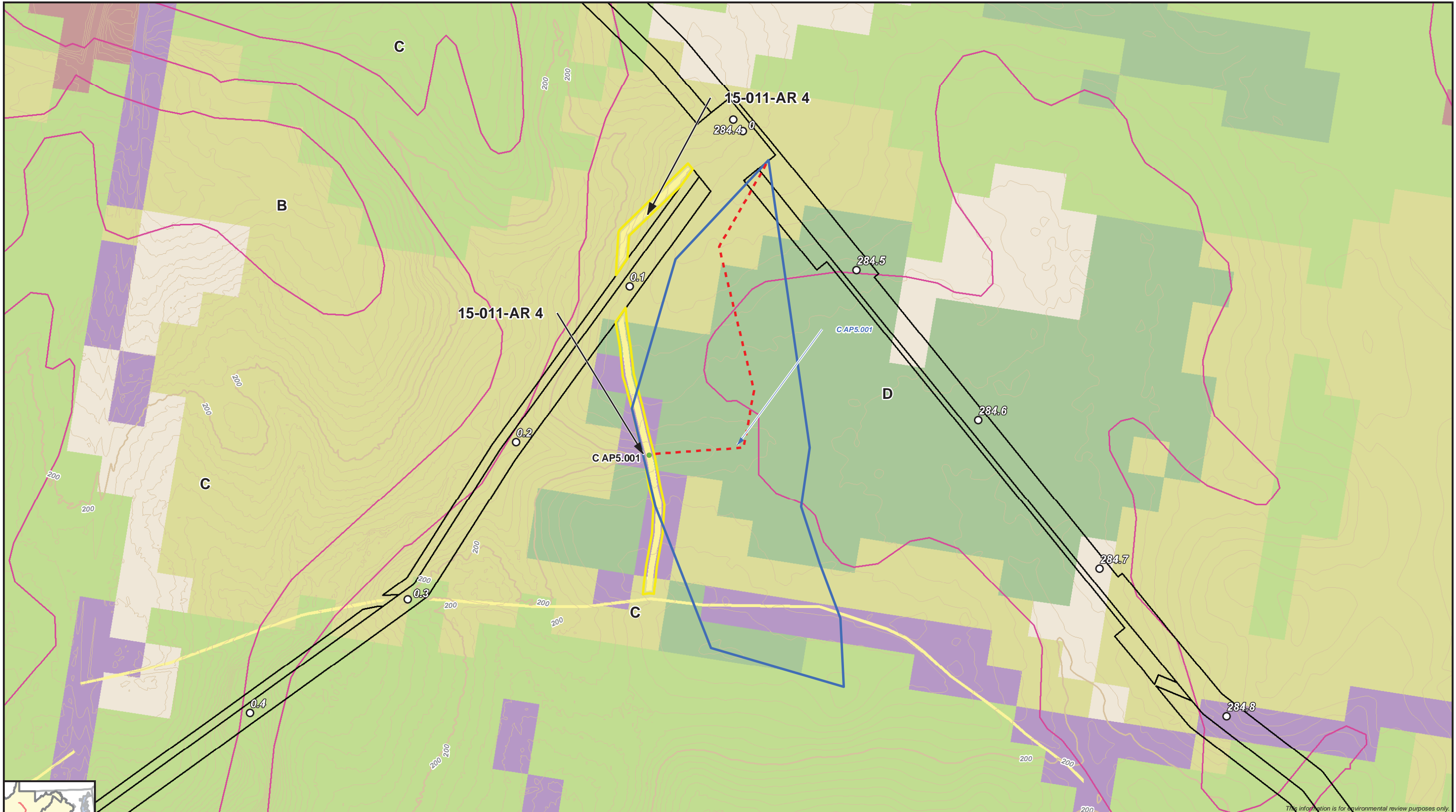


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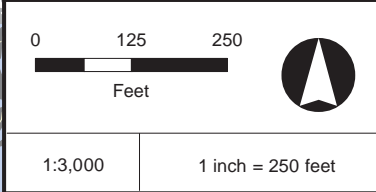
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Culvert and Ditch Analysis
 Temporary Access Roads
 Construction Conditions

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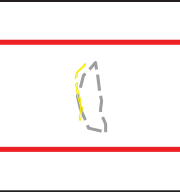


- Milepost
- ▭ Temporary Access Road ROW
- ▭ Pipeline ROW
- ▭ Culvert Drainage Area
- Culvert

- - - Flow Path
- Major Contour
- Minor Contour
- ▭ Hydrologic Soil Group

- Land Cover**
- ▭ Agriculture
 - ▭ Developed, Open Space
 - ▭ Forest
 - ▭ Grassland
 - ▭ Gravel
 - ▭ Shrub
 - ▭ Wetlands

Access Road Key →



Virginia
Culvert and Ditch Analysis
 Temporary Access Roads
 Construction Conditions



FIGURE 3.1

Water Quality Map Book, Pre-Development Conditions

**Figure 3.1 Water Quality Map Book, Pre-Development Conditions
TABLE OF CONTENTS**

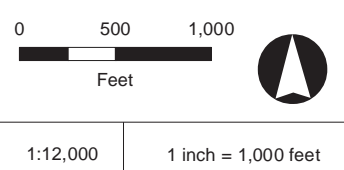
HUC-12 Watershed	Workspace	Access Road Category	Figure 3.1 Water Quality Map Book, Pre-Development Conditions PAGE
Angola Creek-Appomattox River	ROW	-	51, 52, 53
Barterbrook Branch-Christians Creek	07-001-A155.AR-AR 1 ROW	Proposed New Road -	27 26, 27, 28
Beaver Creek-Rockfish River	08-210.AR-AR 1 ROW	Proposed New Road -	38 37, 38, 39
Beaver Pond Creek-Nottoway River	13-041-AR 1 14-001-AR 1 ROW	Proposed New Road Proposed New Road -	66, 67 66, 67 65, 66, 67, 68
Bennett Creek-Nansemond River	26-060-A080.AR1 26-060-A082.AR1 ROW	Major Upgrade Proposed New Road -	99 99 98, 99, 100
Bishop Creek-Willis River	09-080-AR 1 09-103.AR2 09-113-AR 1 09-113-AR 3 ROW	Proposed New Road Major Upgrade Major Upgrade Proposed New Road -	46 47, 48 48 48 46, 47, 48
Bolar Run-Jackson River	06-001-C028.AR2 06-001-C032.AR1 06-001-C036.AR1 06-001-C037.AR1 06-001-C037.AR2 06-001-C037.AR3 36-014.AR2 ROW	Major Upgrade Major Upgrade Major Upgrade Major Upgrade Major Upgrade Major Upgrade Major Upgrade -	3 3 4 4 4 4 4 5, 6, 7 3, 4, 5, 6, 7
Buck Creek-Rockfish River	08-014-AR 1 08-086-A036.AR1 08-086-A039-AR 1 08-086-A045-AR 1 08-086-A045-AR 2 08-113-AR 1 08-113-AR 2 ROW	Major Upgrade Proposed New Road Proposed New Road Proposed New Road Proposed New Road Proposed New Road Proposed New Road -	34 35 36 36 36 34 34 33, 34, 35, 36
Buckhorn Swamp-Meherrin River	ROW	-	81, 82
Buffalo Branch-Middle River	ROW	-	22, 23
Butterwood Creek	13-006.AR1 13-007.AR1 ROW	Major Upgrade Major Upgrade -	63 63 62, 63, 64, 65
Cabin Creek-Mill Creek	36-091.AR1 ROW	Major Upgrade -	13 11, 12, 13
Canada Run-South River	ROW	-	27, 28, 29, 30
Cattail Creek-Fontaine Creek	15-029-AR 2 ROW	Proposed New Road -	76, 77 76, 77, 78, 79
Cedar Lake-Nansemond River	26-060-A080.AR1 26-060-A082.AR1 26-060-A098.AR1 ROW	Major Upgrade Proposed New Road Proposed New Road -	99 99 100, 99 98, 99, 100, 101
Cellar Creek	12-101-AR 1 12-108-AR 1 ROW	Major Upgrade Proposed New Road -	61, 62 62 60, 61, 62
Chair Draft-Calfpasture River	07-001.AR1-AR 4 07-001-A009-AR 1 07-001-A055.AR2 07-001-AR 3 07-001-AR 6 ROW	Proposed New Road Major Upgrade Major Upgrade Major Upgrade Major Upgrade -	18 17, 18 17 18 18 16, 17, 18
Chapel Swamp-Somerton Creek	ROW	-	92, 93
Cohoon Creek	ROW	-	94, 95, 96, 97, 98
Darden Pond-Mill Swamp	25-048-AR 1 25-055-A003.AR1 ROW	Major Upgrade Proposed New Road -	84 85 84, 85, 86
Deep Creek-Southern Branch Elizabeth River	27-002-AR 1 27-006-AR 1 27-006-AR 2 27-045.AR1-revised ROW	Major Upgrade Major Upgrade Major Upgrade Proposed New Road -	102 102 102 103, 104 101, 102, 103, 104, 105
Douglas Run-Meherrin River	15-011-A001-AR 1 15-011-AR 1 15-011-AR 3 15-014.AR1 ROW	Major Upgrade Proposed New Road Major Upgrade Major Upgrade -	75 75 75 75, 76 74, 75, 76
Dry Run	36-014.AR2 36-014.AR3 36-018.AR1 36-027.AR1 ROW	Major Upgrade Proposed New Road Major Upgrade Major Upgrade -	5, 6, 7 5, 6, 8 5 8 5, 6, 7, 8
Ducker Creek-Appomattox River	ROW	-	50, 51
Dutch Creek-Rockfish River	08-086-A045-AR 3 08-086-A050-AR 1 08-086-A054.AR1 08-086-A112.AR1 ROW	Proposed New Road Proposed New Road Proposed New Road Major Upgrade -	36 36 37 37 36, 37, 38
Edison Creek-Middle River	ROW	-	23, 24

HUC-12 Watershed	Workspace	Access Road Category	Figure 3.1 Water Quality Map Book, Pre-Development Conditions PAGE
Falling Run-Meherrin River	15-029-AR 2	Proposed New Road	76, 77
	ROW	-	76, 77
Folly Mills Creek-Christians Creek	07-001-A138.AR 1	Proposed New Road	25
	07-001-A148-AR 1	Proposed New Road	26
	ROW	-	25, 26, 27
Grease Creek-Slate River	09-051.AR1	Major Upgrade	44, 45
	ROW	-	44, 45, 46
Hamilton Branch	07-001-F002.AR1	Major Upgrade	13
	07-001-F002.AR2	Major Upgrade	13
	07-001-F009.AR1	Major Upgrade	14
	07-001-F012.AR1	Major Upgrade	14
	07-001-F029.AR1	Major Upgrade	14
	ROW	-	13, 14, 15
Holloway Draft-Calfpasture River	07-001-A017.AR1	Proposed New Road	16
	ROW	-	15, 16
Horsepen Creek-Slate River	09-048.AR1	Major Upgrade	44
	09-051.AR1	Major Upgrade	44, 45
	ROW	-	44, 45, 46
Inch Branch-Back Creek	ROW	-	29, 30, 31
Jacks Swamp	ROW	-	80
Jennings Branch	07-001.AR1-AR 9	Major Upgrade	19
	07-001-A011.AR-AR 1	Major Upgrade	19
	07-001-A011-AR 1	Major Upgrade	19
	07-001-A057.AR-AR 1	Proposed New Road	21
	07-001-AR 3	Major Upgrade	18
	07-001-AR 6	Major Upgrade	18
	07-001-AR 7	Proposed New Road	19
	ROW	-	18, 19, 20, 21, 22
Jim Dave Run-Back Creek	06-001-C004.AR3	Major Upgrade	2
	06-001-C026.AR2	Major Upgrade	3
	ROW	-	1, 2, 3
Jones Swamp	ROW	-	93, 94, 95
Kingsale Swamp	ROW	-	91, 92, 93
Lake Drummond-Dismal Swamp	ROW	-	101
Lake Prince	ROW	-	97, 98
Lewis Creek	ROW	-	24, 25
Lick Run-Stuart Run	36-001.AR1	Major Upgrade	10, 9
	36-001.AR2	Major Upgrade	10, 9
	36-016.AR2	Major Upgrade	10
	36-039.AR1	Major Upgrade	10
	36-059.AR1	Major Upgrade	10
	ROW	-	9, 10, 11, 12
Little Creek-Deep Creek	12-047-AR 1	Major Upgrade	58
	ROW	-	57, 58, 59, 60
Little Creek-Flat Creek	12-012-AR 1	Major Upgrade	56
	ROW	-	55, 56, 57
Little Willis River	09-129-AR 2	Major Upgrade	49
	10-007-AR 1	Major Upgrade	50
	ROW	-	48, 49, 50, 51
Lower Tarrara Creek	25-001-B047.AR 1	Major Upgrade	83
	25-048-AR 1	Major Upgrade	84
	ROW	-	82, 83, 84
Maclins Creek	ROW	-	74, 75
Meadow Creek-North River	09-040.AR-AR 1	Major Upgrade	43
	09-040.AR-AR 4	Major Upgrade	43
	09-040-A001-AR 1	Major Upgrade	43
	09-045.AR3	Proposed New Road	44
	09-048.AR1	Major Upgrade	44
	ROW	-	42, 43, 44
Mill Creek	ROW	-	84, 85, 86
Mill Swamp-Fontaine Creek	15-055-AR 1	Major Upgrade	79
	15-067-AR 1	Major Upgrade	79, 80
	15-072-AR 1	Major Upgrade	80
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Moffett Creek	07-001-A023.AR-AR 1	Proposed New Road	20, 21
	07-001-A029.AR-AR 1	Proposed New Road	21
	07-001-A030-AR 1	Proposed New Road	21
	07-001-A030-AR 2	Proposed New Road	21
	07-001-AR 7	Proposed New Road	19
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Ramseys Draft	ROW	-	16, 17
Red Oak Creek-Nottoway River	14-003-AR 1	Major Upgrade	67
	ROW	-	66, 67
Reedy Creek	14-096-AR 1	Major Upgrade	74
	14-103-AR 1	Major Upgrade	74
	ROW	-	71, 72, 73, 74
Ripley Creek-Walton Fork	09-005-AR 3	Major Upgrade	41
	ROW	-	41, 42, 43
Round Gut-Nottoway River	25-066-AR 1	Major Upgrade	86
	25-074-AR 3	Major Upgrade	87
	25-078-AR 1	Proposed New Road	87
	ROW	-	86, 87, 88, 89
Rucker Run	ROW	-	37, 38

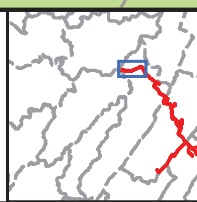
HUC-12 Watershed	Workspace	Access Road Category	Figure 3.1 Water Quality Map Book, Pre-Development Conditions PAGE
Sayers Creek	11-040.AR-AR 1 ROW	Major Upgrade -	53 53, 54, 55
Scotchtown Draft-Cowpasture River	36-027.AR1 ROW	Major Upgrade -	8 8, 9
Slagles Lake-Three Creek	14-103-AR 1 14-106-AR 1 ROW	Major Upgrade Major Upgrade -	74 74 71, 72, 73, 74
South Fork Rockfish River	08-001-B013-AR 1 08-001-B051-AR 1 ROW	Proposed New Road Proposed New Road -	32 33 30, 31, 32, 33
Speights Run-Lake Kilby	ROW	-	95
Sturgeon Creek	ROW	-	69, 70, 71, 72
Sycamore Creek-James River	08-214-B004-AR 1 08-214-B007.AR1 09-001-A001.AR2 09-001-A011-AR 1 09-005-AR 3 ROW	Major Upgrade Proposed New Road Major Upgrade Major Upgrade Major Upgrade -	40 40 40 41 41 39, 40, 41
Tommeheton Creek	ROW	-	62, 63, 66, 67
Union Camp Holding Pond-Blackwater River	26-001.AR1 ROW	Major Upgrade -	90 89, 90, 91, 92
Waqua Creek	14-020-AR 1 ROW	Major Upgrade -	68 67, 68, 69, 70
Warm Springs Run-Jackson River	36-014.AR2	Major Upgrade	5, 6, 7
West Creek	12-028-AR 1 ROW	Major Upgrade -	57 56, 57, 58
Western Branch Reservoir	ROW	-	98
Whispering Creek-Willis River	09-113-AR 1 ROW	Major Upgrade -	48 48, 49



This information is for environmental review purposes only.



- Milepost
 - PCSM Analysis Workspaces
 - HUC-12 Watershed
 - Ⓐ Hydrologic Soil Group
 - State Boundary
- | Land Cover | |
|-------------------------|----------|
| ■ Agriculture | ■ Forest |
| ■ Developed, Open Space | |



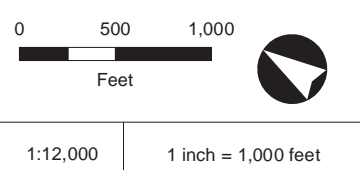
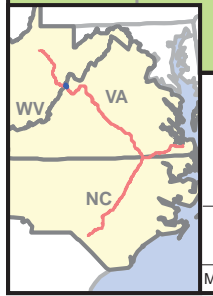
Atlantic Coast Pipeline

Virginia Water Quality
Pre-Development Conditions

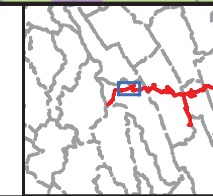




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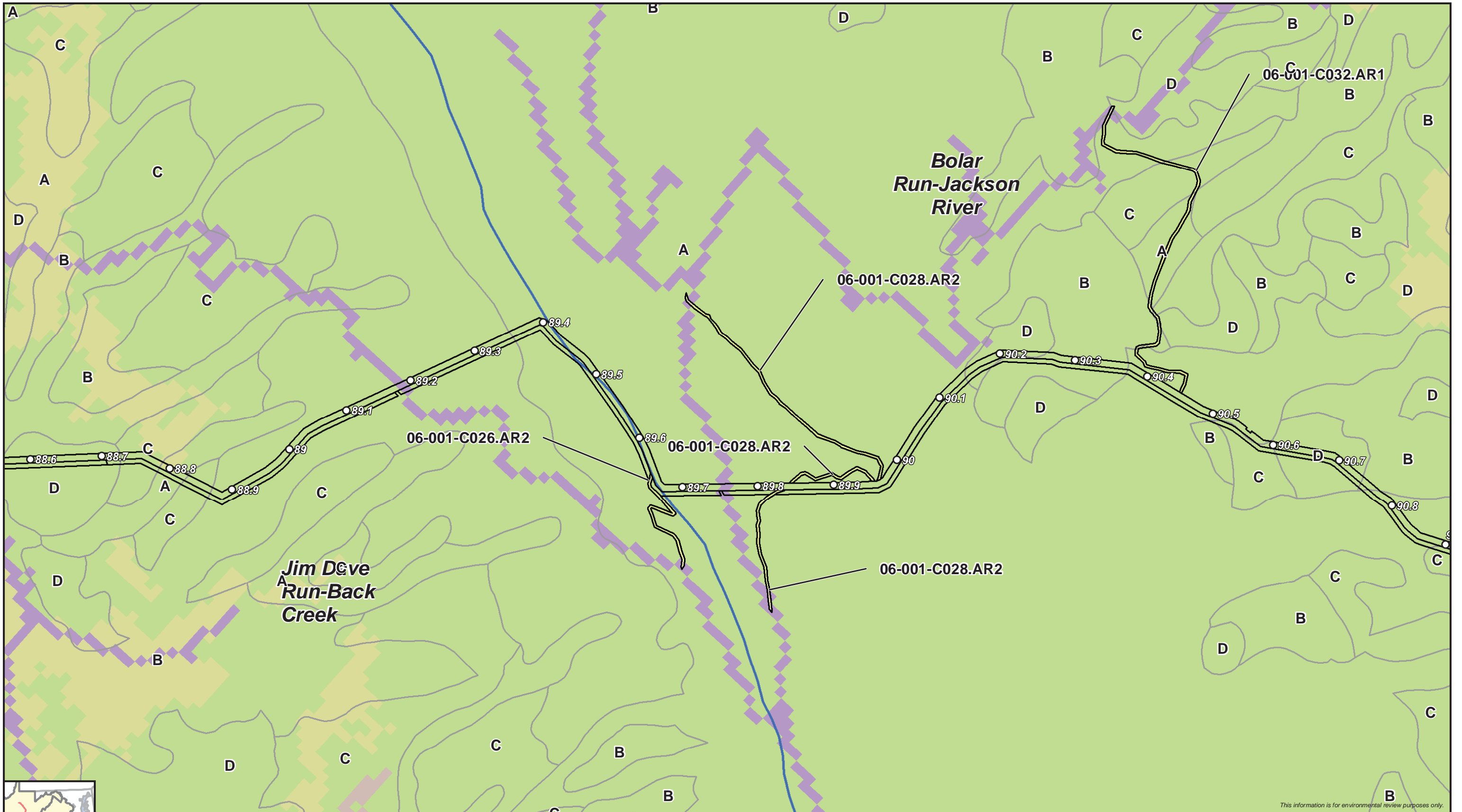


○ Milepost	Land Cover	Forest	Wetlands
□ PCSM Analysis Workspaces	Agriculture	Grassland	
□ HUC-12 Watershed	Developed, Low Intensity	Gravel	
□ Hydrologic Soil Group	Developed, Medium Intensity	Open Water	
	Developed, Open Space	Shrub	

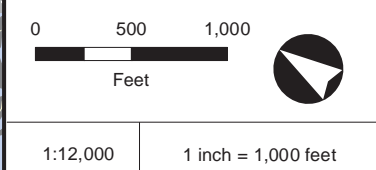


Virginia Water Quality
Pre-Development Conditions





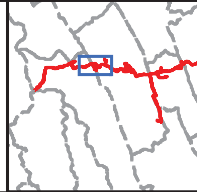
This information is for environmental review purposes only.



- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Barren Land
 - Developed, Open Space
 - Forest

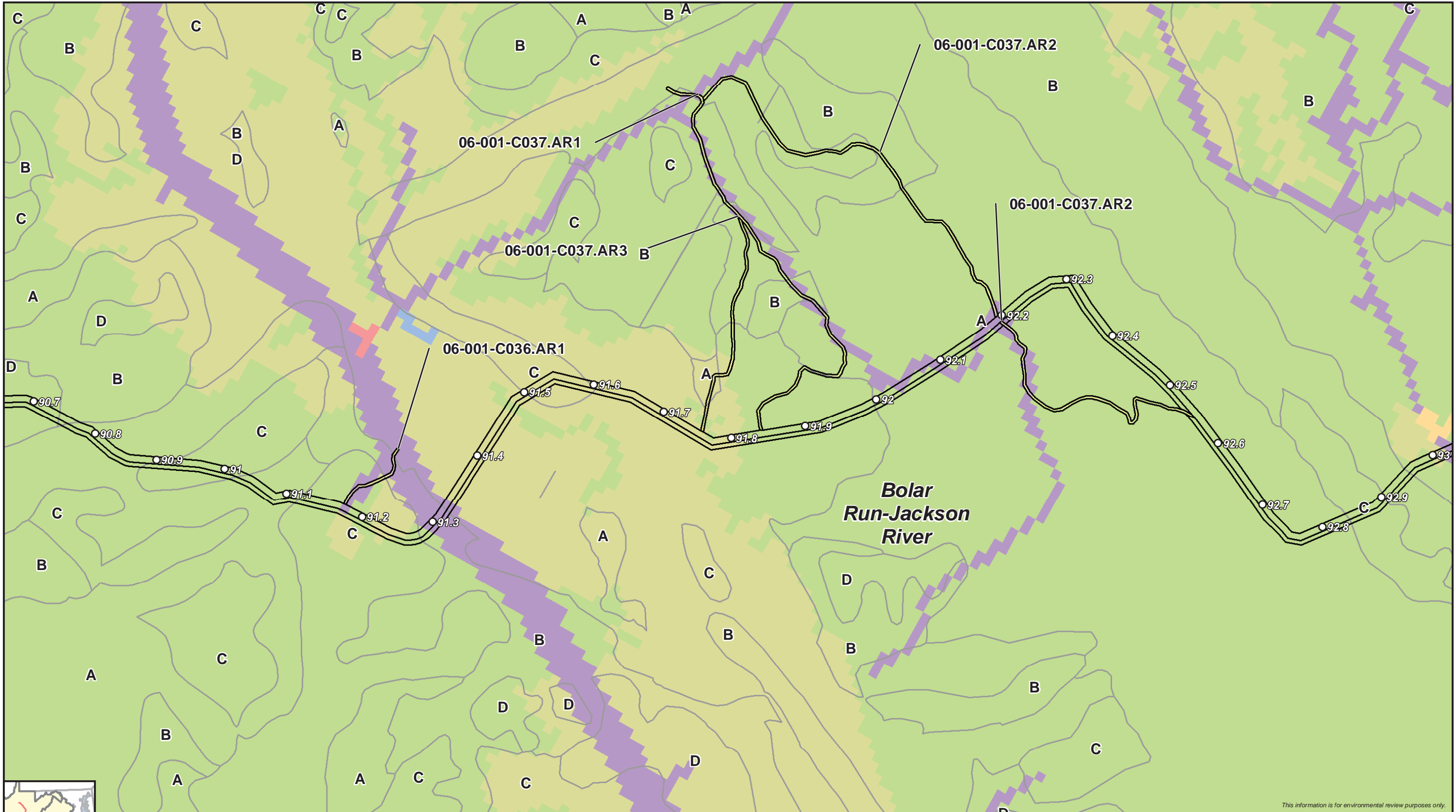
■ Gravel



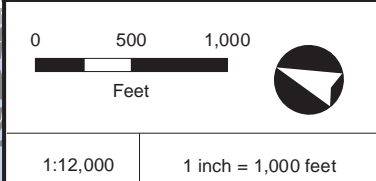
Atlantic Coast Pipeline

Virginia Water Quality
Pre-Development Conditions

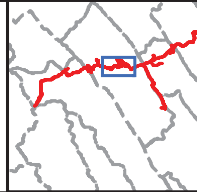




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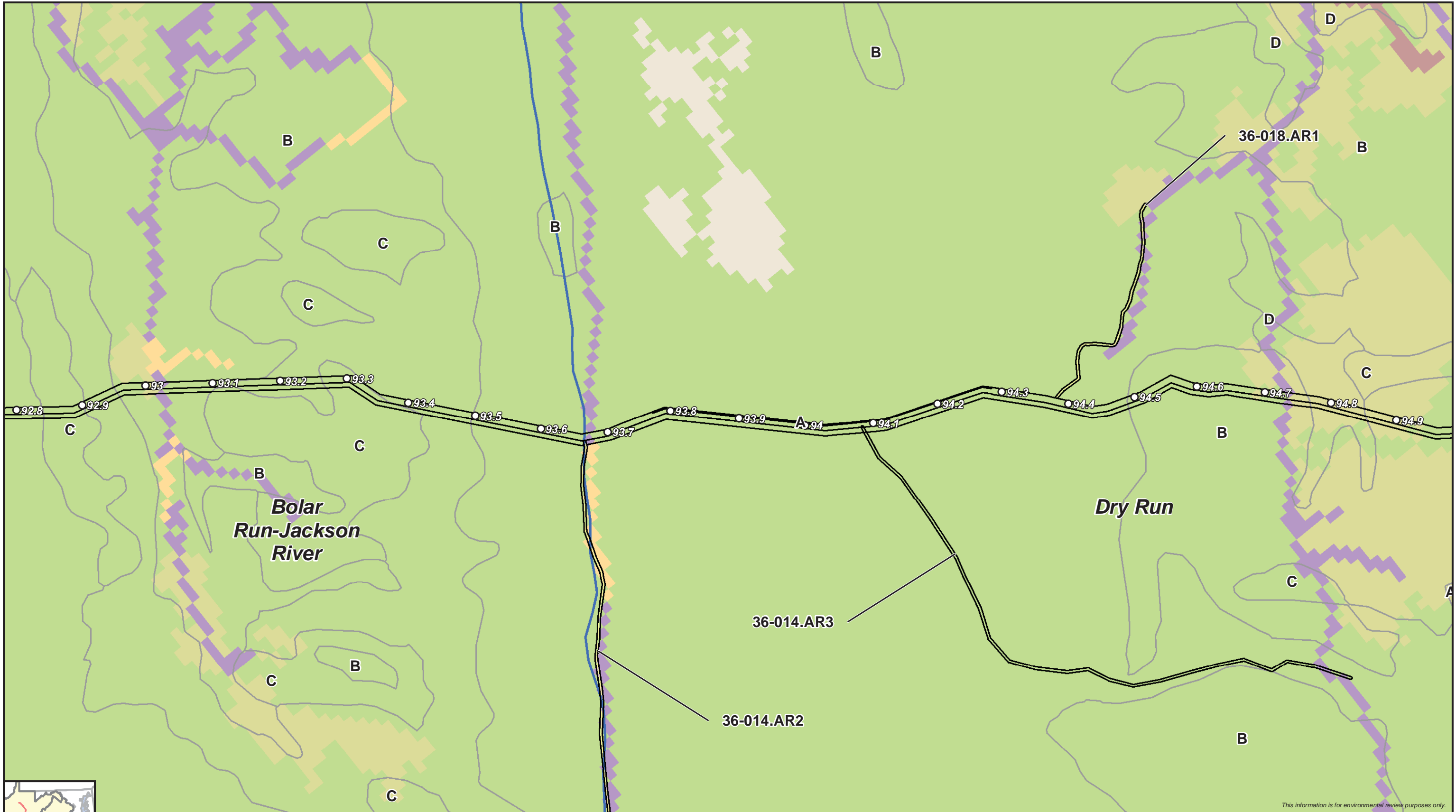


Milepost	Land Cover	Forest
PCSM Analysis Workspaces	Agriculture	Gravel
HUC-12 Watershed	Developed, High Intensity	Open Water
Hydrologic Soil Group	Developed, Medium Intensity	
	Developed, Open Space	

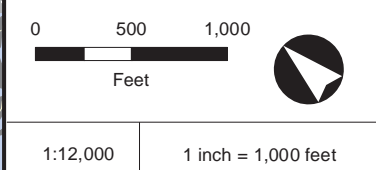


Virginia Water Quality
Pre-Development Conditions





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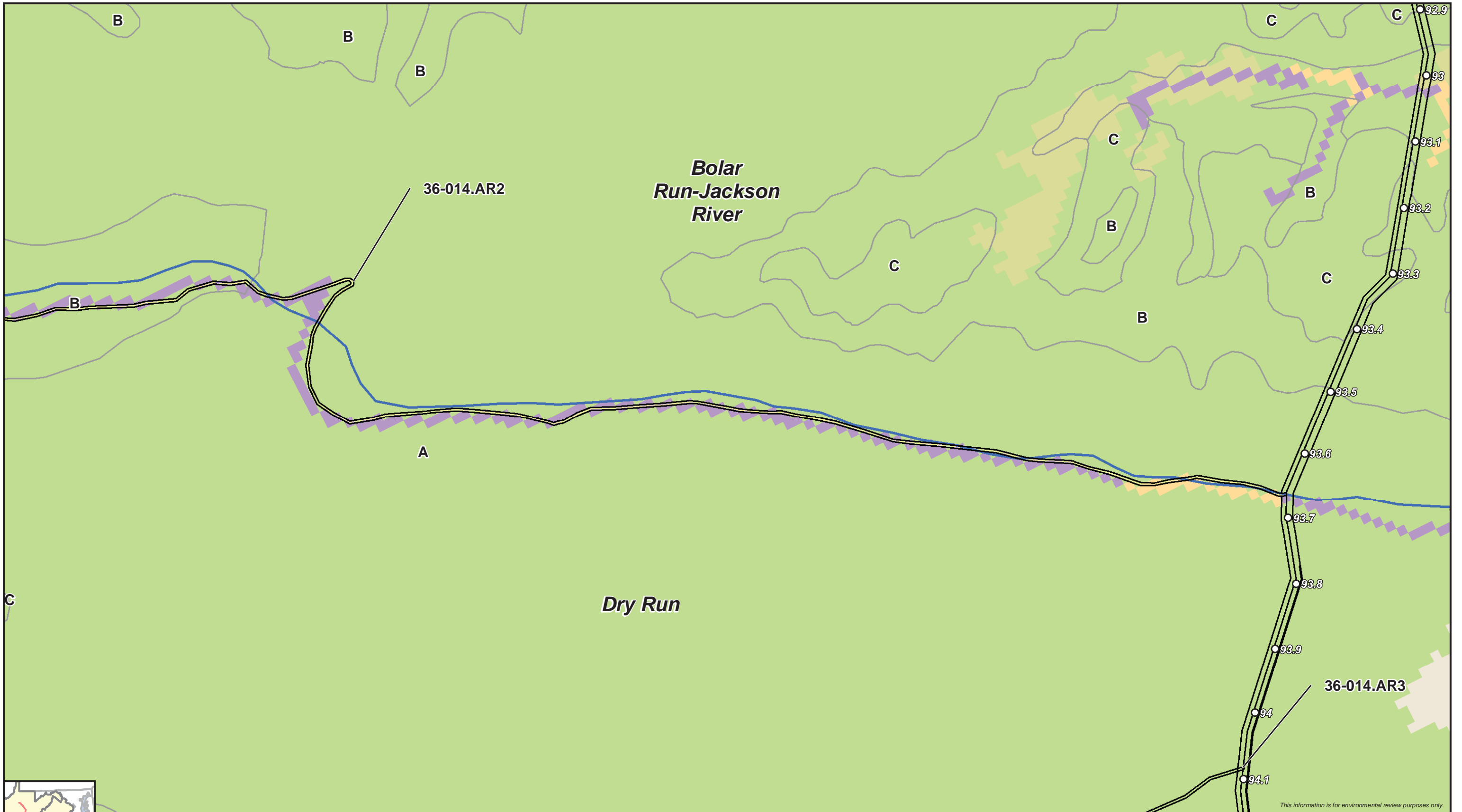


○ Milepost	Land Cover	Gravel
□ PCSI Analysis Workspaces	Agriculture	Shrub
□ HUC-12 Watershed	Developed, Medium Intensity	Wetlands
□ Hydrologic Soil Group	Developed, Open Space	
	Forest	

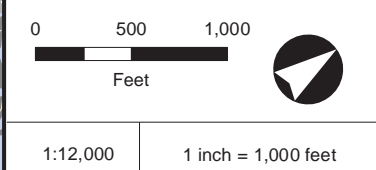
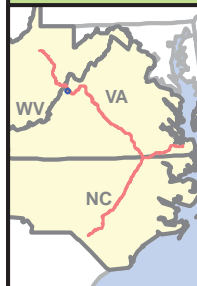


Virginia Water Quality
Pre-Development Conditions

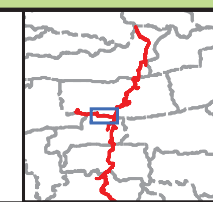




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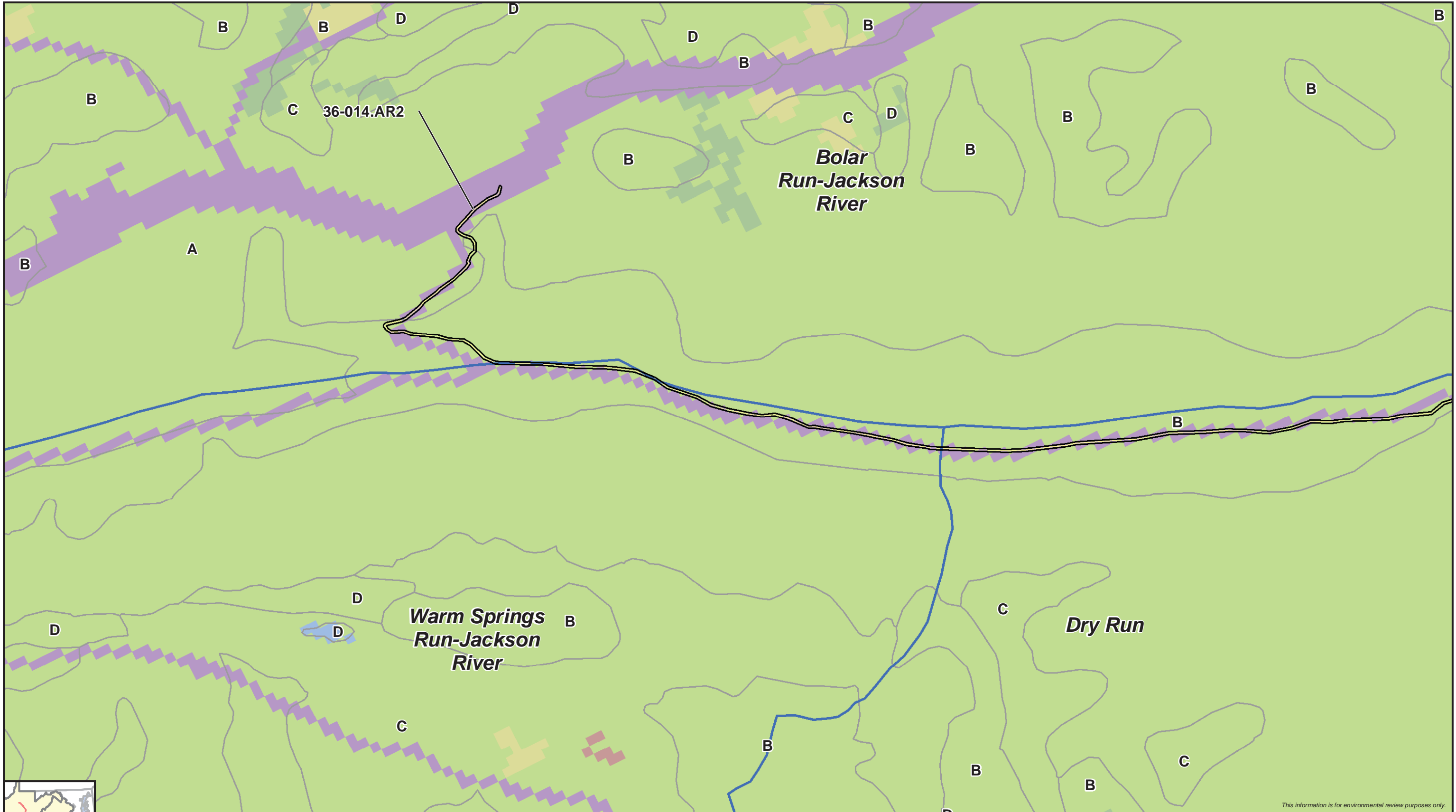


○ Milepost	Land Cover	■ Gravel
□ PCSI Analysis Workspaces	■ Agriculture	■ Shrub
■ HUC-12 Watershed	■ Developed, Medium Intensity	
■ Hydrologic Soil Group	■ Developed, Open Space	
	■ Forest	

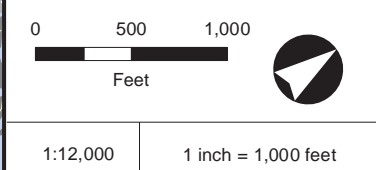
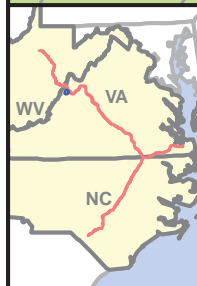


Virginia Water Quality
Pre-Development Conditions

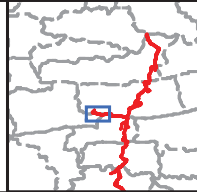




This information is for environmental review purposes only.



Milepost	Land Cover	Gravel
PCSM Analysis Workspaces	Agriculture	Open Water
HUC-12 Watershed	Developed, Open Space	Wetlands
Hydrologic Soil Group	Forest	
	Grassland	

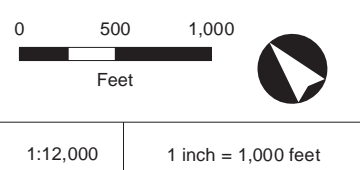


Virginia Water Quality
Pre-Development Conditions

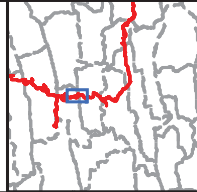




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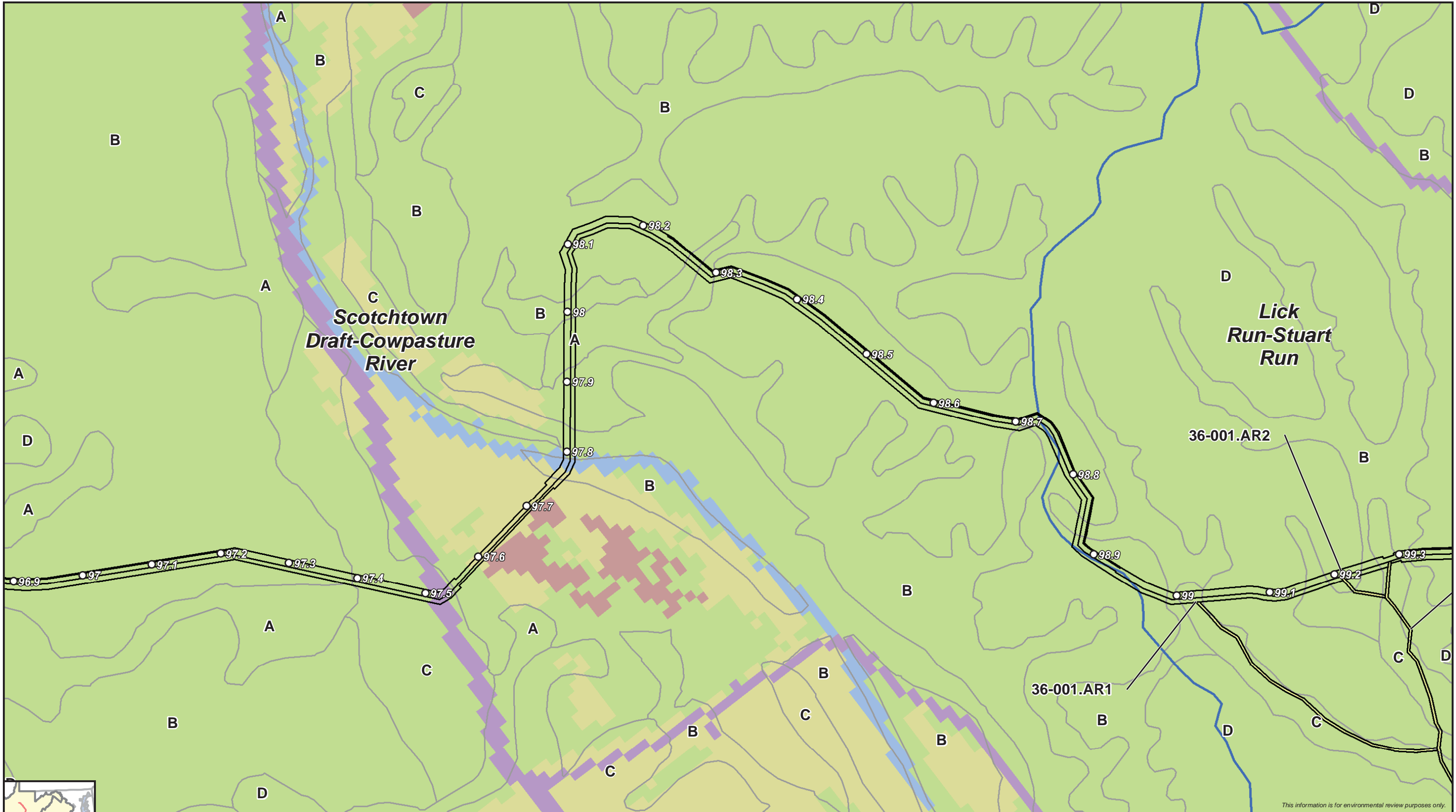


○ Milepost	Land Cover	Gravel
□ PCSM Analysis Workspaces	Agriculture	Open Water
□ HUC-12 Watershed	Developed, Open Space	Shrub
□ Hydrologic Soil Group	Forest	Wetlands
	Grassland	

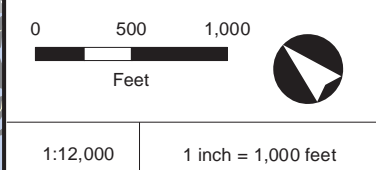


Virginia Water Quality
Pre-Development Conditions

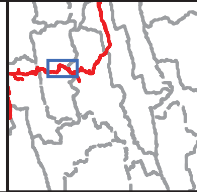




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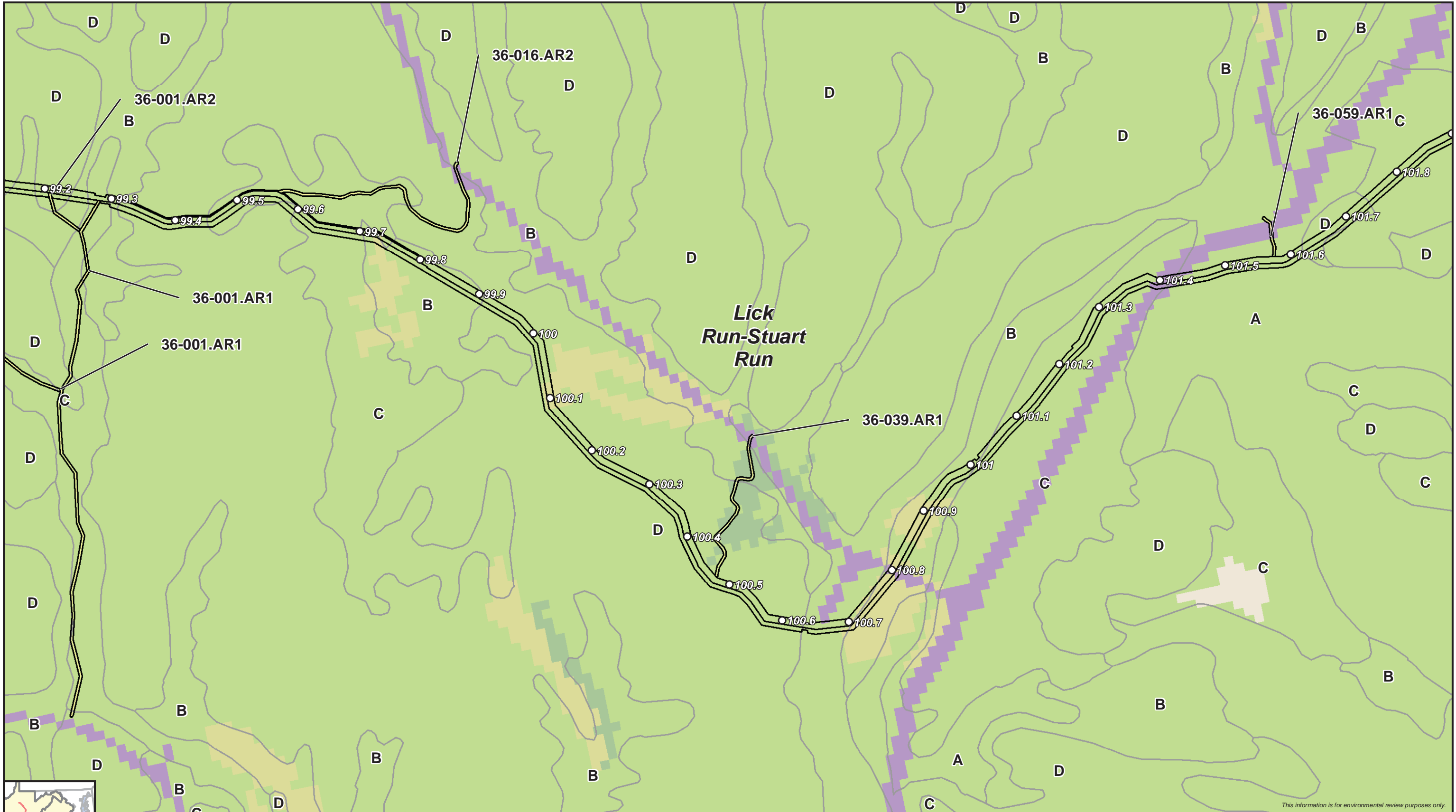


Milepost	Agriculture	Open Water
PCSI Analysis Workspaces	Developed, Open Space	Wetlands
HUC-12 Watershed	Forest	
Hydrologic Soil Group	Gravel	

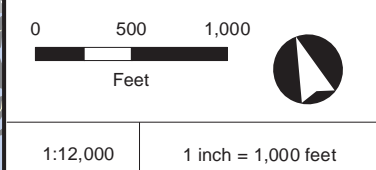
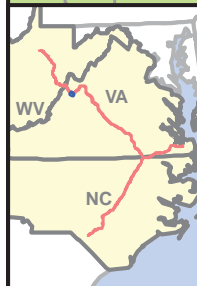


Virginia Water Quality
Pre-Development Conditions



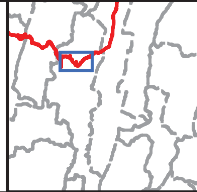


This information is for environmental review purposes only.



- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

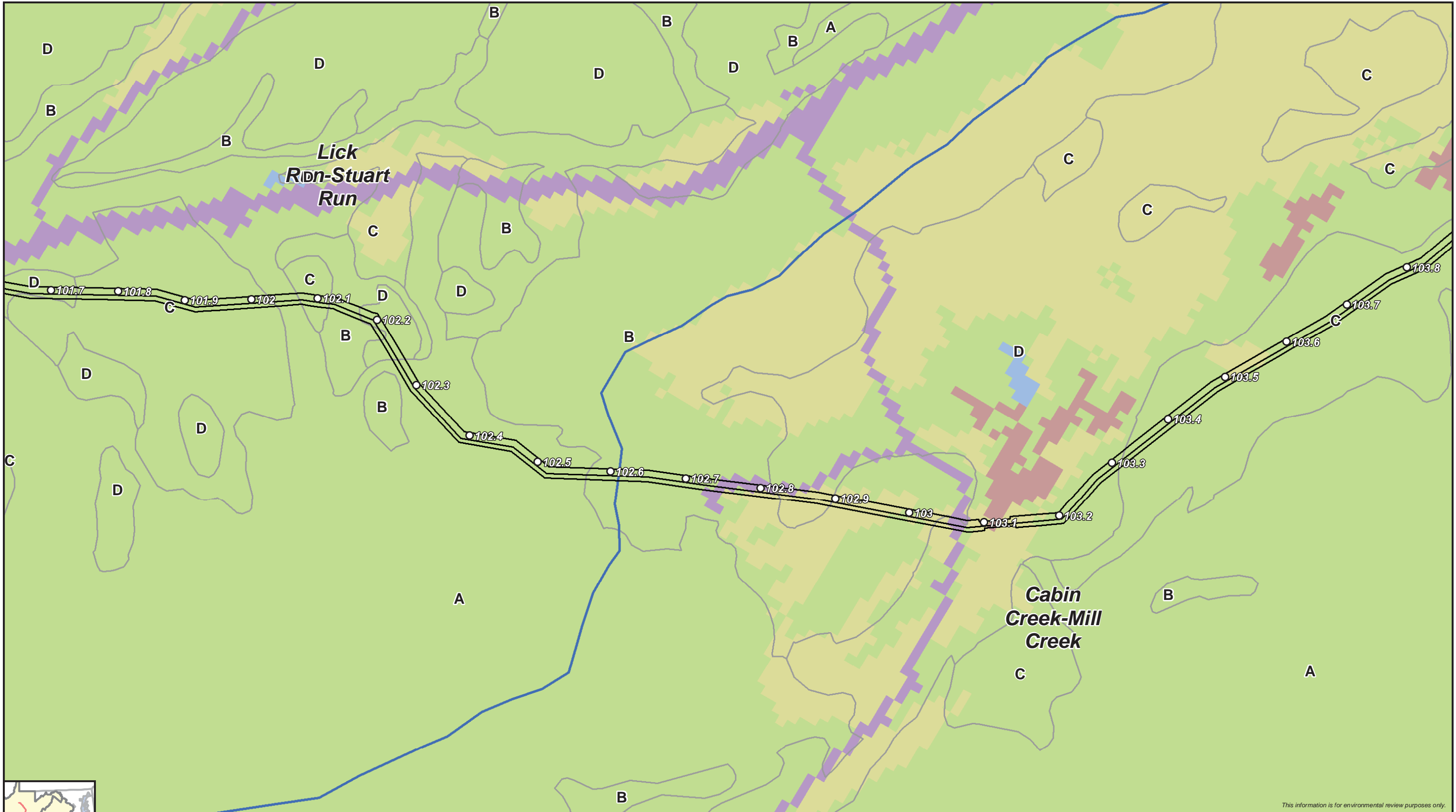
- Land Cover**
- Agriculture
 - Developed, Open Space
 - Forest
 - Grassland
 - Gravel
 - Shrub



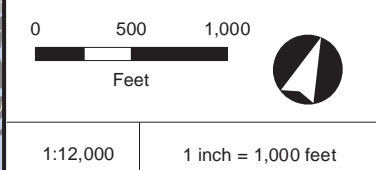
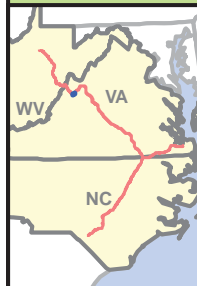
Atlantic Coast Pipeline

Virginia Water Quality
Pre-Development Conditions

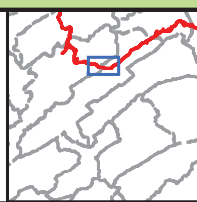




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○ Milepost	Land Cover	■ Wetlands
□ PCSM Analysis Workspaces	■ Agriculture	
■ HUC-12 Watershed	■ Developed, Open Space	
■ Hydrologic Soil Group	■ Forest	
	■ Open Water	

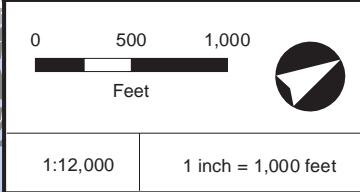
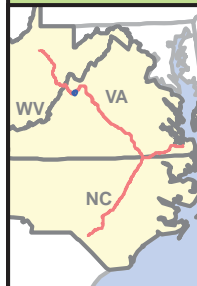


Virginia
Water Quality
Pre-Development Conditions

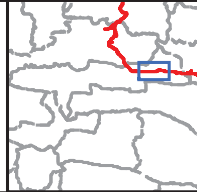




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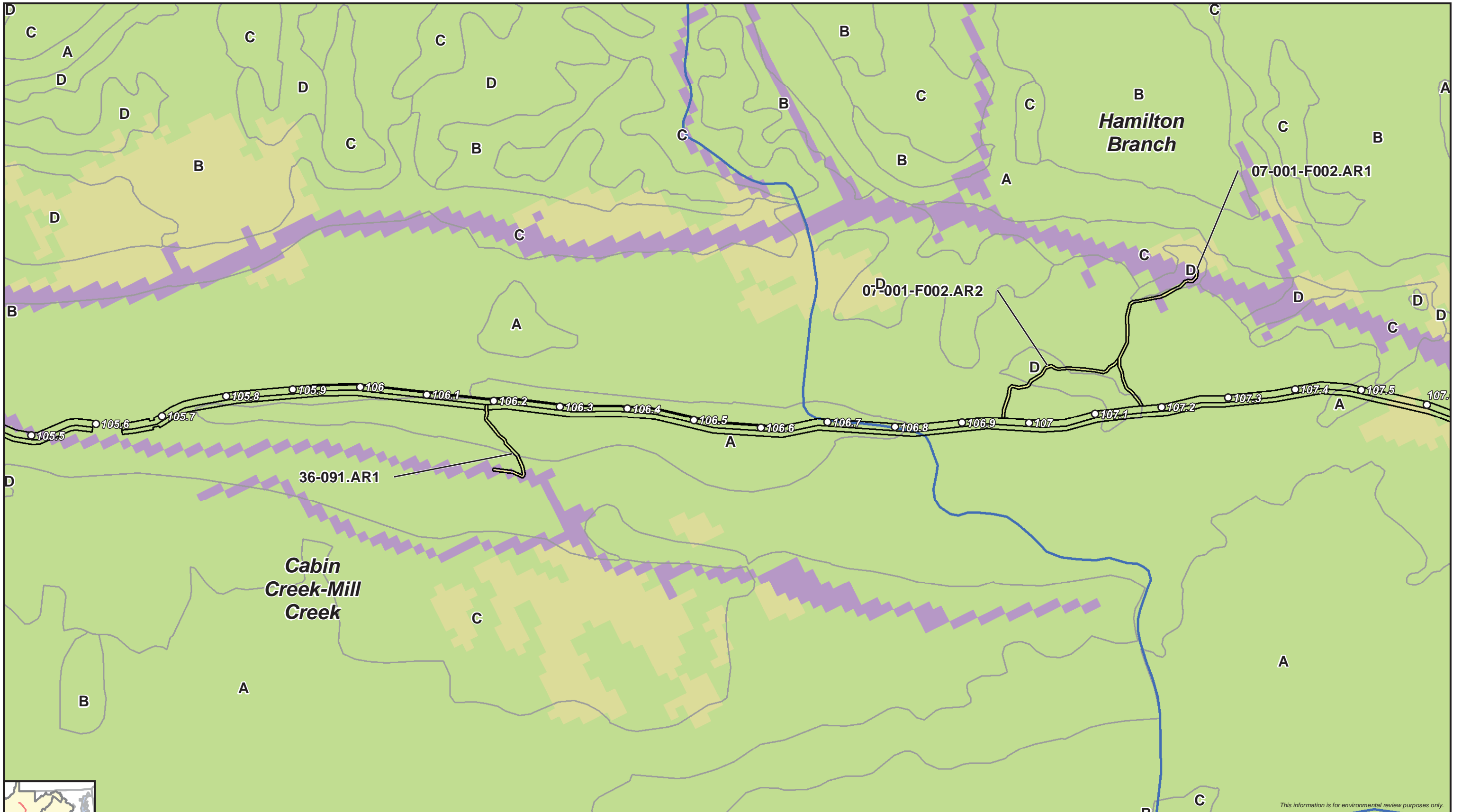


- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group
- Land Cover**
- Agriculture
- Developed, Open Space
- Forest
- Grassland
- Open Water
- Wetlands

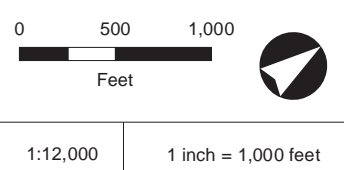
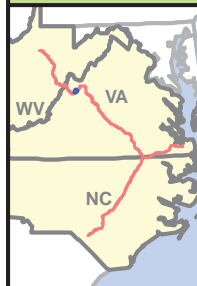


Virginia
Water Quality
 Pre-Development Conditions



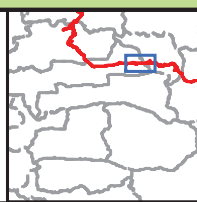


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- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

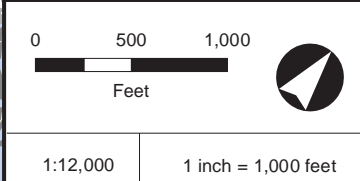
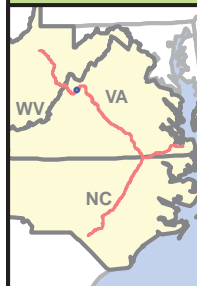
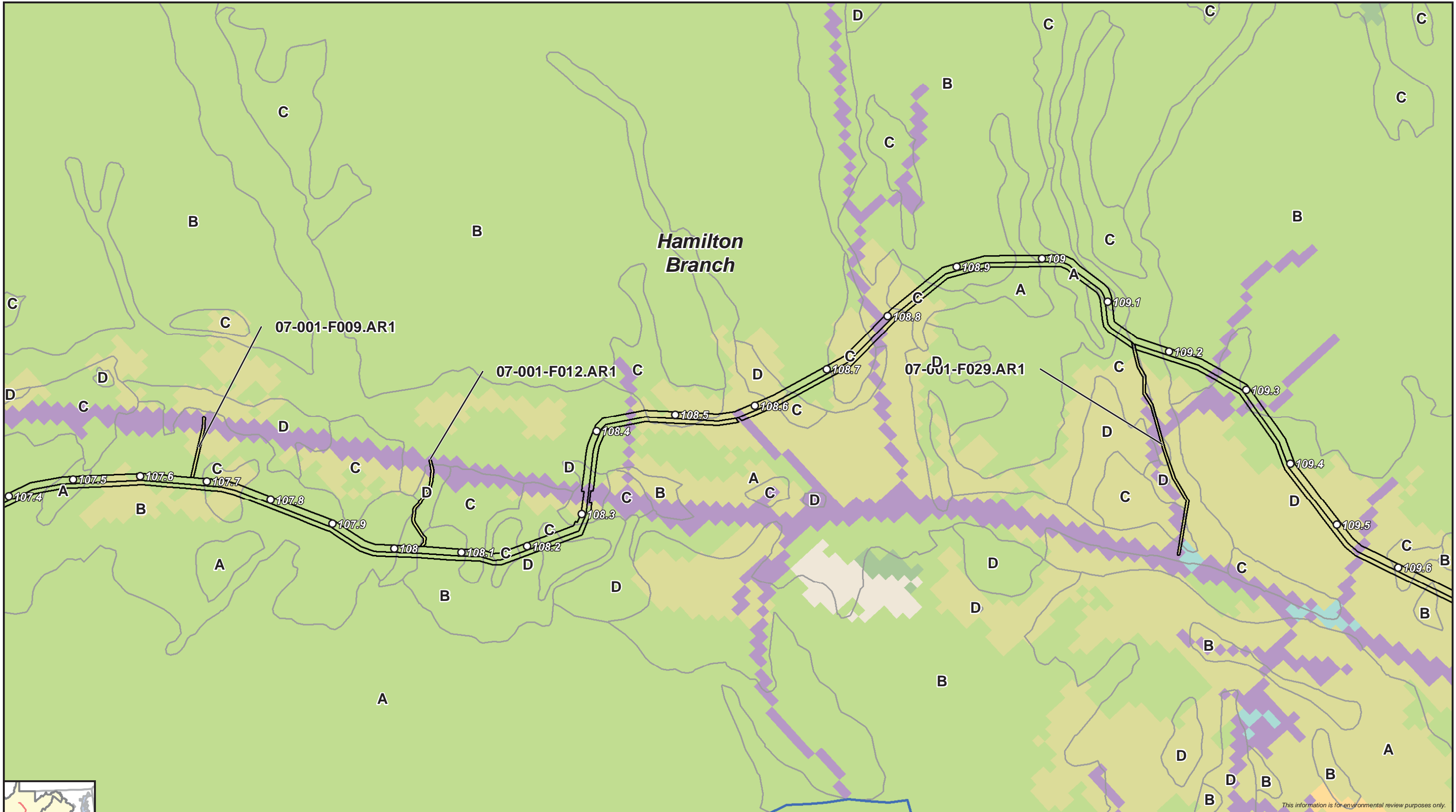
- Land Cover**
- Agriculture
 - Developed, Open Space
 - Forest
 - Gravel



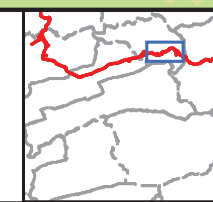
Virginia Water Quality
Pre-Development Conditions



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○ Milepost	Land Cover	Forest
□ PCSI Analysis Workspaces	Agriculture	Grassland
□ HUC-12 Watershed	Developed, Low Intensity	Gravel
□ Hydrologic Soil Group	Developed, Medium Intensity	Shrub
	Developed, Open Space	



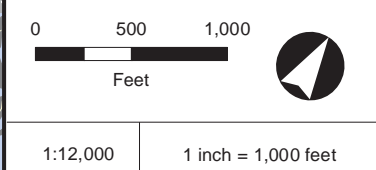
Virginia
Water Quality
 Pre-Development Conditions



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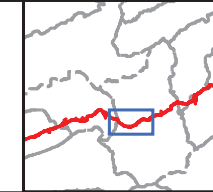


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- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

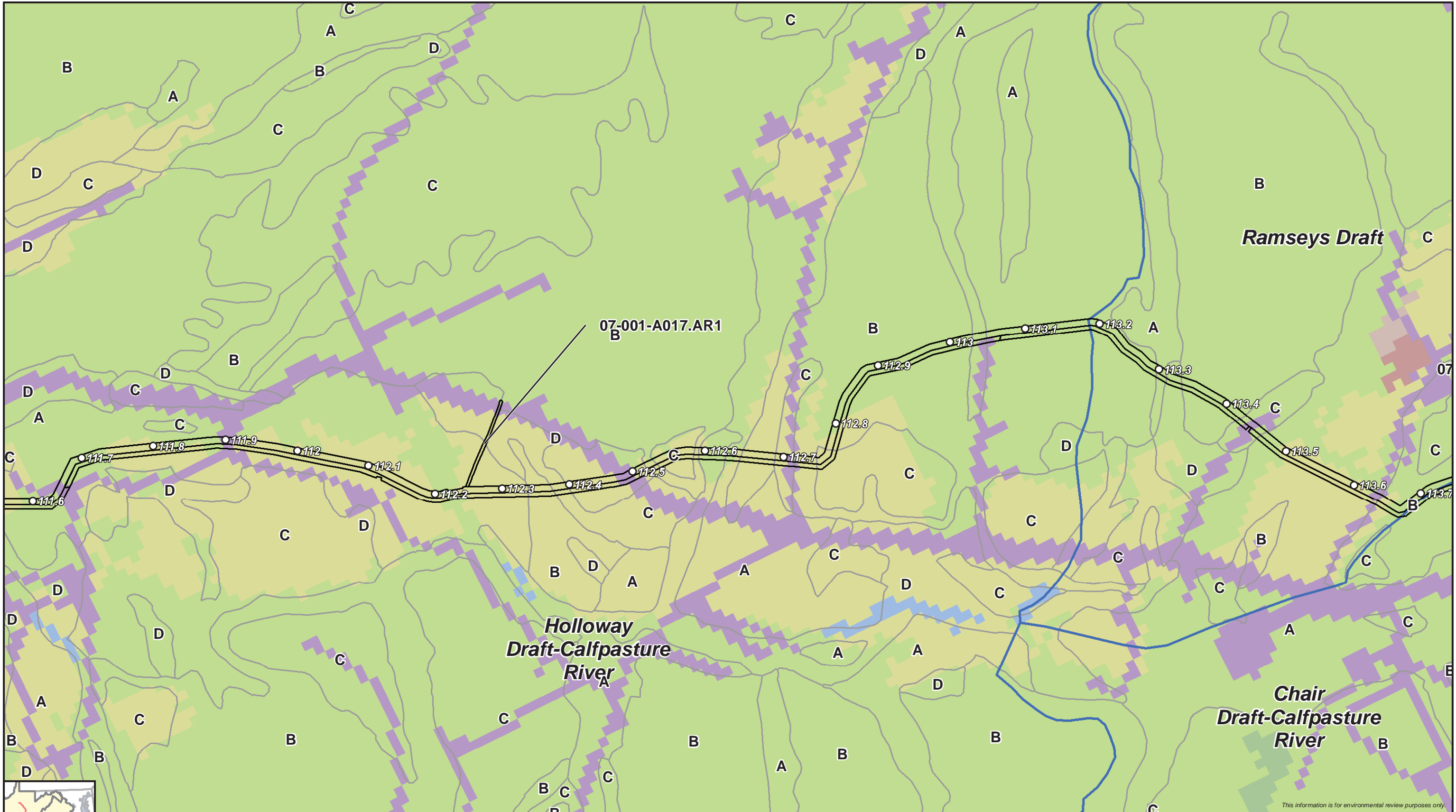
- Land Cover**
- Agriculture
 - Barren Land
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Open Water
 - Shrub
 - Wetlands



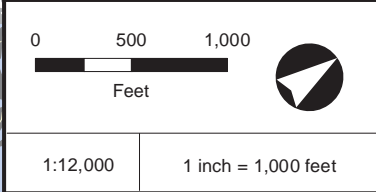
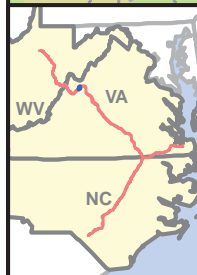
Atlantic Coast Pipeline

Virginia Water Quality Pre-Development Conditions



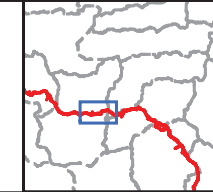


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- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Barren Land
 - Developed, Open Space
 - Forest
 - Grassland
 - Open Water
 - Wetlands

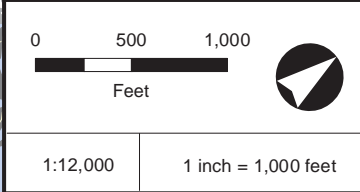
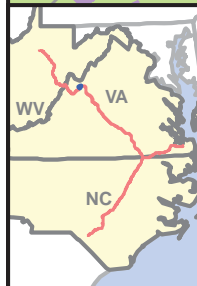


Virginia
Water Quality
 Pre-Development Conditions

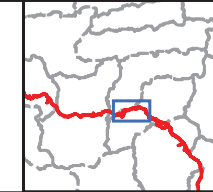




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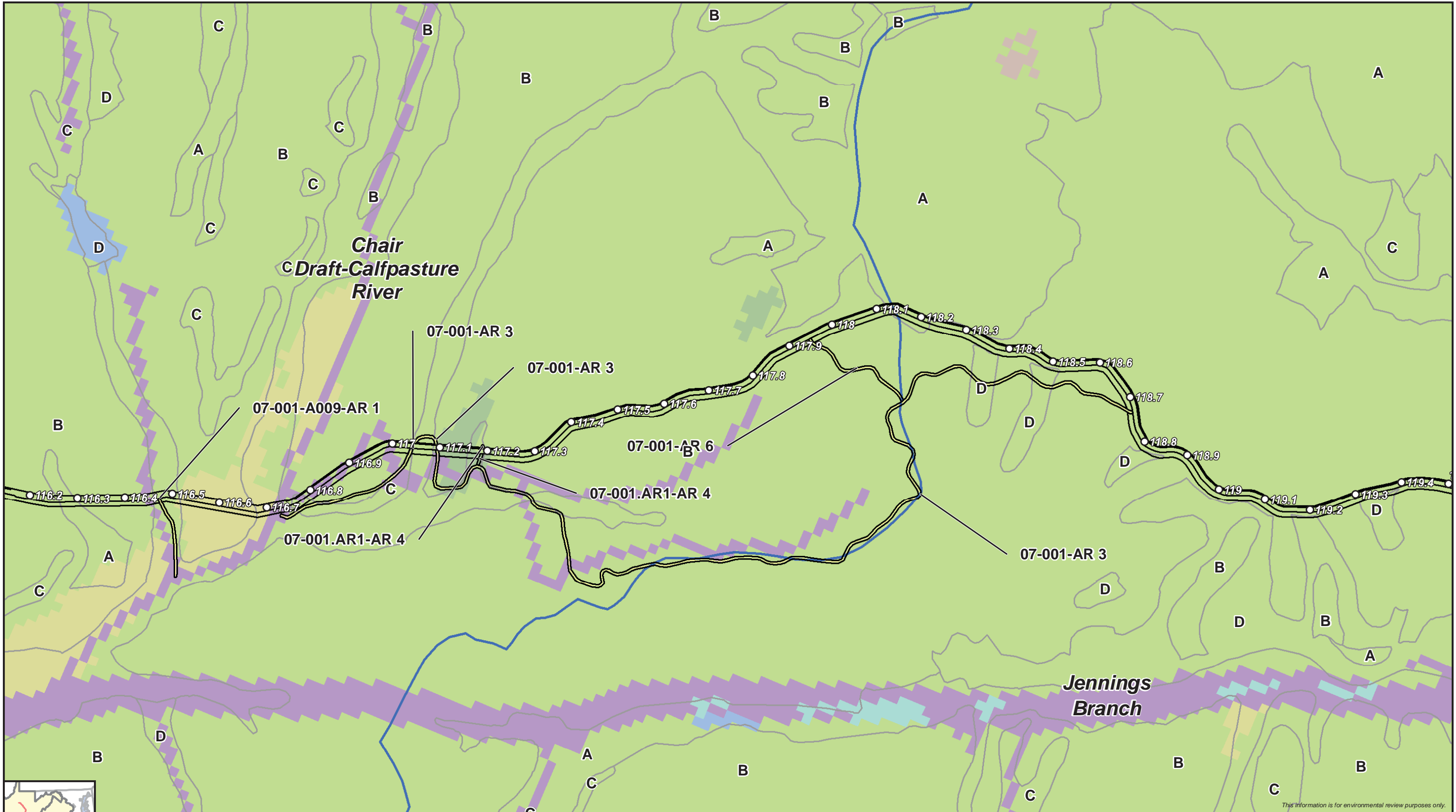


○ Milepost	Land Cover	Forest
□ PCSM Analysis Workspaces	■ Agriculture	■ Grassland
■ HUC-12 Watershed	■ Barren Land	■ Gravel
■ Hydrologic Soil Group	■ Developed, Low Intensity	■ Open Water
	■ Developed, Open Space	■ Wetlands

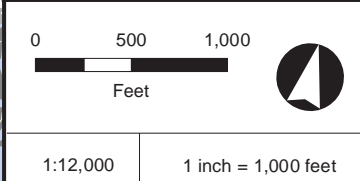
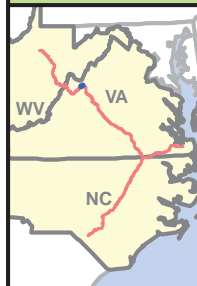


Virginia
Water Quality
Pre-Development Conditions

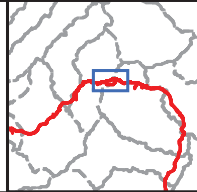




This information is for environmental review purposes only.



○ Milepost	Land Cover	Forest
□ PCSM Analysis Workspaces	■ Agriculture	■ Grassland
■ HUC-12 Watershed	■ Barren Land	■ Gravel
■ Hydrologic Soil Group	■ Developed, Low Intensity	■ Open Water
	■ Developed, Open Space	

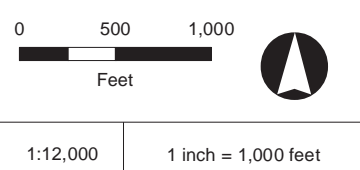
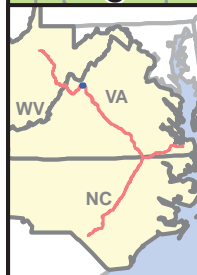


Virginia Water Quality
Pre-Development Conditions

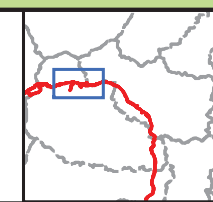




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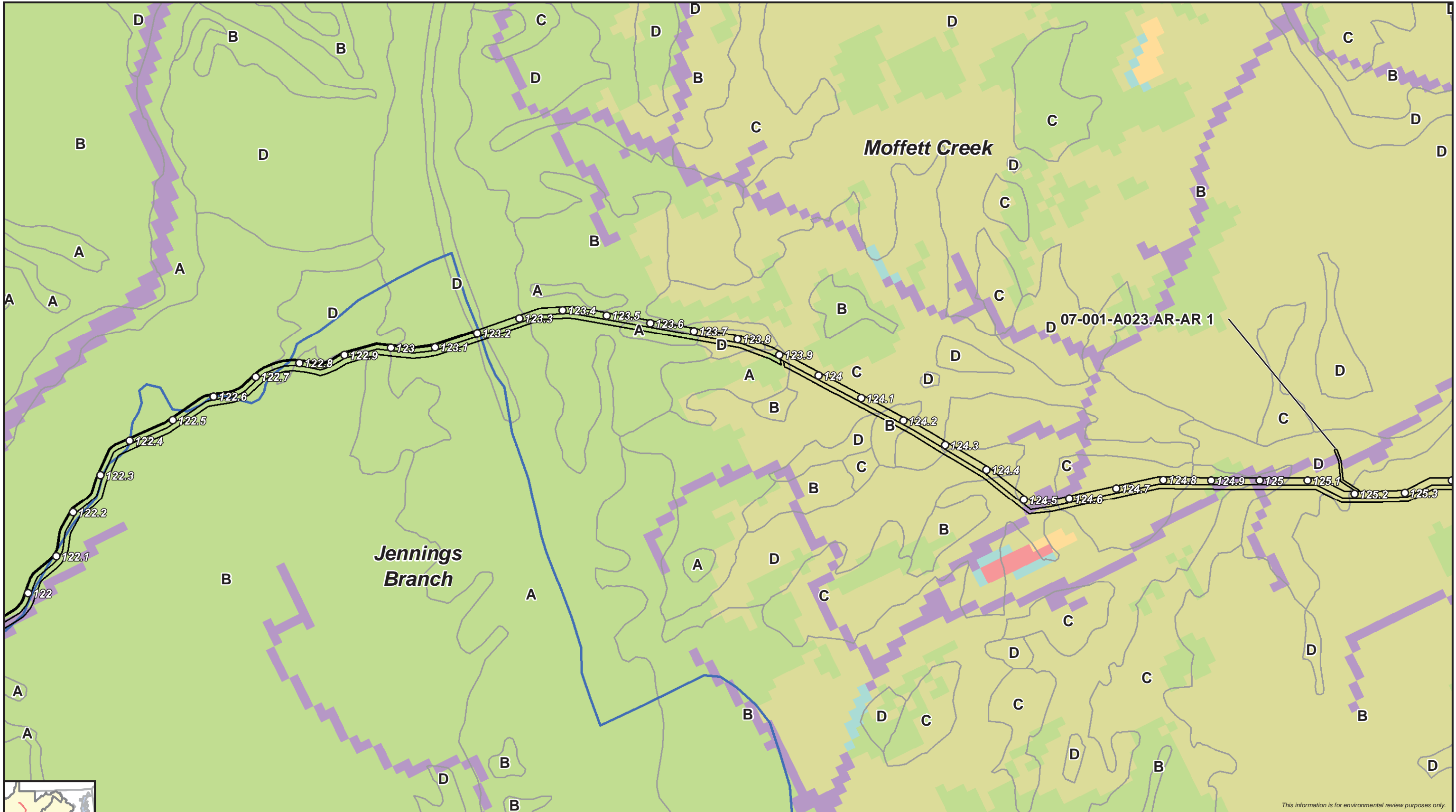


○ Milepost	Land Cover	■ Developed, Open Space
□ PCSM Analysis Workspaces	■ Agriculture	■ Forest
■ HUC-12 Watershed	■ Barren Land	■ Gravel
■ Hydrologic Soil Group	■ Developed, Low Intensity	■ Open Water
	■ Developed, Medium Intensity	

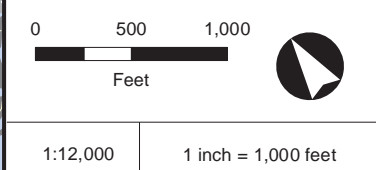


Virginia Water Quality
Pre-Development Conditions

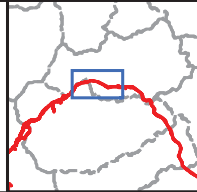




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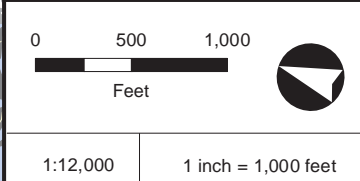
○ Milepost	Land Cover	■ Developed, Open Space
□ PCSI Analysis Workspaces	■ Agriculture	■ Forest
■ HUC-12 Watershed	■ Developed, High Intensity	
■ Hydrologic Soil Group	■ Developed, Low Intensity	
	■ Developed, Medium Intensity	



Atlantic Coast Pipeline

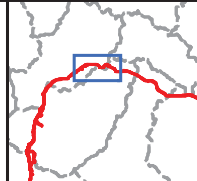
Virginia Water Quality
Pre-Development Conditions





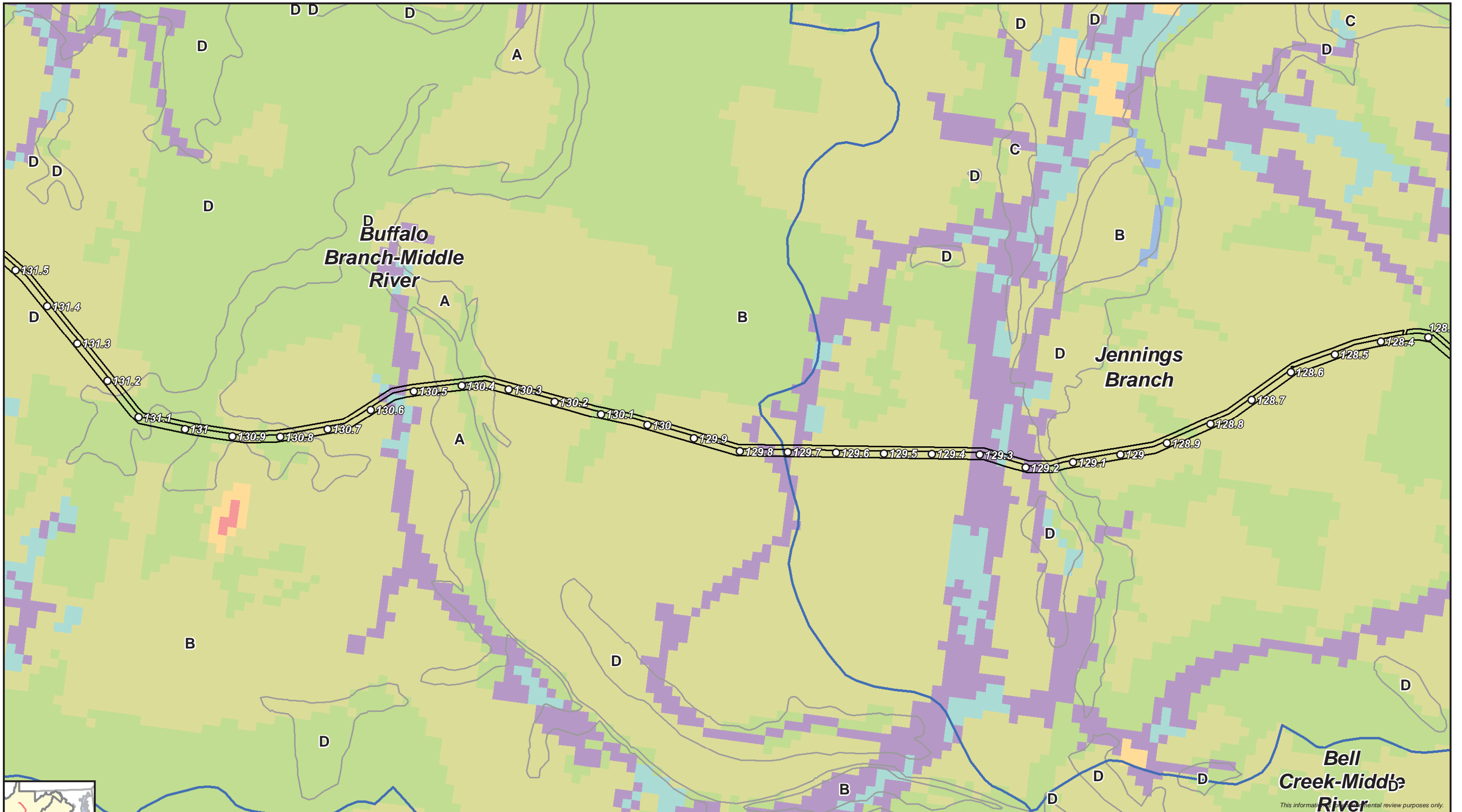
- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Developed, Low Intensity
 - Developed, Open Space
 - Forest
 - Grassland

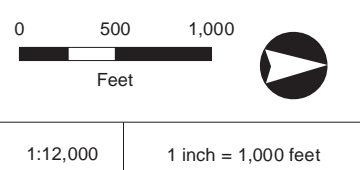


Virginia
Water Quality
 Pre-Development Conditions

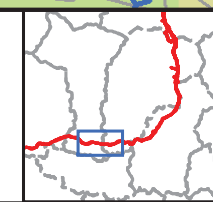




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○ Milepost	Land Cover	■ Developed, Open Space
□ PCSI Analysis Workspaces	■ Agriculture	■ Forest
■ HUC-12 Watershed	■ Developed, High Intensity	■ Open Water
■ Hydrologic Soil Group	■ Developed, Low Intensity	
	■ Developed, Medium Intensity	

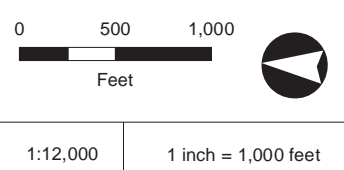


Virginia Water Quality
Pre-Development Conditions

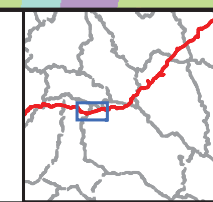




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- | | | |
|----------------------------|-------------------------------|-------------|
| ○ Milepost | Land Cover | ■ Forest |
| □ PCSM Analysis Workspaces | ■ Agriculture | ■ Grassland |
| ■ HUC-12 Watershed | ■ Developed, Low Intensity | ■ Shrub |
| ■ Hydrologic Soil Group | ■ Developed, Medium Intensity | |
| | ■ Developed, Open Space | |

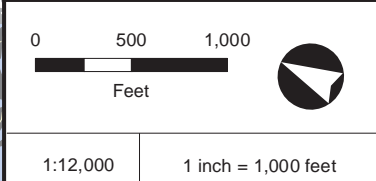


Virginia
Water Quality
Pre-Development Conditions

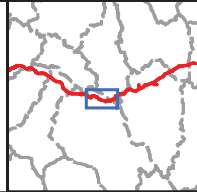




This information is for environmental review purposes only.



○ Milepost	Land Cover	Forest
□ PCSI Analysis Workspaces	■ Agriculture	
■ HUC-12 Watershed	■ Developed, Low Intensity	
■ Hydrologic Soil Group	■ Developed, Medium Intensity	
	■ Developed, Open Space	

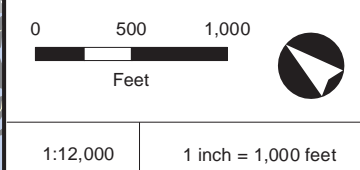


Virginia
Water Quality
Pre-Development Conditions



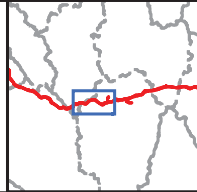


This information is for environmental review purposes only.



- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

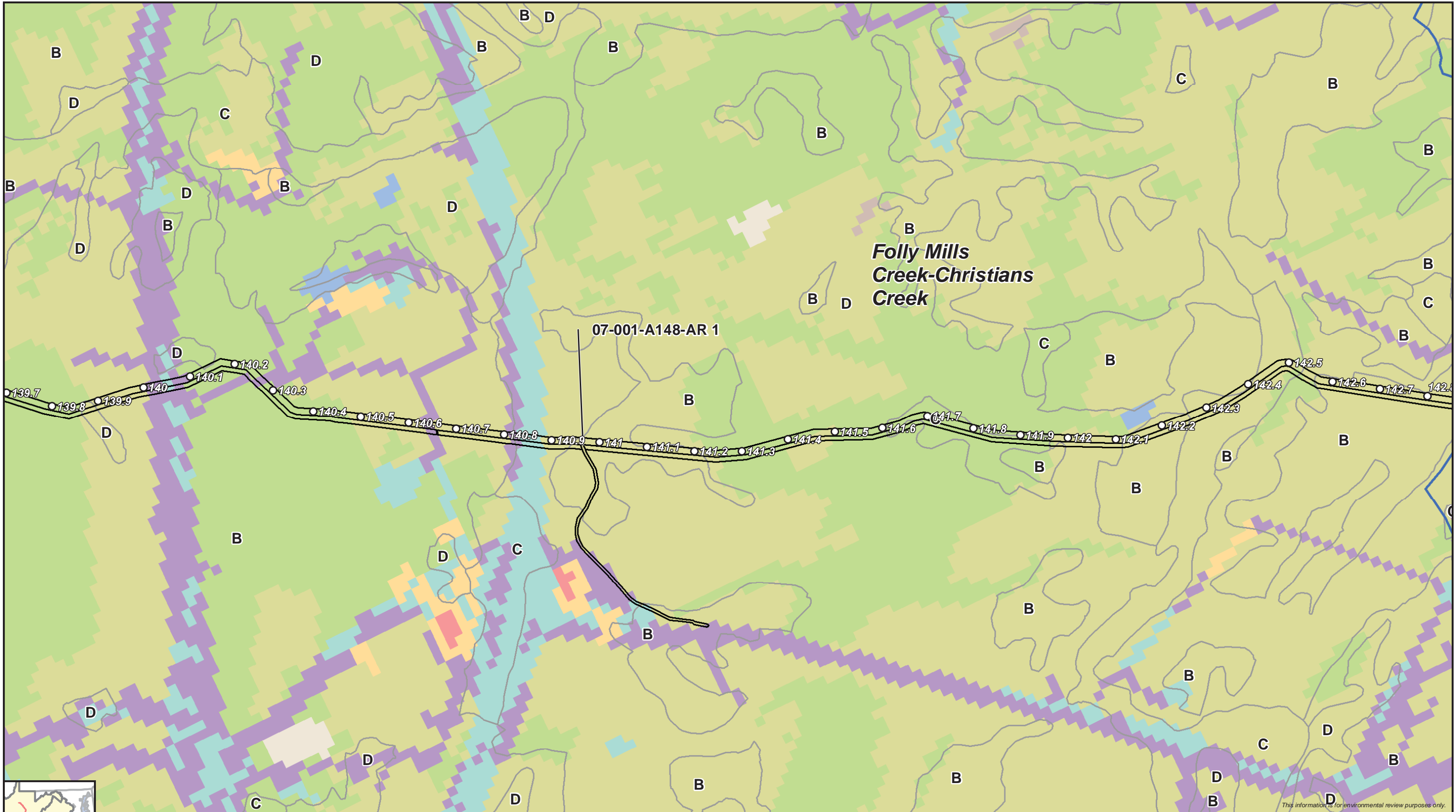
- Land Cover**
- Forest
 - Agriculture
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space



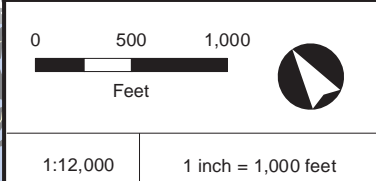
Atlantic Coast Pipeline

Virginia Water Quality Pre-Development Conditions

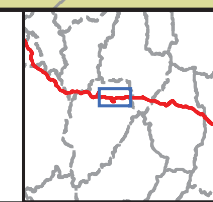




This information is for environmental review purposes only.



○ Milepost	Land Cover	Developed, Medium Intensity
□ PCSI Analysis Workspaces	■ Agriculture	■ Developed, Open Space
■ HUC-12 Watershed	■ Barren Land	■ Forest
■ Hydrologic Soil Group	■ Developed, High Intensity	■ Open Water
	■ Developed, Low Intensity	■ Shrub



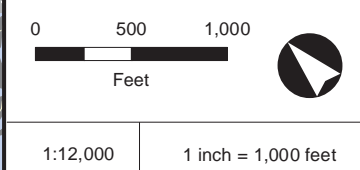
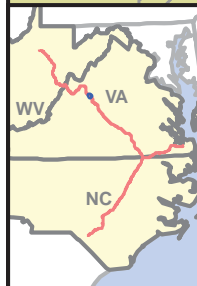
Atlantic Coast Pipeline

Virginia Water Quality Pre-Development Conditions

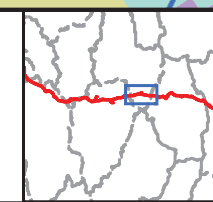




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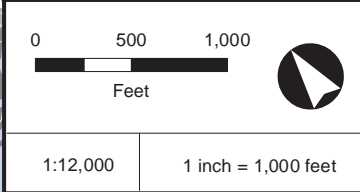
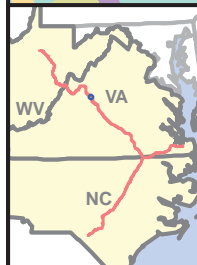
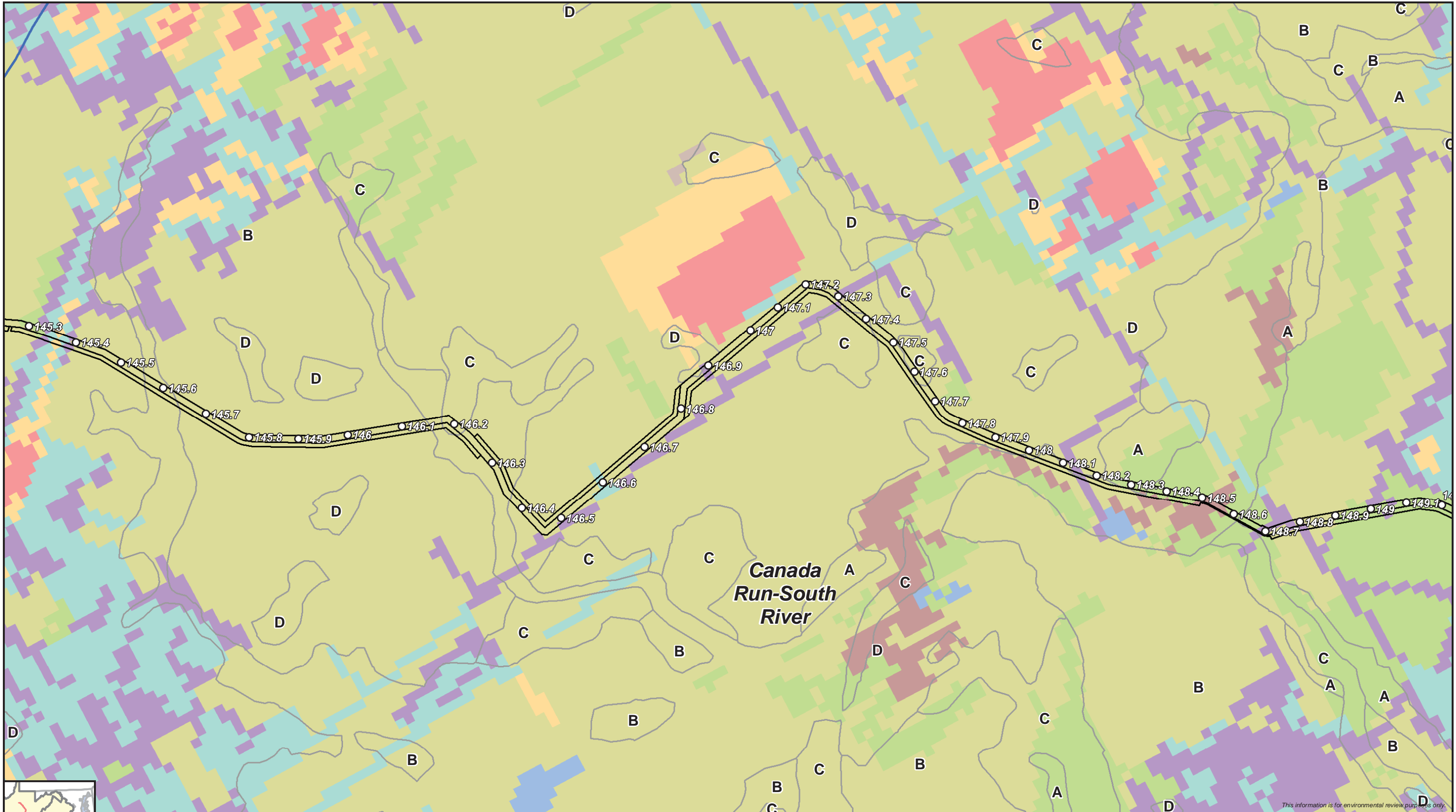


○ Milepost	Land Cover	■ Developed, Open Space
□ PCSI Analysis Workspaces	■ Agriculture	■ Forest
■ HUC-12 Watershed	■ Developed, High Intensity	■ Grassland
■ Hydrologic Soil Group	■ Developed, Low Intensity	
	■ Developed, Medium Intensity	



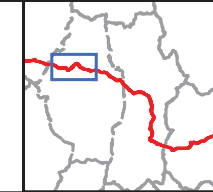
Virginia Water Quality
Pre-Development Conditions





- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Barren Land
 - Developed, High Intensity
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Open Water
 - Wetlands

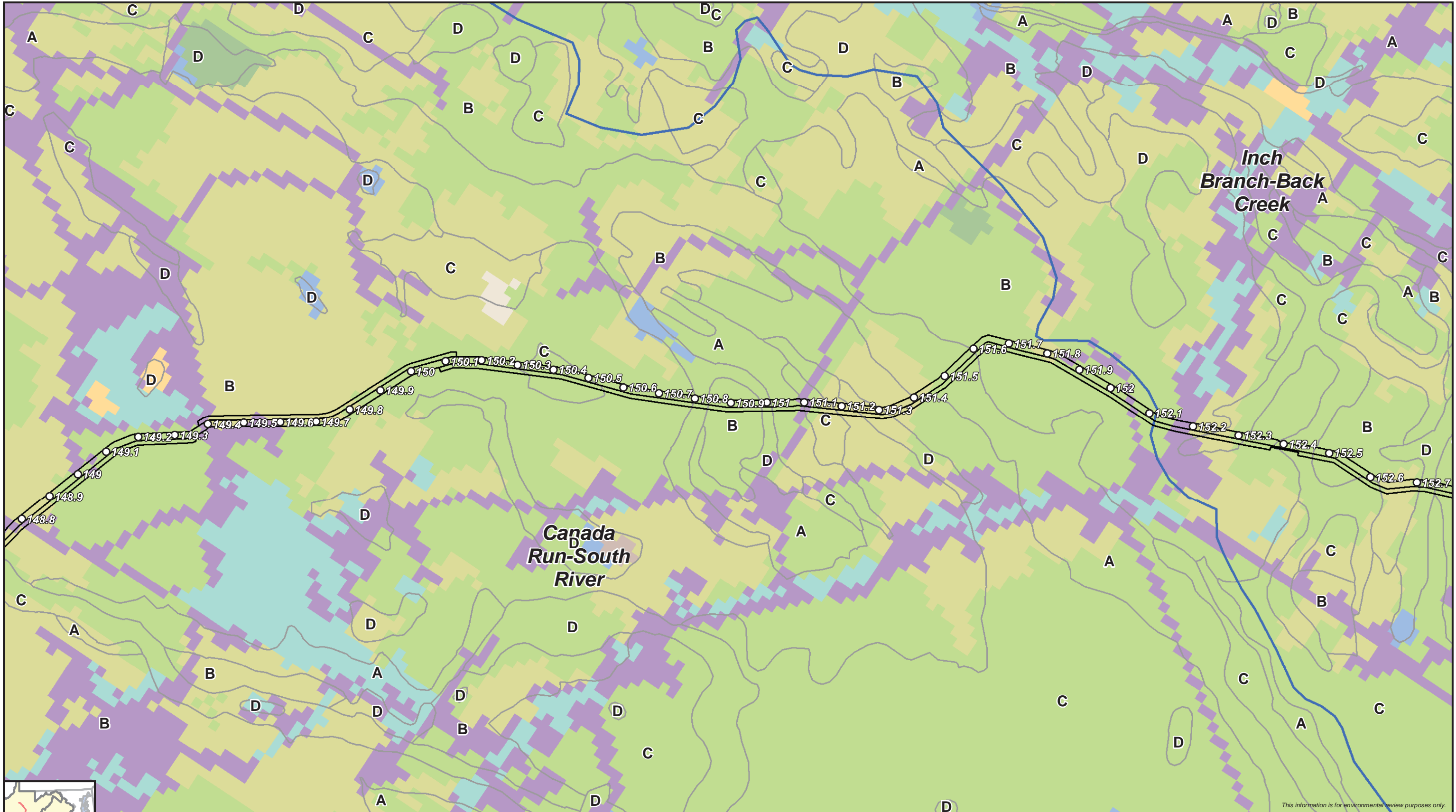


Atlantic Coast Pipeline

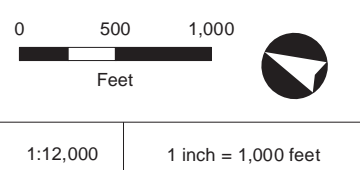
Virginia Water Quality
Pre-Development Conditions



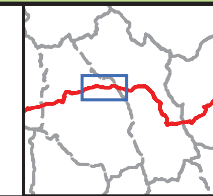
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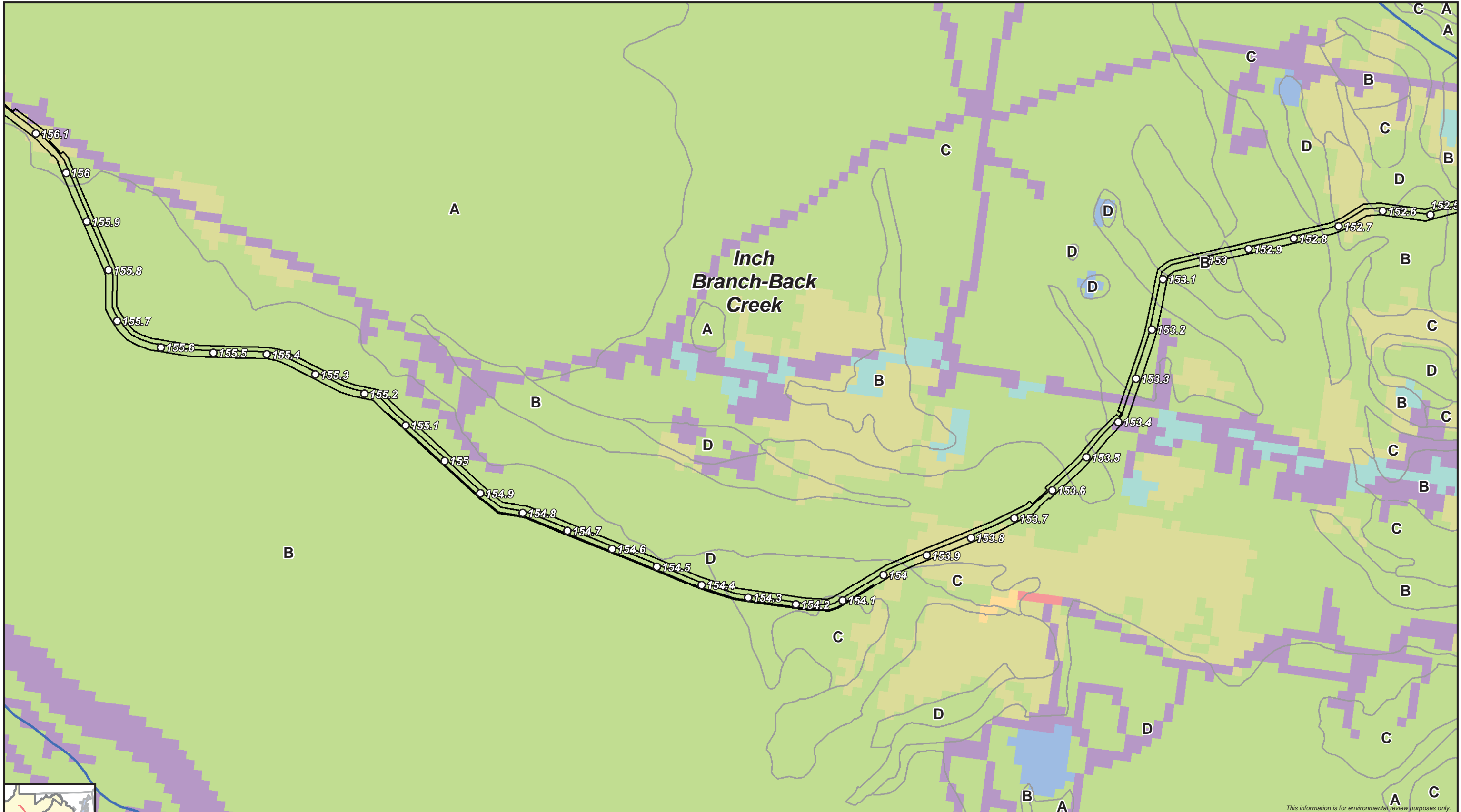


○ Milepost	Land Cover	Developed, Open Space
□ PCSM Analysis Workspaces	Agriculture	Forest
□ HUC-12 Watershed	Barren Land	Grassland
□ Hydrologic Soil Group	Developed, Low Intensity	Open Water
	Developed, Medium Intensity	Shrub

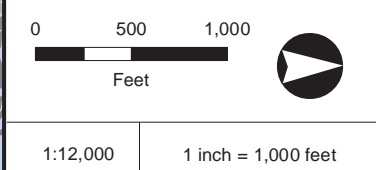


Virginia
Water Quality
Pre-Development Conditions

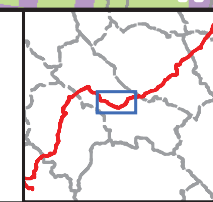




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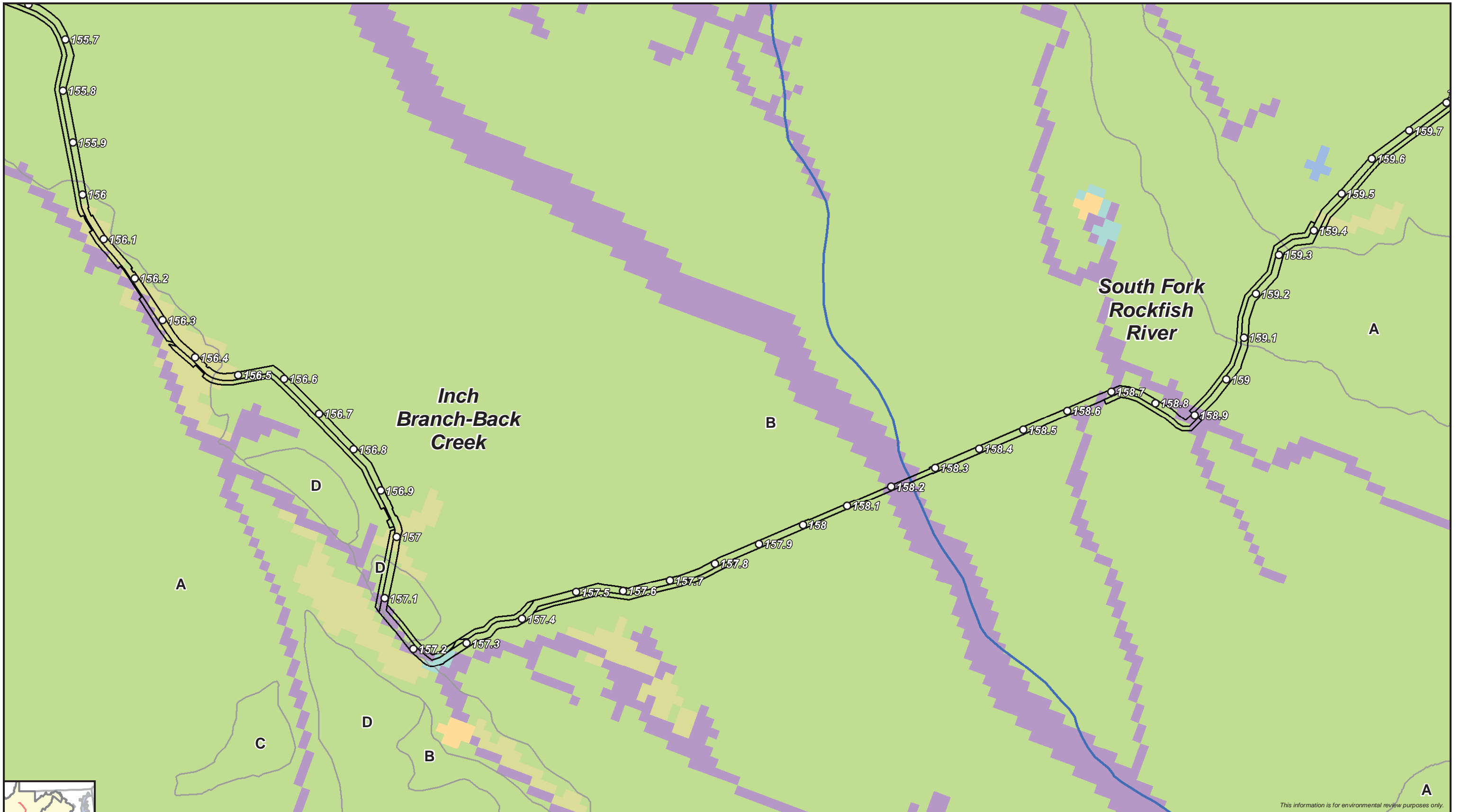


○ Milepost	Land Cover	■ Developed, Open Space
□ PCSI Analysis Workspaces	■ Agriculture	■ Forest
■ HUC-12 Watershed	■ Developed, High Intensity	■ Open Water
■ Hydrologic Soil Group	■ Developed, Low Intensity	
	■ Developed, Medium Intensity	

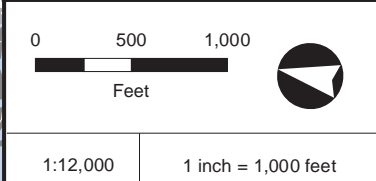
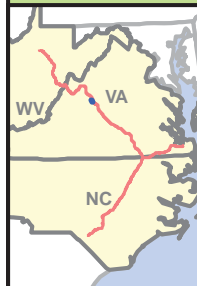


Virginia Water Quality
Pre-Development Conditions

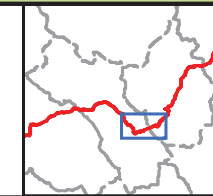




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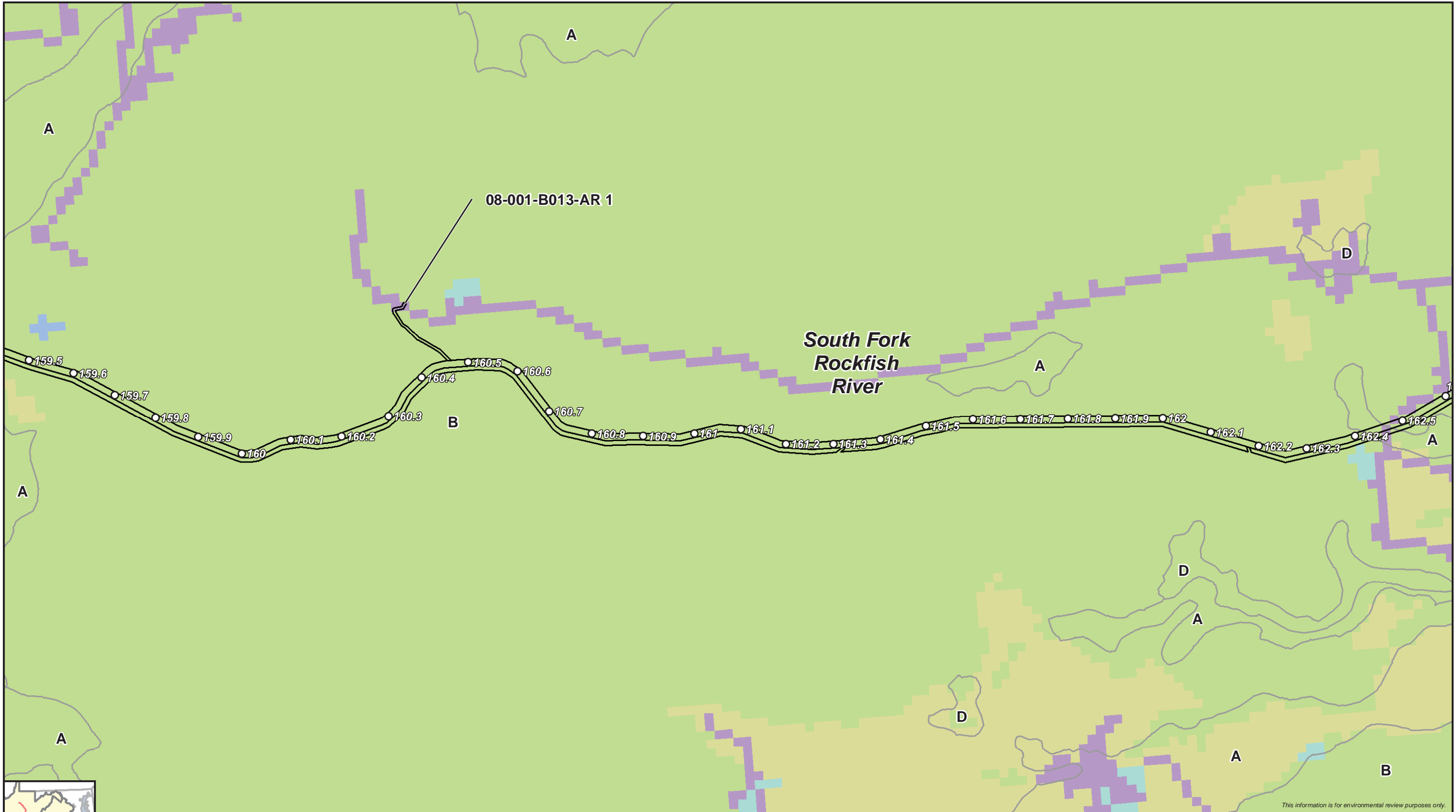


○ Milepost	Land Cover	Forest
□ PCSI Analysis Workspaces	Agriculture	Open Water
□ HUC-12 Watershed	Developed, Low Intensity	
□ Hydrologic Soil Group	Developed, Medium Intensity	
	Developed, Open Space	

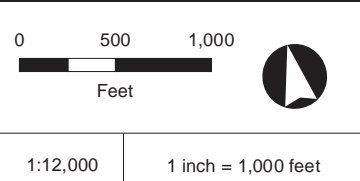


Virginia Water Quality
Pre-Development Conditions

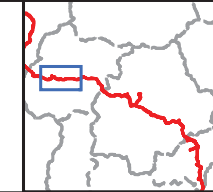




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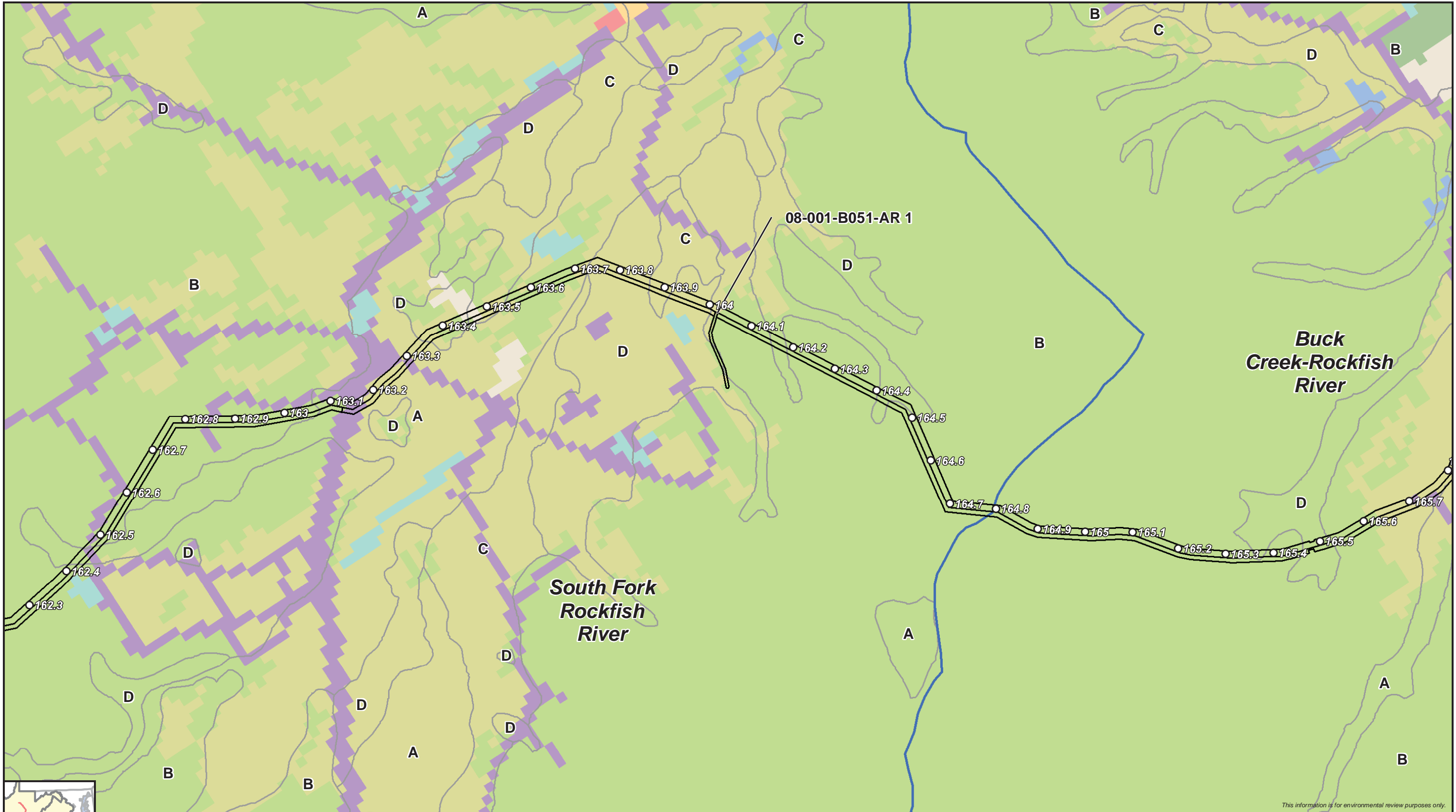


○ Milepost	Land Cover	■ Open Water
□ PCSI Analysis Workspaces	■ Agriculture	
■ HUC-12 Watershed	■ Developed, Low Intensity	
■ Hydrologic Soil Group	■ Developed, Open Space	
	■ Forest	

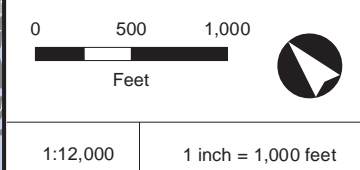


Virginia Water Quality
Pre-Development Conditions

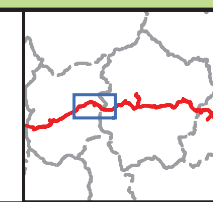




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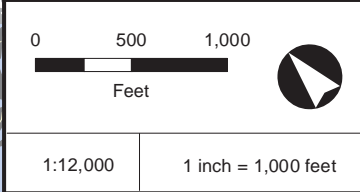
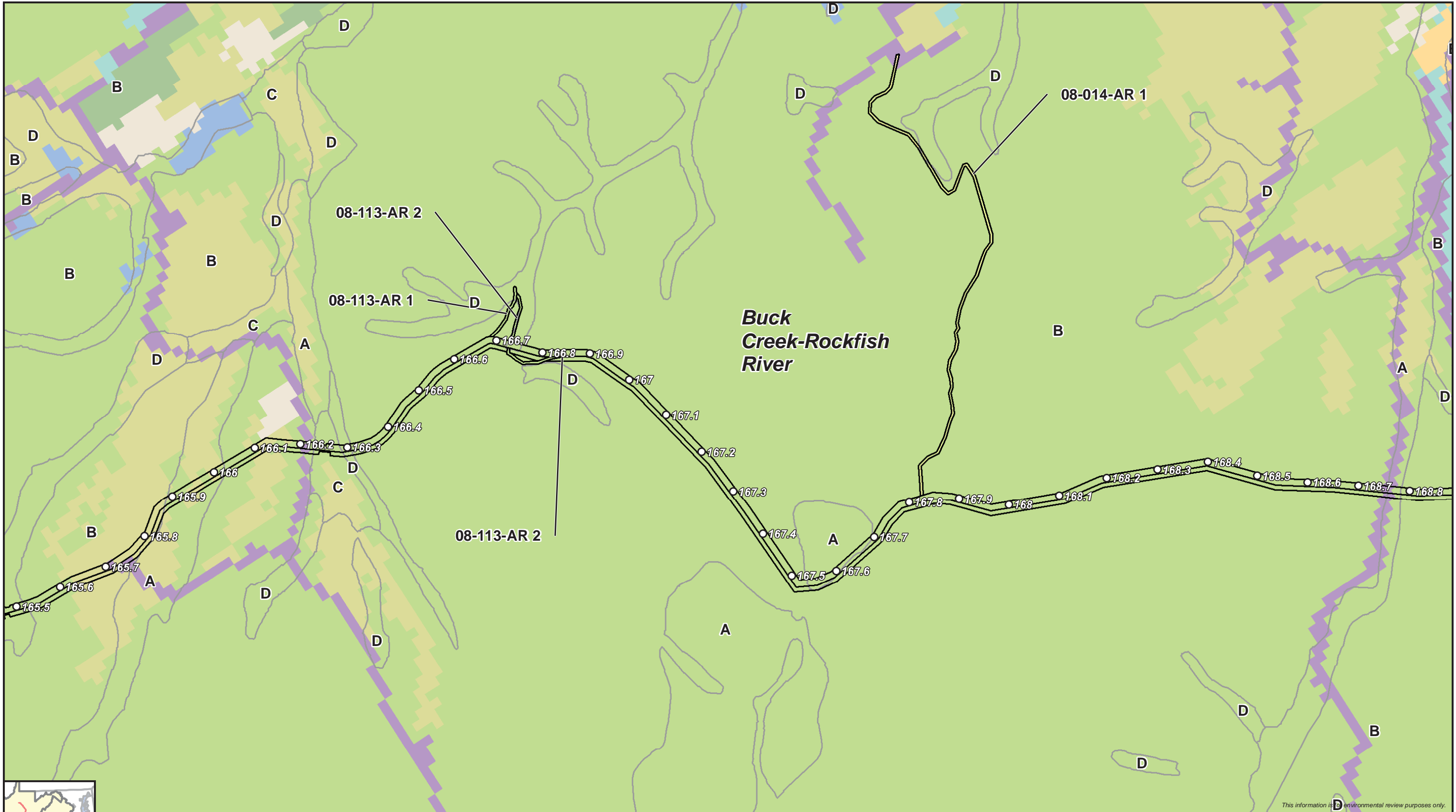
○ Milepost	Land Cover	Developed, Open Space
□ PCSM Analysis Workspaces	Agriculture	Forest
□ HUC-12 Watershed	Developed, High Intensity	Grassland
□ Hydrologic Soil Group	Developed, Low Intensity	Open Water
	Developed, Medium Intensity	Shrub



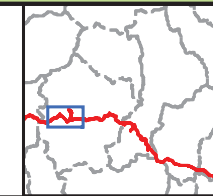
Atlantic Coast Pipeline

Virginia Water Quality
Pre-Development Conditions





○ Milepost	Land Cover	Forest
□ PCSM Analysis Workspaces	Agriculture	Grassland
□ HUC-12 Watershed	Developed, Low Intensity	Gravel
□ Hydrologic Soil Group	Developed, Medium Intensity	Open Water
	Developed, Open Space	Shrub

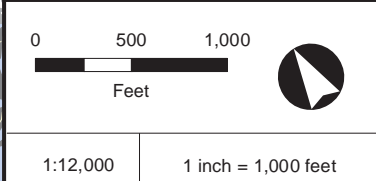
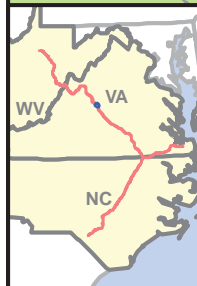
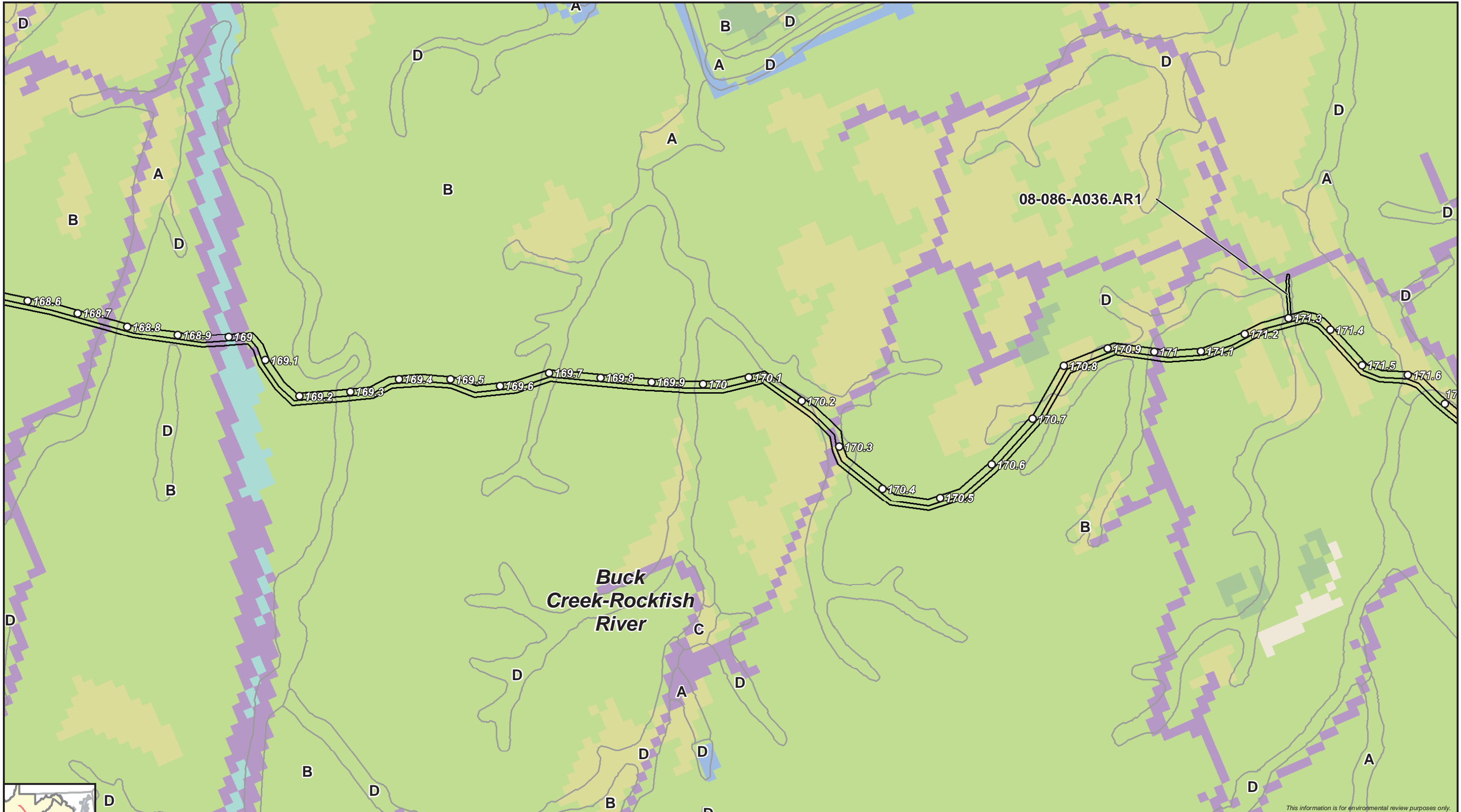


Atlantic Coast Pipeline

Virginia Water Quality
Pre-Development Conditions

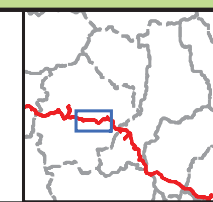


This information is for environmental review purposes only.



- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Developed, Low Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Open Water
 - Shrub



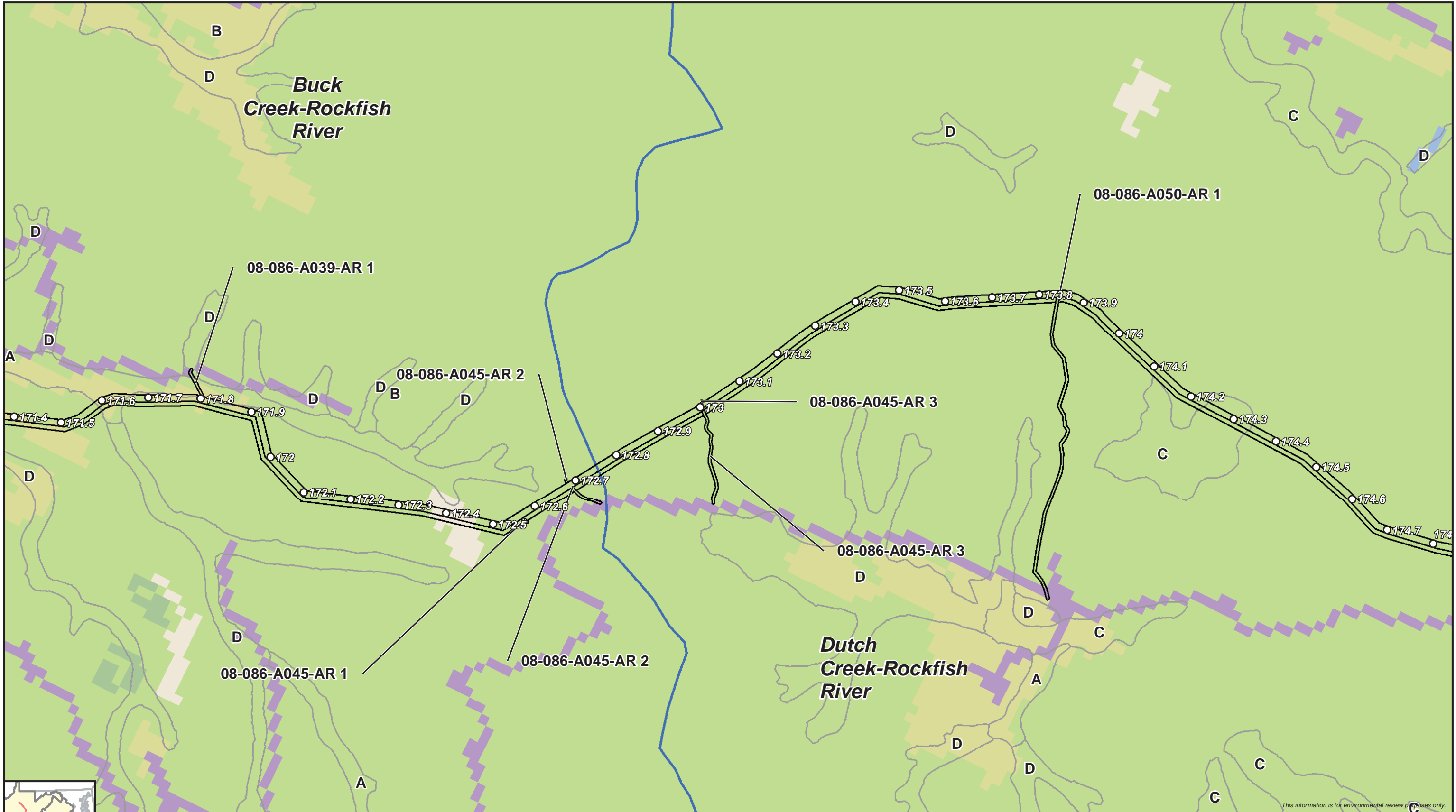
Atlantic Coast Pipeline

Virginia Water Quality
Pre-Development Conditions

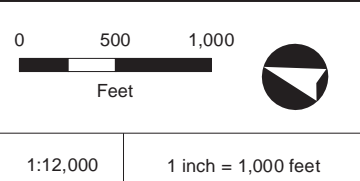


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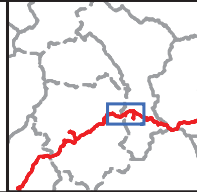


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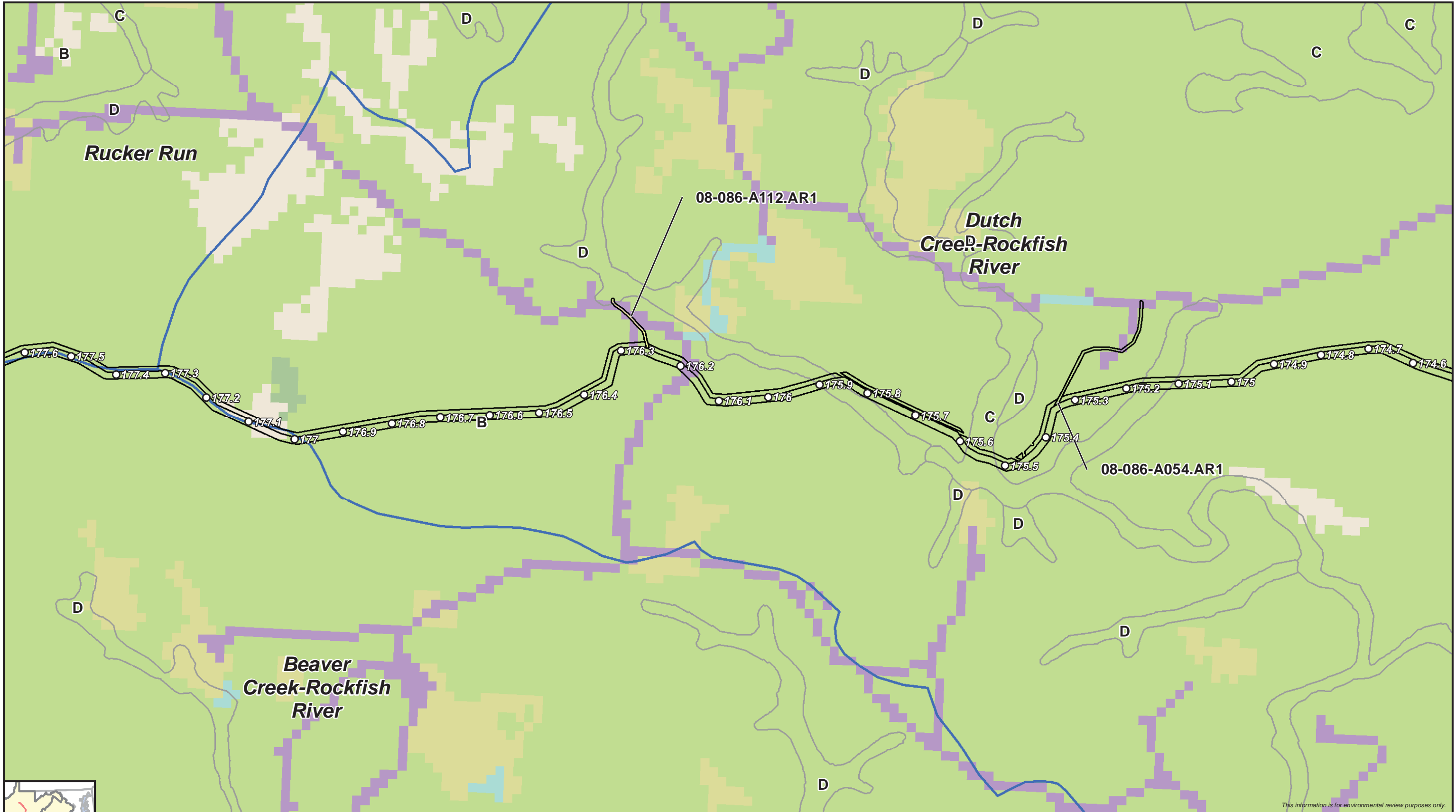
- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Developed, Open Space
 - Forest
 - Grassland
 - Open Water
 - Shrub

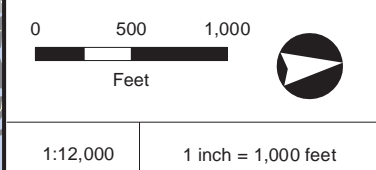


Virginia Water Quality
Pre-Development Conditions





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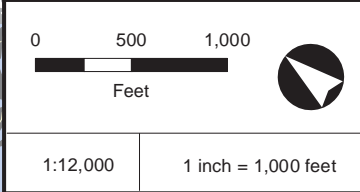
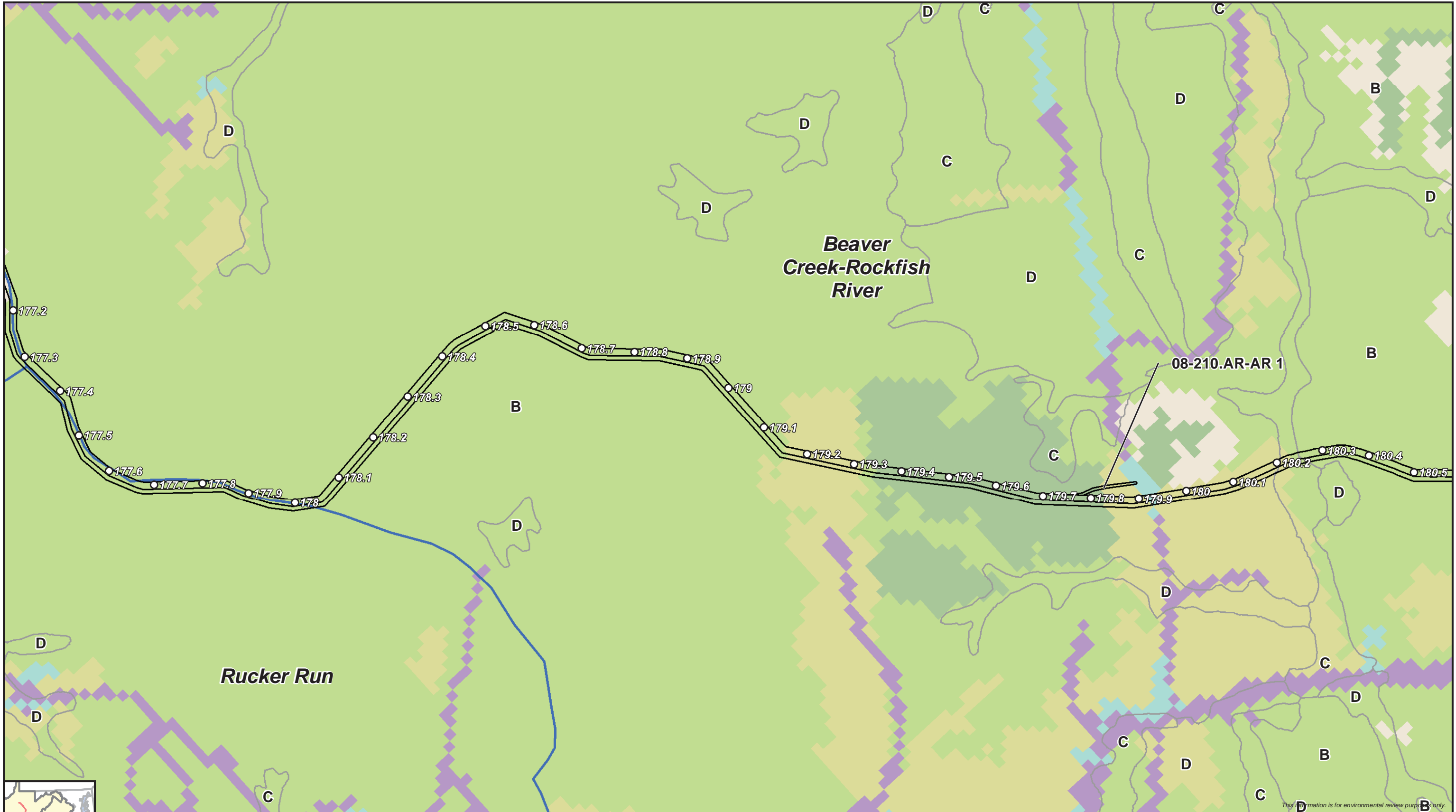
○ Milepost	Land Cover	Grassland
□ PCSI Analysis Workspaces	Agriculture	Gravel
□ HUC-12 Watershed	Developed, Low Intensity	Shrub
□ Hydrologic Soil Group	Developed, Open Space	Forest



Atlantic Coast Pipeline

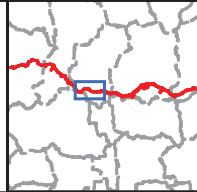
Virginia Water Quality
Pre-Development Conditions





- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Developed, Low Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Shrub

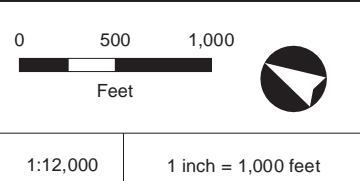
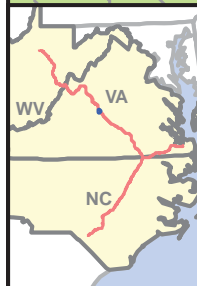


Virginia Water Quality
Pre-Development Conditions



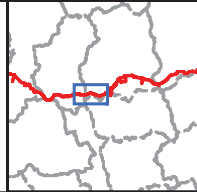


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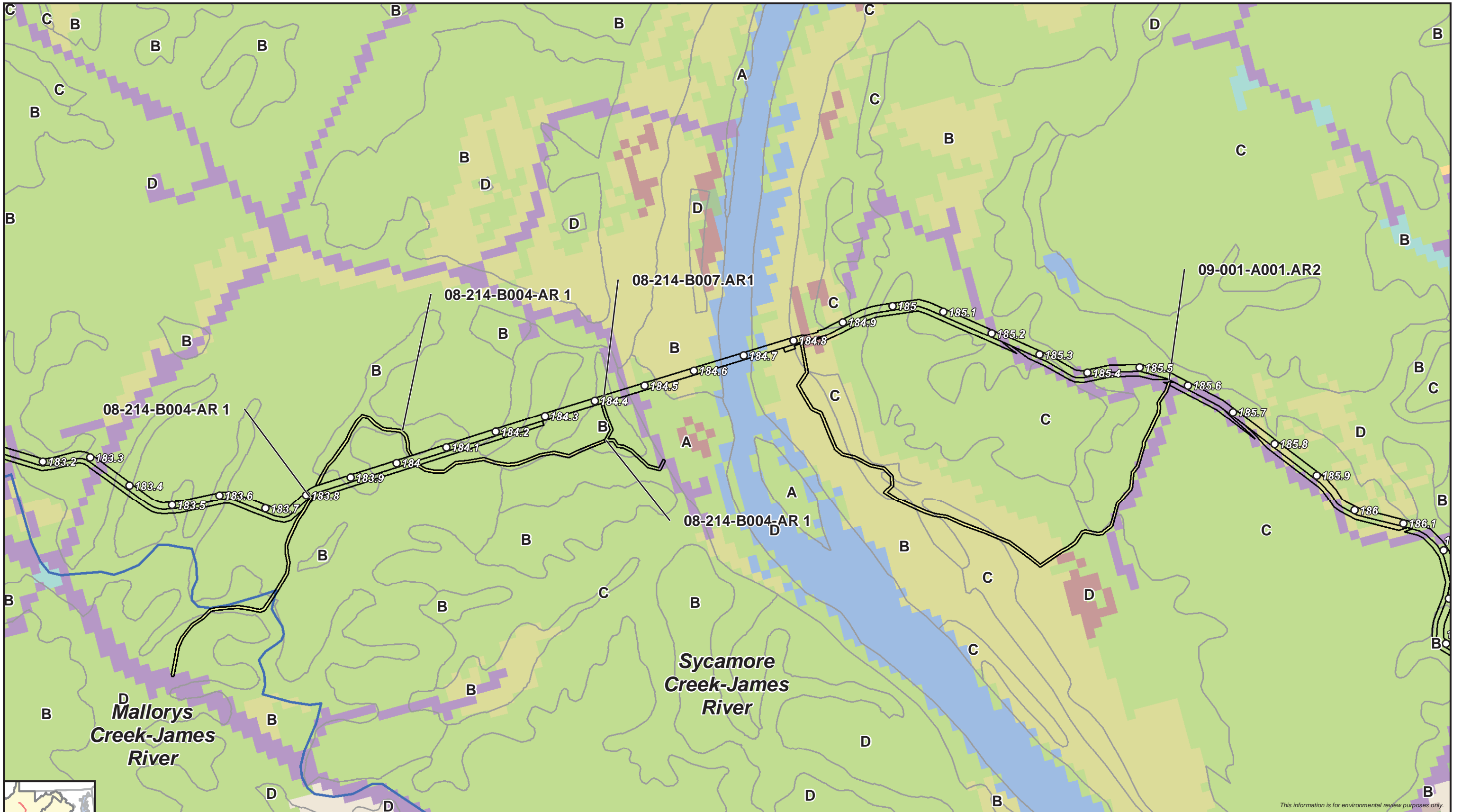
- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Developed, Low Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Shrub

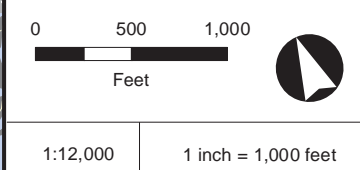
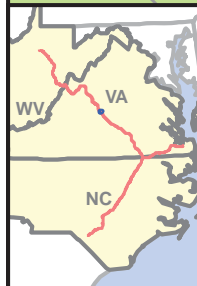


Virginia Water Quality
Pre-Development Conditions



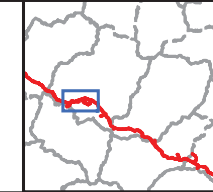


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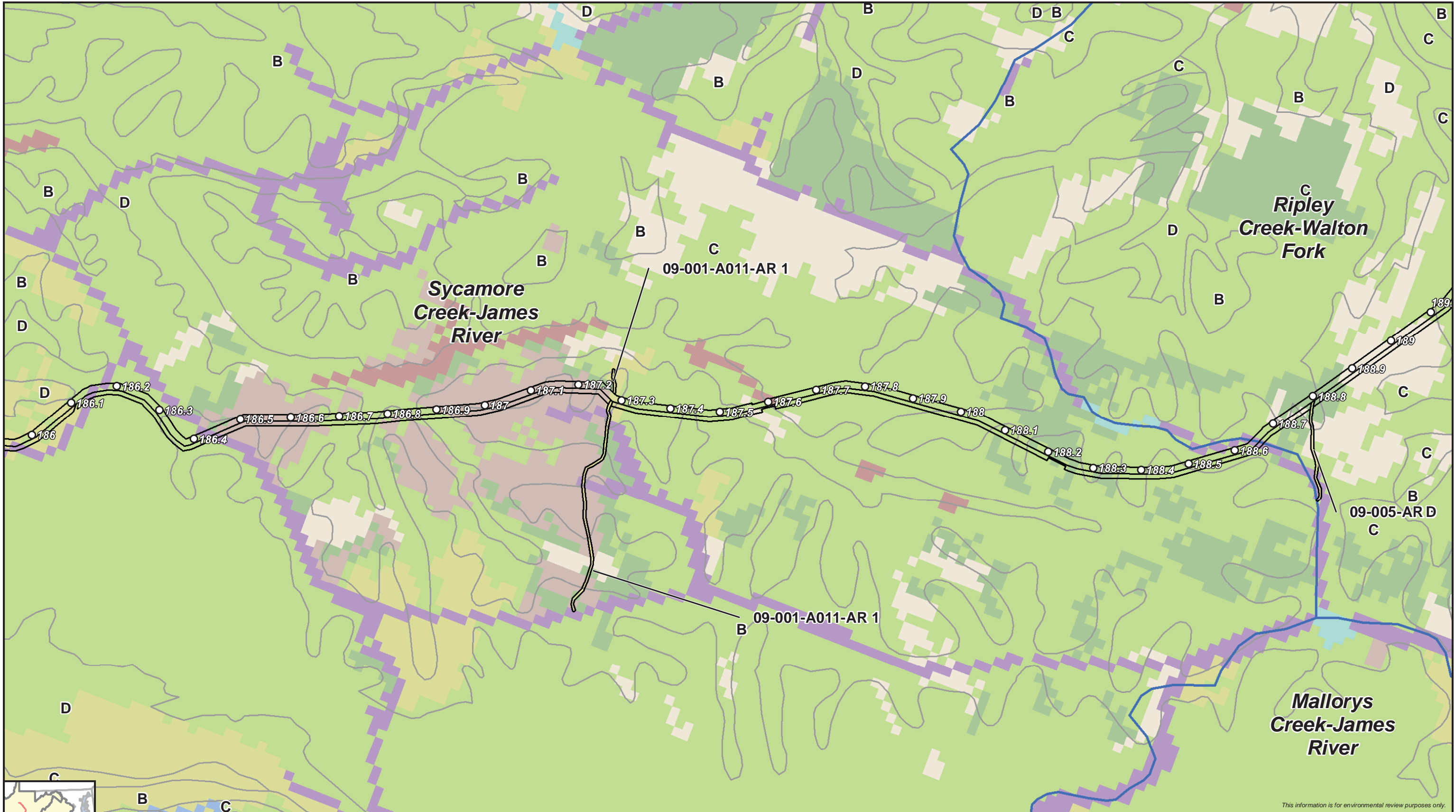
- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- A Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Barren Land
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Gravel
 - Open Water
 - Shrub
 - Wetlands

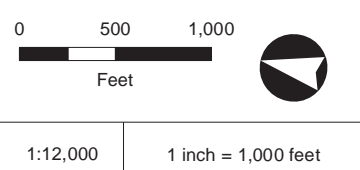
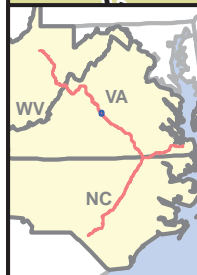


Virginia
Water Quality
 Pre-Development Conditions

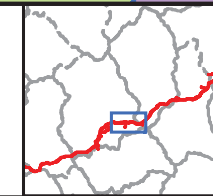




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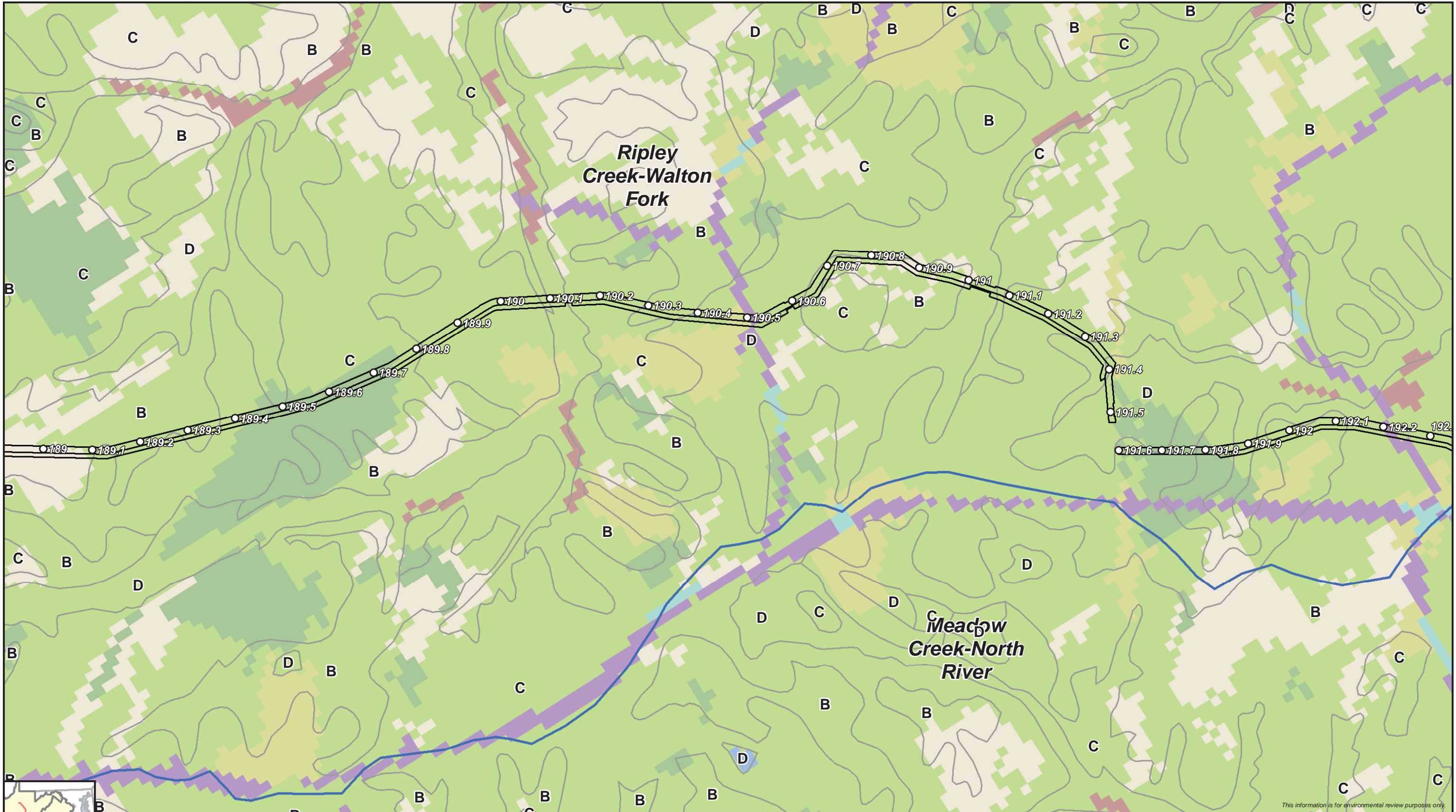


○ Milepost	Land Cover	Forest	Wetlands
□ PCSI Analysis Workspaces	Agriculture	Grassland	
□ HUC-12 Watershed	Barren Land	Gravel	
□ Hydrologic Soil Group	Developed, Low Intensity	Open Water	
	Developed, Open Space	Shrub	

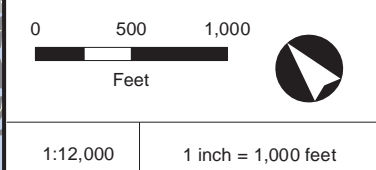
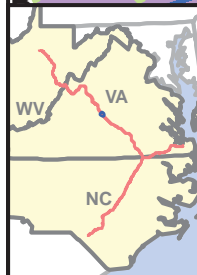


Virginia Water Quality
Pre-Development Conditions

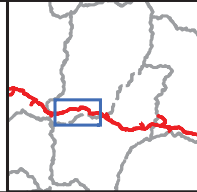




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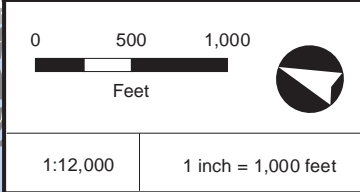
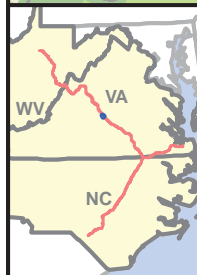
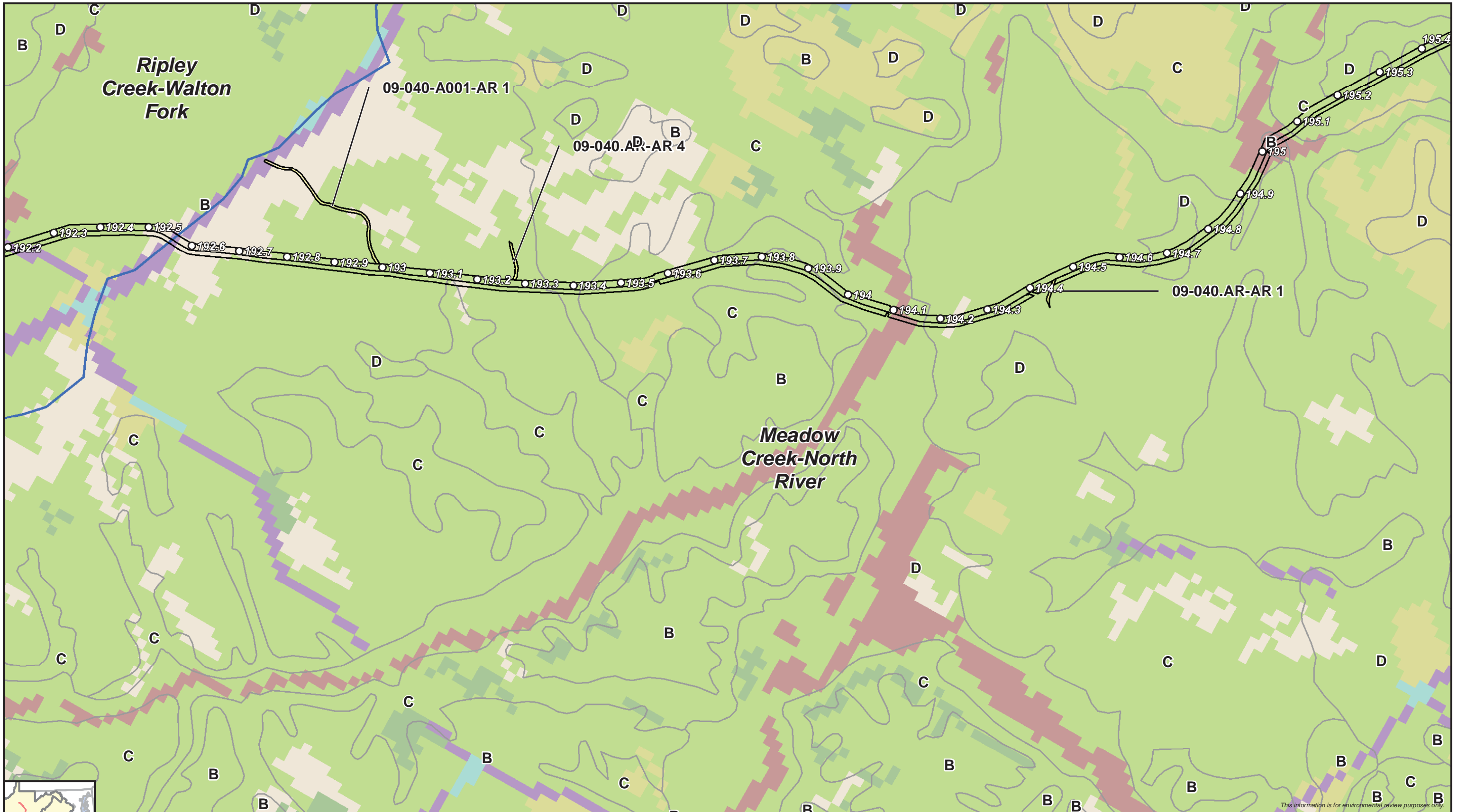


Milepost	Land Cover	Grassland
PCSM Analysis Workspaces	Agriculture	Open Water
HUC-12 Watershed	Developed, Low Intensity	Shrub
Hydrologic Soil Group	Developed, Open Space	Wetlands
	Forest	

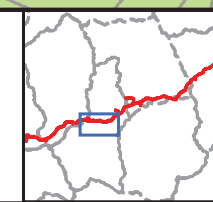


Virginia
Water Quality
Pre-Development Conditions





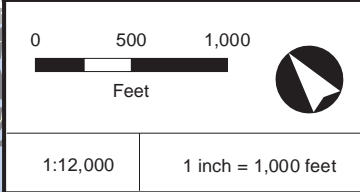
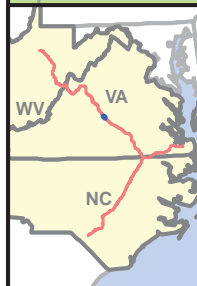
Legend	
○ Milepost	Land Cover
□ PCSI Analysis Workspaces	Grassland
□ HUC-12 Watershed	Gravel
□ Hydrologic Soil Group	Open Water
	Shrub
	Wetlands
	Agriculture
	Developed, Low Intensity
	Developed, Open Space
	Forest



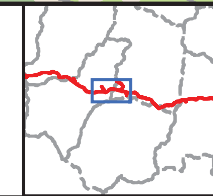
Atlantic Coast Pipeline

Virginia Water Quality Pre-Development Conditions





○ Milepost	Land Cover	Forest	Wetlands
□ PCSM Analysis Workspaces	Agriculture	Grassland	
□ HUC-12 Watershed	Barren Land	Gravel	
□ Hydrologic Soil Group	Developed, Low Intensity	Open Water	
	Developed, Open Space	Shrub	

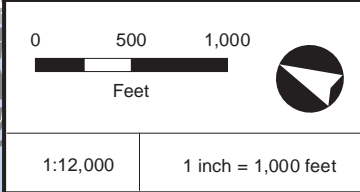


Virginia Water Quality
Pre-Development Conditions

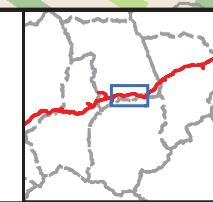




This information is for environmental review purposes only.



○ Milepost	Land Cover	Grassland
□ PCSM Analysis Workspaces	Agriculture	Gravel
□ HUC-12 Watershed	Developed, Low Intensity	Shrub
□ Hydrologic Soil Group	Developed, Open Space	Wetlands
	Forest	



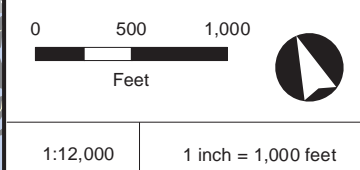
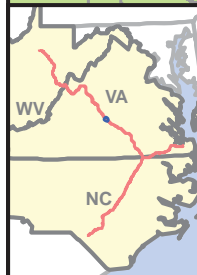
Atlantic Coast Pipeline

Virginia Water Quality Pre-Development Conditions

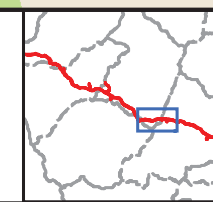




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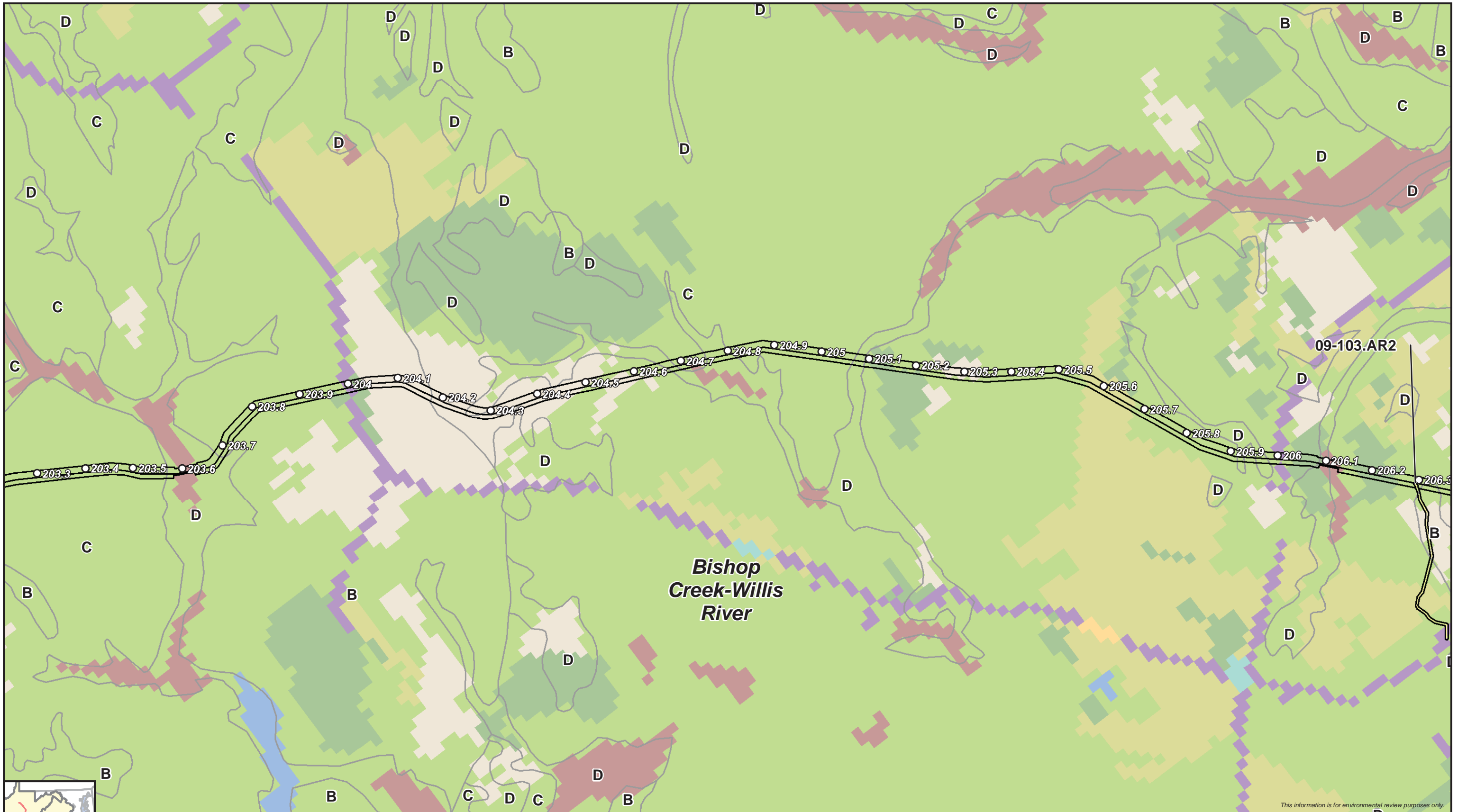


○ Milepost	Land Cover	Forest
□ PCSI Analysis Workspaces	Agriculture	Grassland
□ HUC-12 Watershed	Barren Land	Open Water
□ Hydrologic Soil Group	Developed, Low Intensity	Shrub
	Developed, Open Space	Wetlands

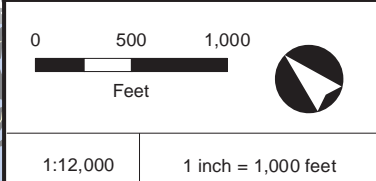


Virginia Water Quality
Pre-Development Conditions

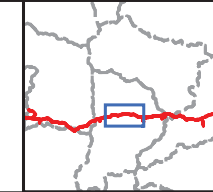




This information is for environmental review purposes only.



○ Milepost	Land Cover	Forest	Wetlands
□ PCSI Analysis Workspaces	Agriculture	Grassland	
□ HUC-12 Watershed	Developed, Low Intensity	Gravel	
□ Hydrologic Soil Group	Developed, Medium Intensity	Open Water	
	Developed, Open Space	Shrub	



Atlantic Coast Pipeline

Virginia Water Quality Pre-Development Conditions

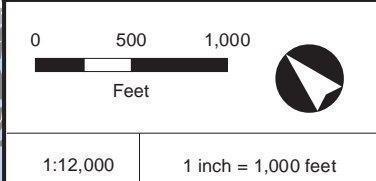
ERM

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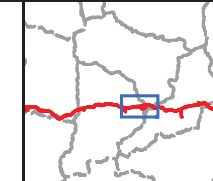


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- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

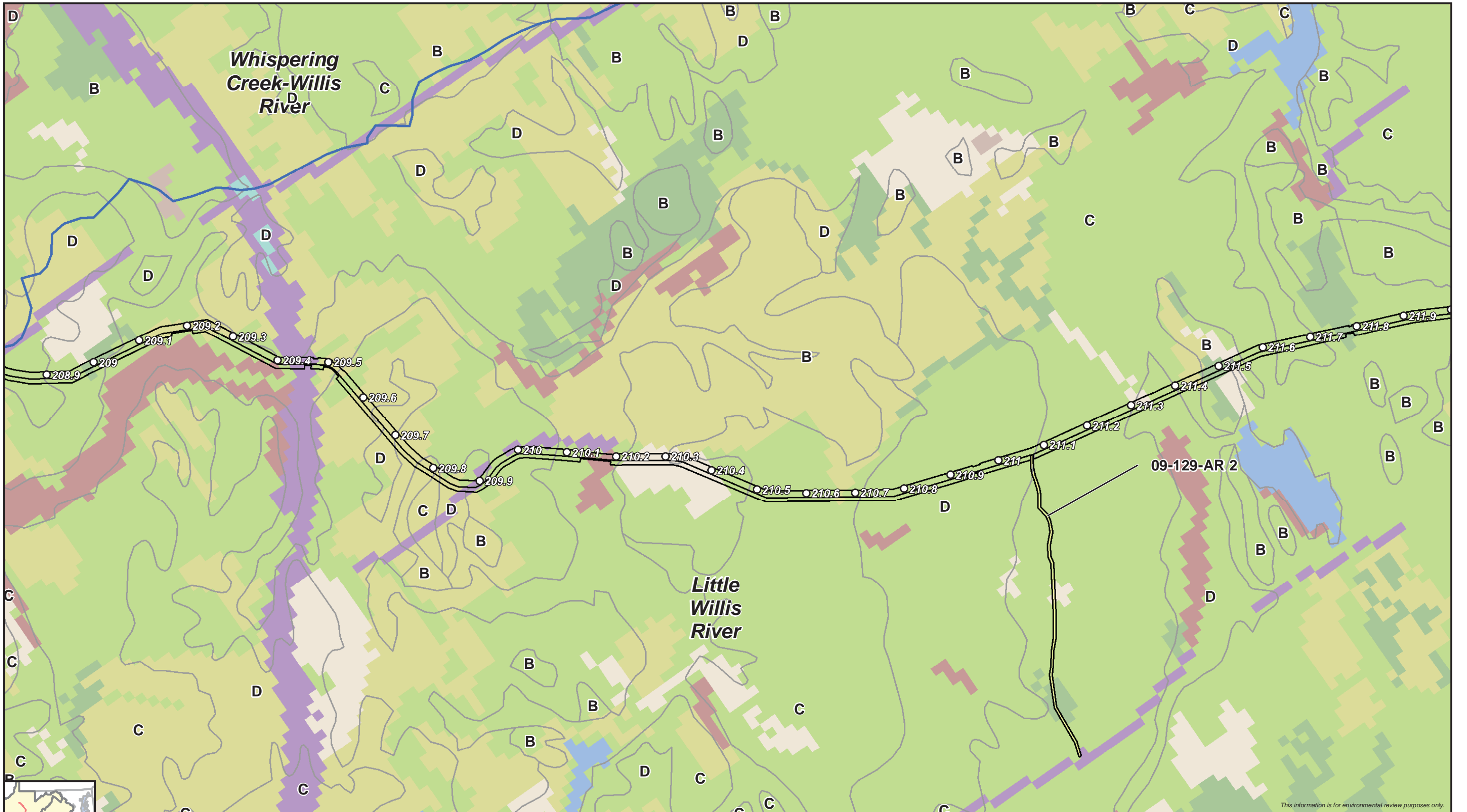
- Land Cover**
- Agriculture
 - Barren Land
 - Developed, Open Space
 - Forest
 - Grassland
 - Gravel
 - Open Water
 - Shrub
 - Wetlands



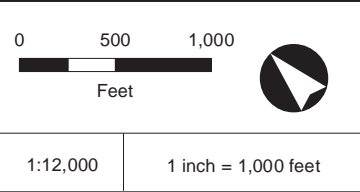
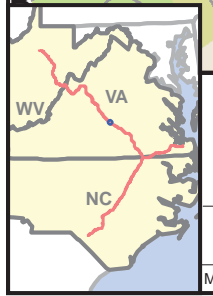
Atlantic Coast Pipeline

Virginia Water Quality Pre-Development Conditions

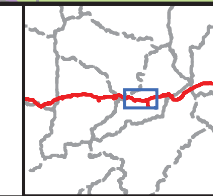




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○ Milepost	Land Cover	Forest	Wetlands
□ PCSI Analysis Workspaces	Agriculture	Grassland	
□ HUC-12 Watershed	Barren Land	Gravel	
□ Hydrologic Soil Group	Developed, Low Intensity	Open Water	
	Developed, Open Space	Shrub	

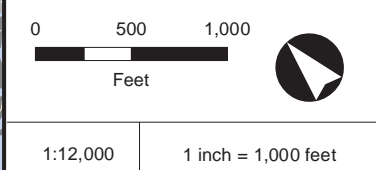
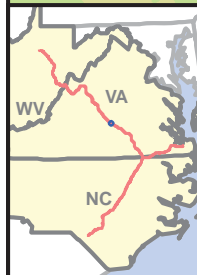


Virginia Water Quality Pre-Development Conditions

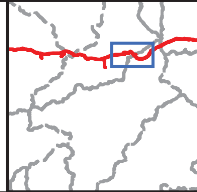




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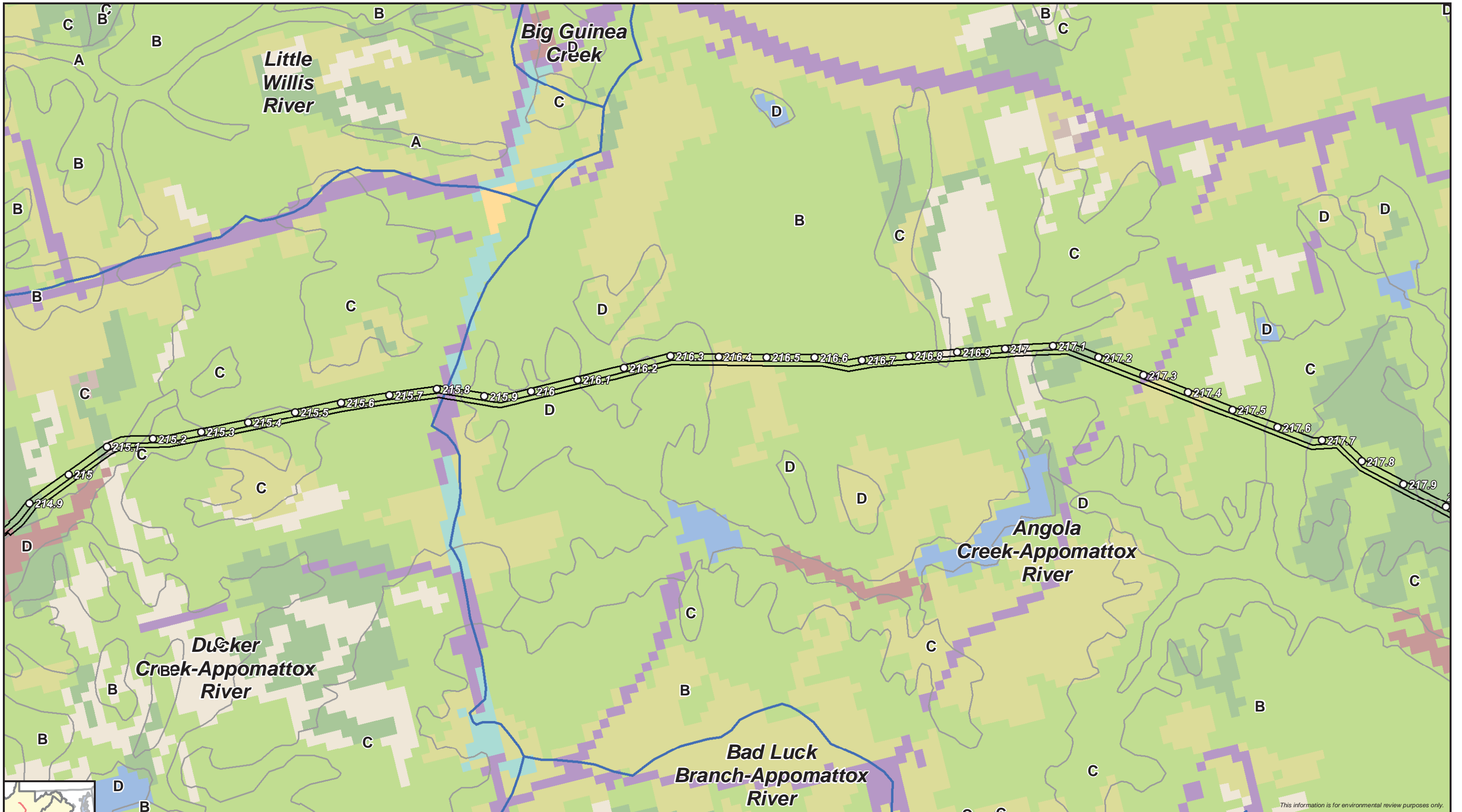
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□ PCSM Analysis Workspaces	Agriculture	Grassland	
□ HUC-12 Watershed	Barren Land	Gravel	
□ Hydrologic Soil Group	Developed, Low Intensity	Open Water	
	Developed, Open Space	Shrub	



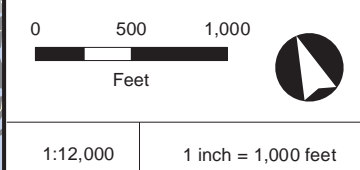
Atlantic Coast Pipeline

Virginia Water Quality Pre-Development Conditions





This information is for environmental review purposes only.



- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Barren Land
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Open Water
 - Shrub
 - Wetlands

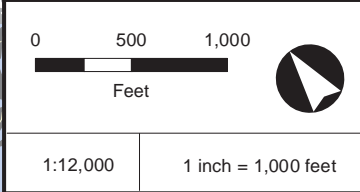
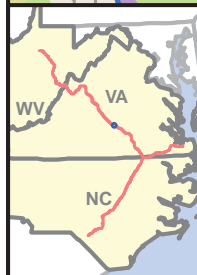


Virginia Water Quality
Pre-Development Conditions

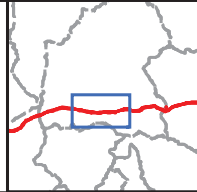




**Angola
Creek-Appomattox
River**



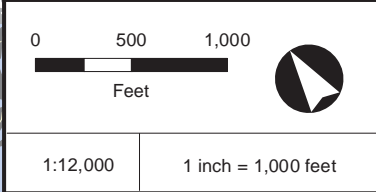
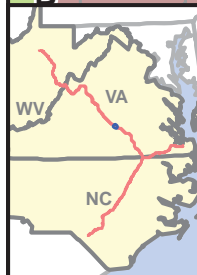
Milepost	Agriculture	Open Water
PCSM Analysis Workspaces	Developed, Open Space	Shrub
HUC-12 Watershed	Forest	Wetlands
Hydrologic Soil Group	Grassland	



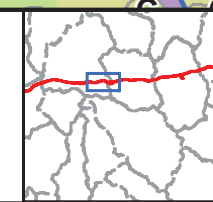
**Atlantic
Coast
Pipeline**

**Virginia
Water Quality
Pre-Development Conditions**





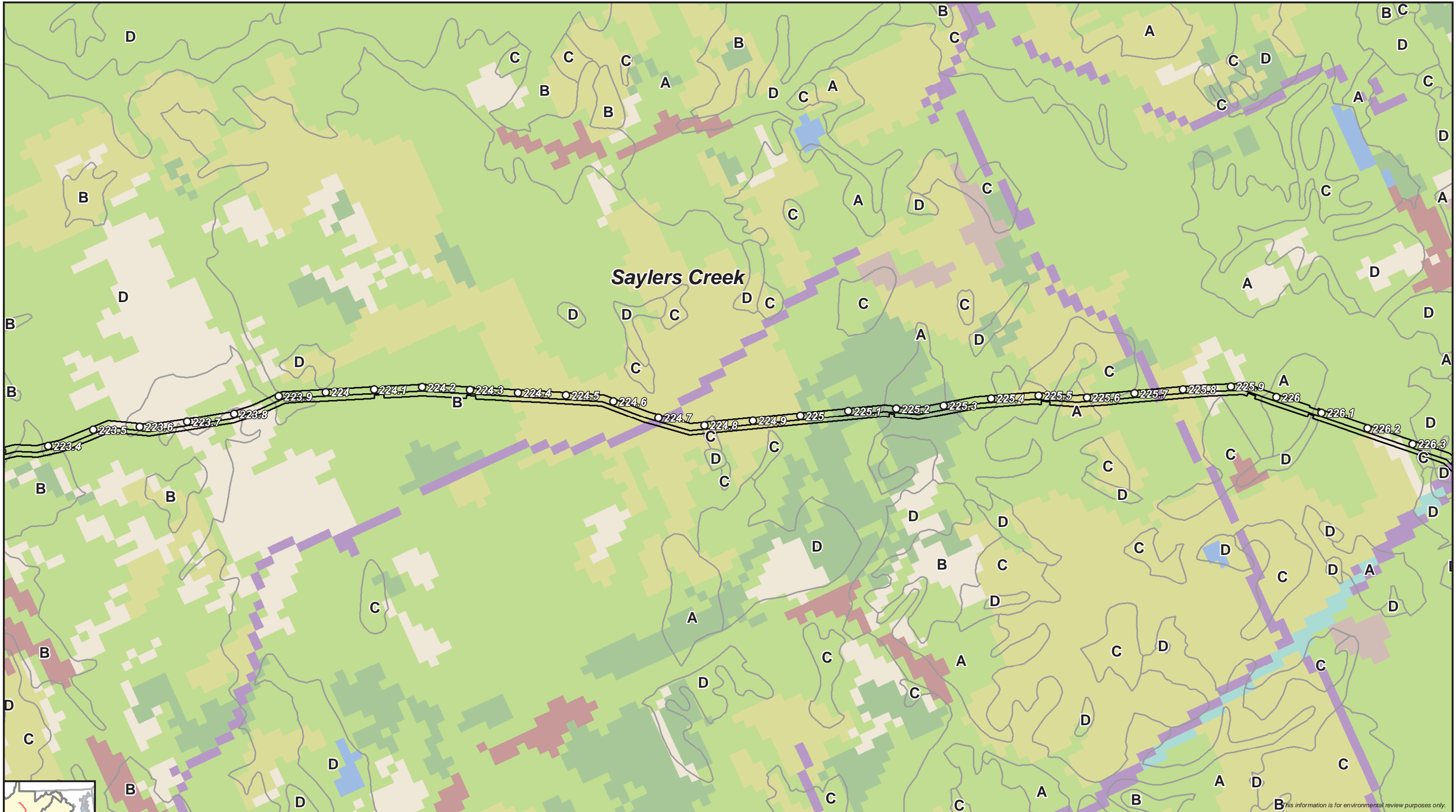
○ Milepost	Land Cover	Forest	Wetlands
□ PCSI Analysis Workspaces	Agriculture	Grassland	
□ HUC-12 Watershed	Barren Land	Gravel	
□ Hydrologic Soil Group	Developed, Low Intensity	Open Water	
	Developed, Open Space	Shrub	



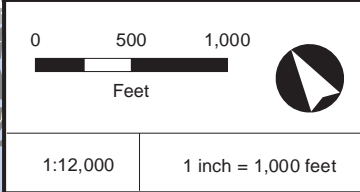
Virginia Water Quality
Pre-Development Conditions



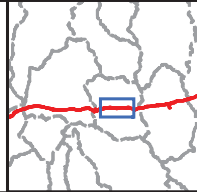
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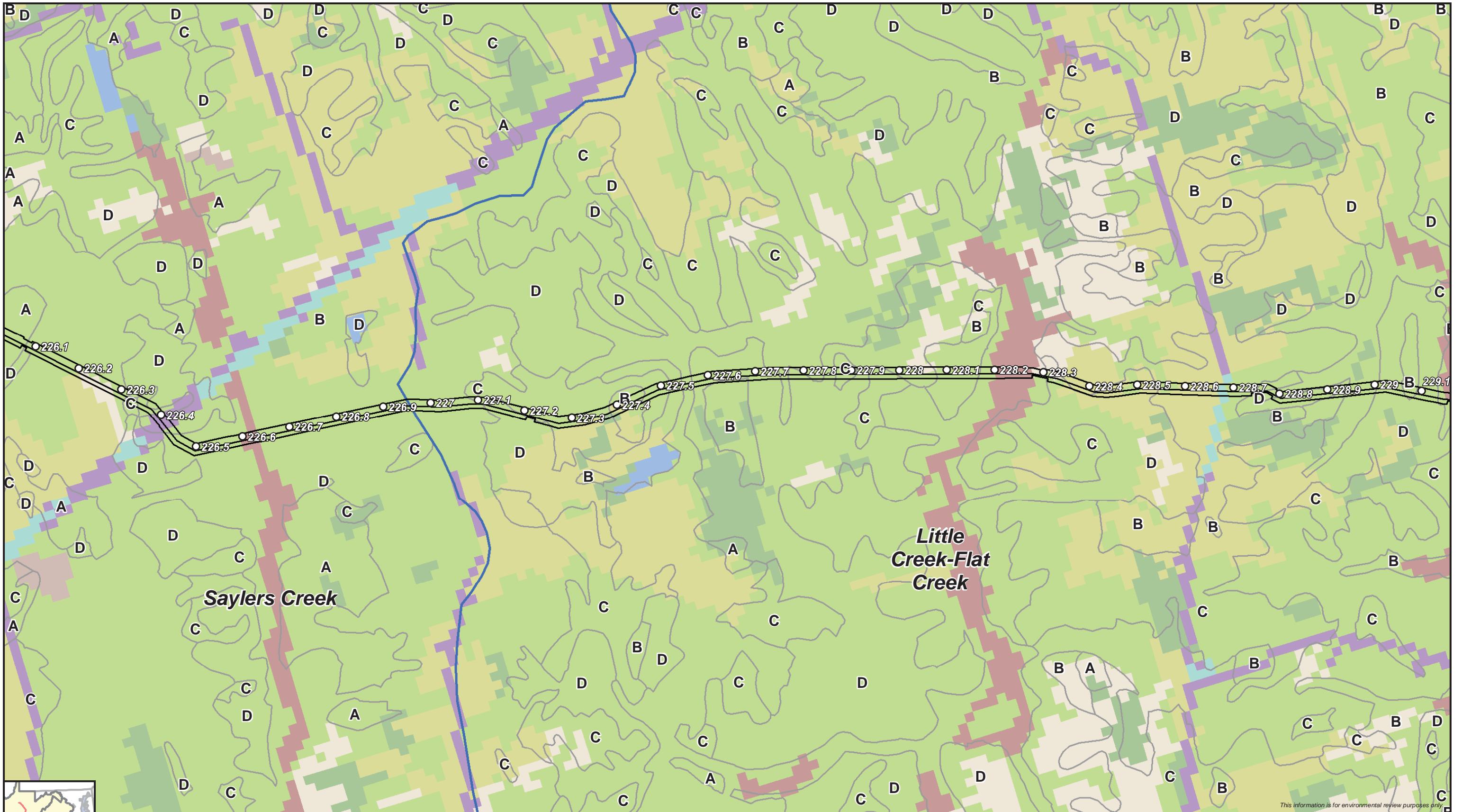
○ Milepost	Land Cover	Forest
□ PCSI Analysis Workspaces	■ Agriculture	Grassland
■ HUC-12 Watershed	■ Barren Land	Open Water
■ Hydrologic Soil Group	■ Developed, Low Intensity	Shrub
	■ Developed, Open Space	Wetlands



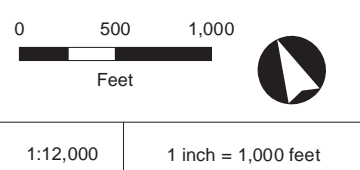
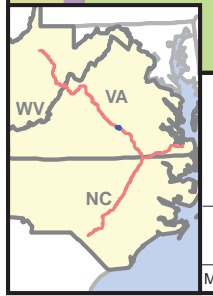
Atlantic Coast Pipeline

Virginia Water Quality Pre-Development Conditions

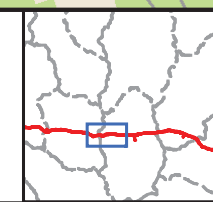




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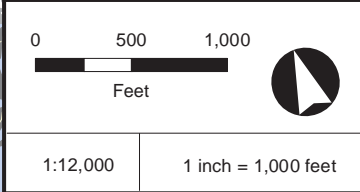
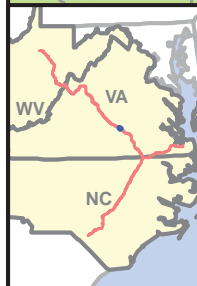
○ Milepost	Land Cover	Forest
□ PCSM Analysis Workspaces	Agriculture	Grassland
□ HUC-12 Watershed	Barren Land	Open Water
□ Hydrologic Soil Group	Developed, Low Intensity	Shrub
	Developed, Open Space	Wetlands



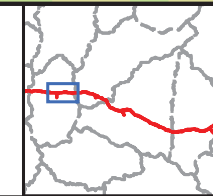
Virginia Water Quality
Pre-Development Conditions



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○ Milepost	Land Cover	Forest	Wetlands
□ PCSM Analysis Workspaces	Agriculture	Grassland	
□ HUC-12 Watershed	Developed, Low Intensity	Gravel	
□ Hydrologic Soil Group	Developed, Medium Intensity	Open Water	
	Developed, Open Space	Shrub	



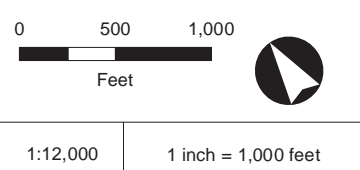
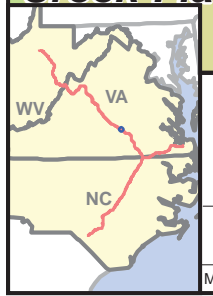
Atlantic Coast Pipeline

Virginia Water Quality
Pre-Development Conditions

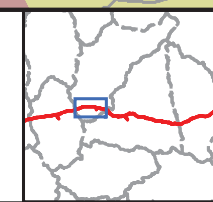




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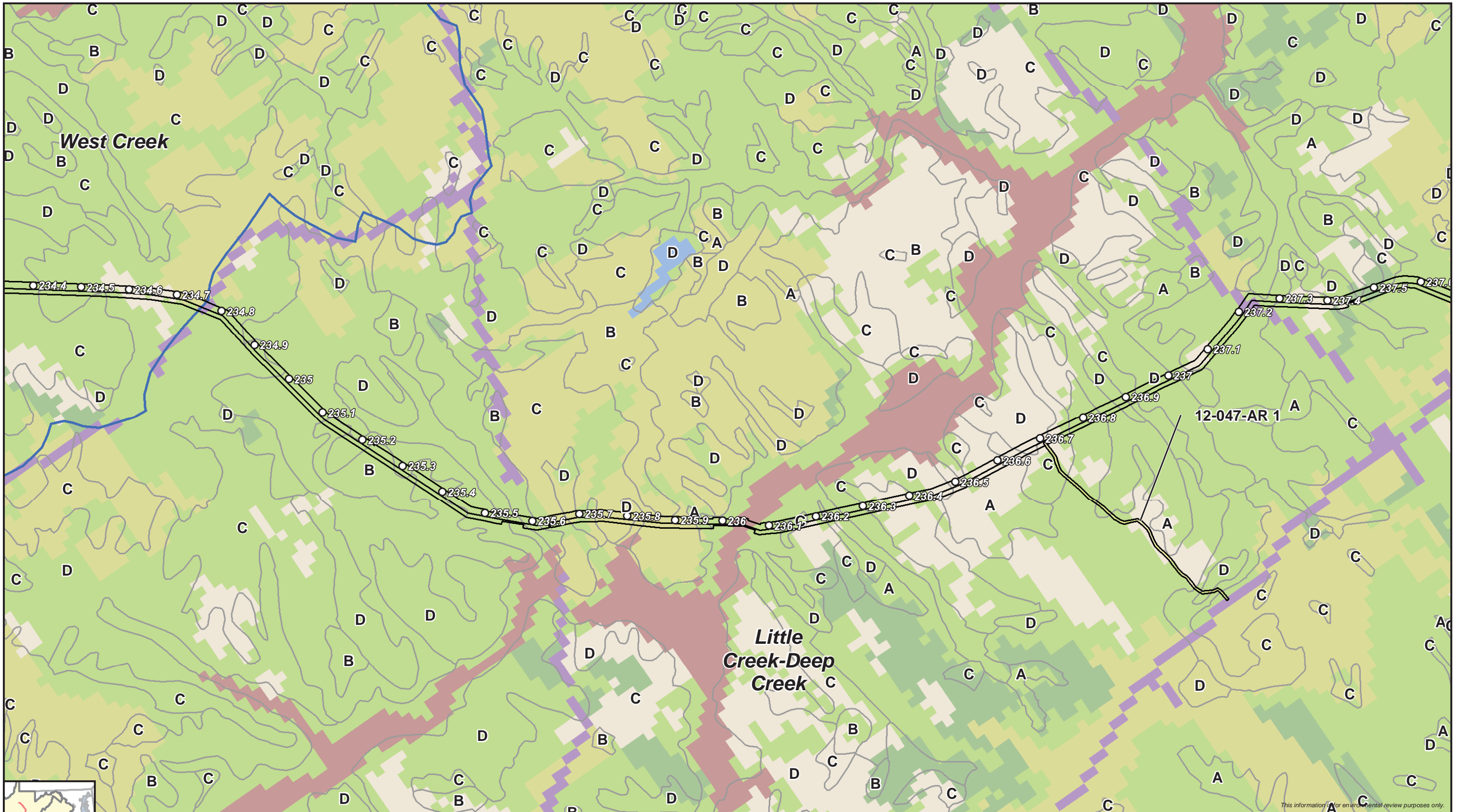
○ Milepost	Land Cover	Forest	Wetlands
□ PCSM Analysis Workspaces	Agriculture	Grassland	
□ HUC-12 Watershed	Barren Land	Gravel	
□ Hydrologic Soil Group	Developed, Low Intensity	Open Water	
	Developed, Open Space	Shrub	



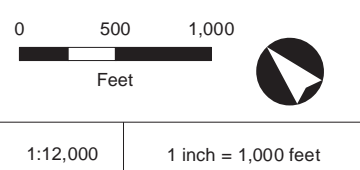
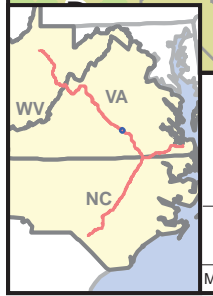
Virginia
Water Quality
 Pre-Development Conditions



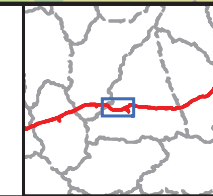
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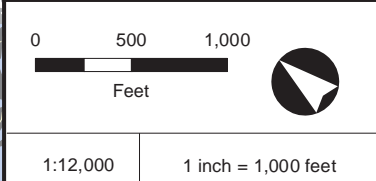
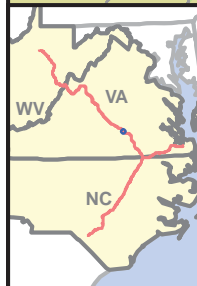


○ Milepost	Land Cover	Gravel
□ PCSI Analysis Workspaces	Agriculture	Open Water
□ HUC-12 Watershed	Developed, Open Space	Shrub
□ Hydrologic Soil Group	Forest	Wetlands
	Grassland	



Virginia
Water Quality
 Pre-Development Conditions





○ Milepost	Land Cover	■ Open Water
□ PCSM Analysis Workspaces	■ Agriculture	■ Shrub
■ HUC-12 Watershed	■ Developed, Open Space	■ Wetlands
■ Hydrologic Soil Group	■ Forest	
	■ Grassland	



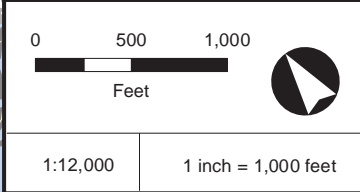
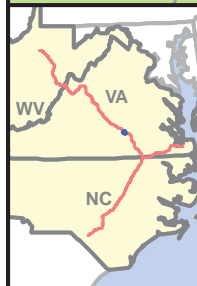
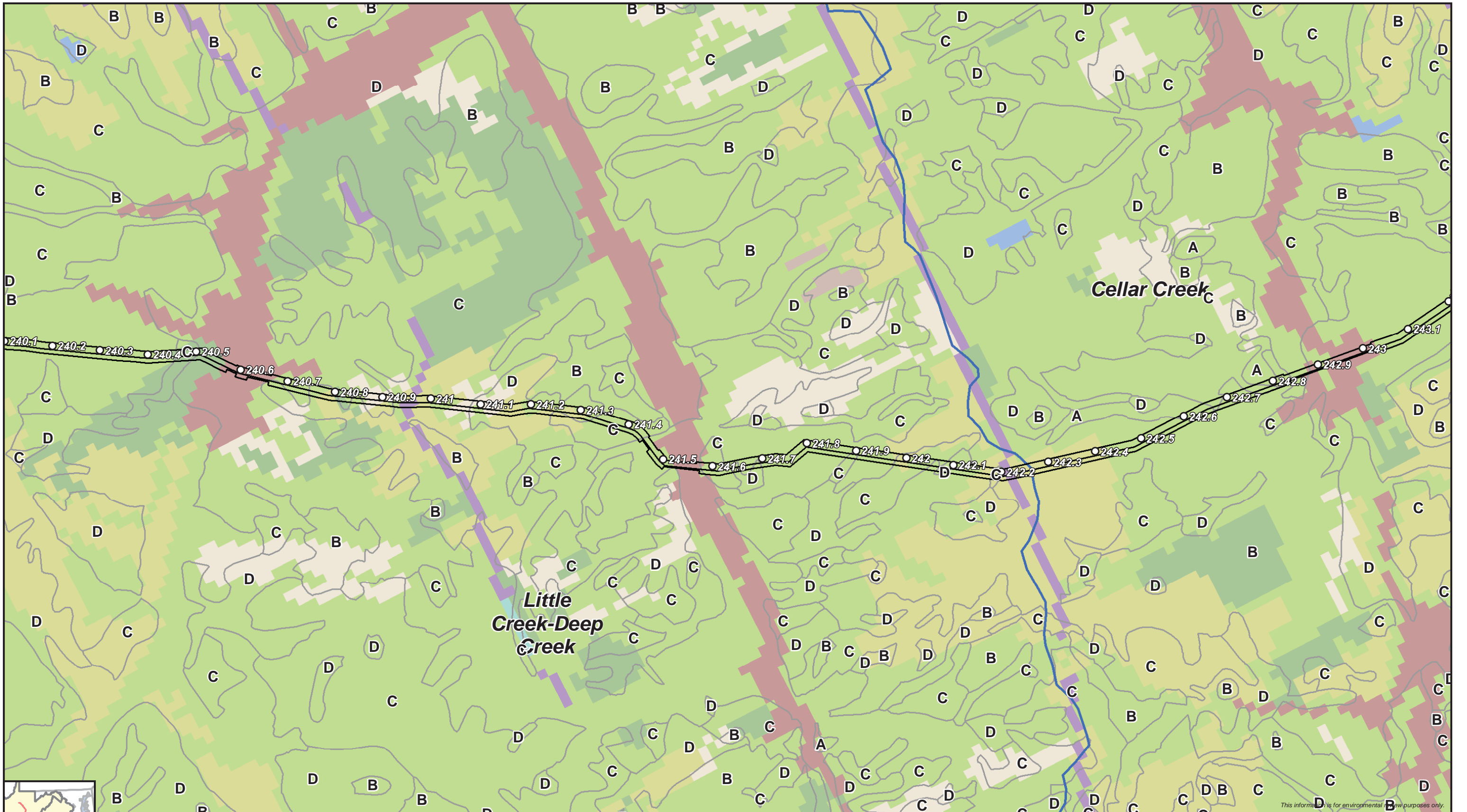
Atlantic Coast Pipeline

Virginia Water Quality
Pre-Development Conditions

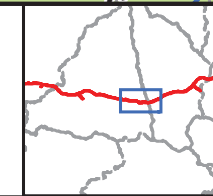


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This information is for environmental review purposes only.



○ Milepost	Land Cover	Forest
□ PCSI Analysis Workspaces	Agriculture	Grassland
□ HUC-12 Watershed	Barren Land	Open Water
□ Hydrologic Soil Group	Developed, Low Intensity	Shrub
	Developed, Open Space	Wetlands



Atlantic Coast Pipeline

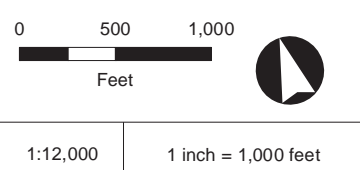
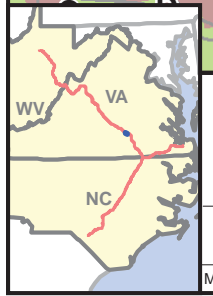
Virginia Water Quality Pre-Development Conditions



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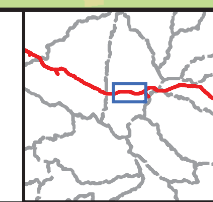


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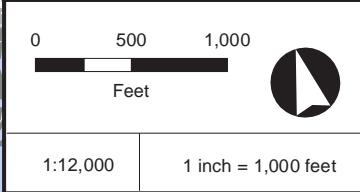
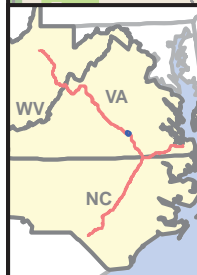
- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Barren Land
 - Developed, Open Space
 - Forest
 - Grassland
 - Gravel
 - Open Water
 - Shrub
 - Wetlands

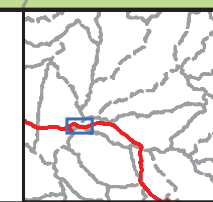


Virginia Water Quality
Pre-Development Conditions





○ Milepost	Land Cover	Grassland
□ PCSM Analysis Workspaces	Agriculture	Gravel
□ HUC-12 Watershed	Developed, Low Intensity	Open Water
□ Hydrologic Soil Group	Developed, Open Space	Shrub
	Forest	Wetlands



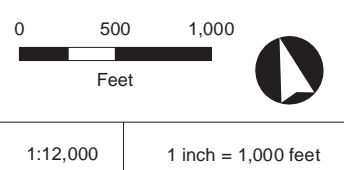
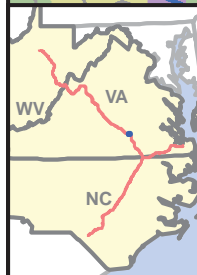
Atlantic Coast Pipeline

Virginia Water Quality
Pre-Development Conditions

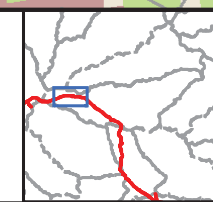




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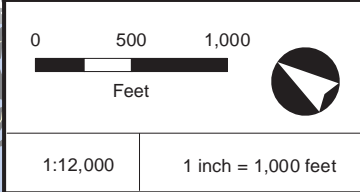
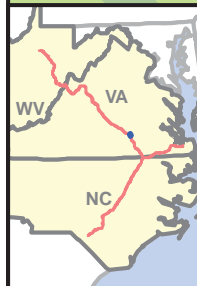
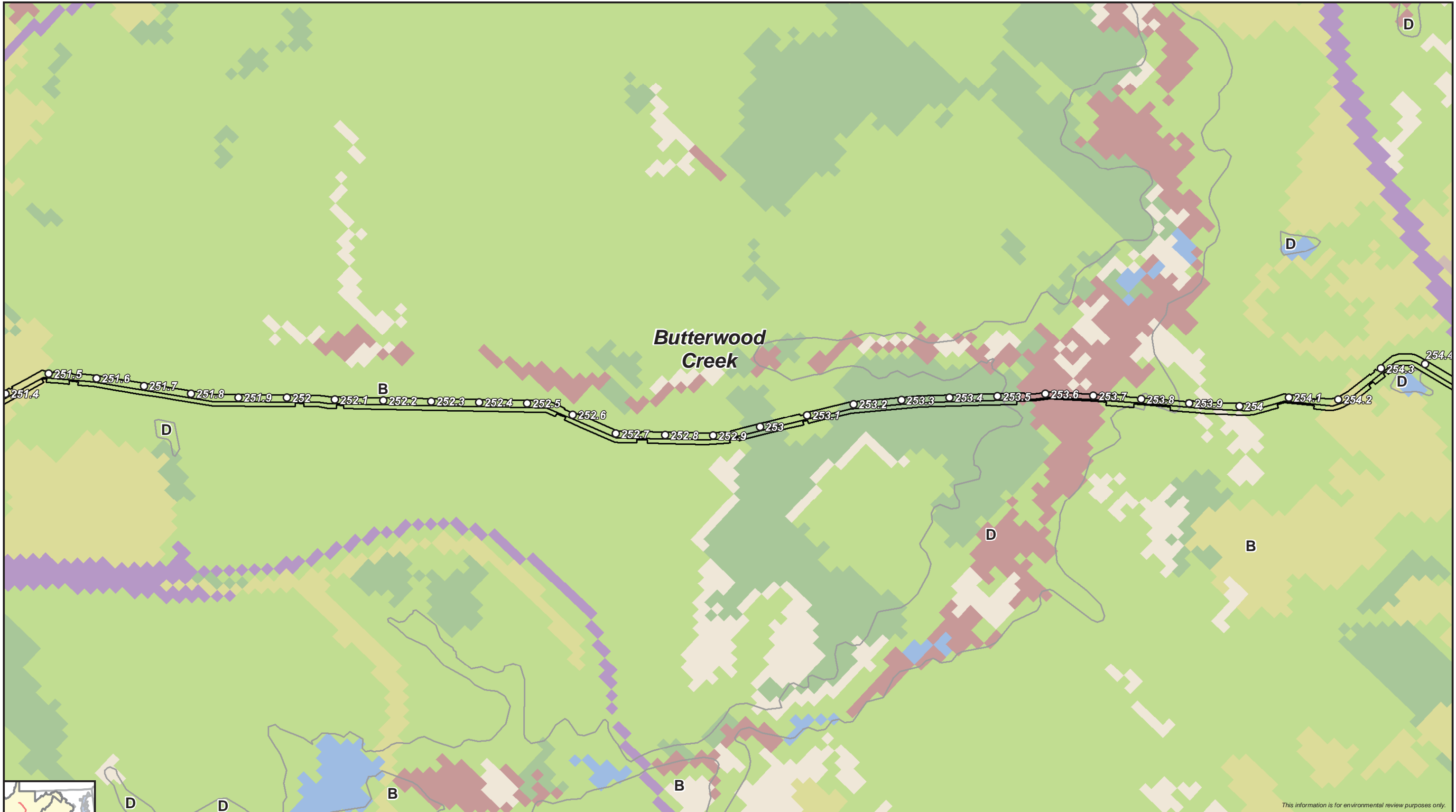
○ Milepost	Land Cover	Forest	Wetlands
□ PCSI Analysis Workspaces	■ Agriculture	■ Grassland	
■ HUC-12 Watershed	■ Barren Land	■ Gravel	
■ Hydrologic Soil Group	■ Developed, Low Intensity	■ Open Water	
	■ Developed, Open Space	■ Shrub	



Virginia Water Quality
Pre-Development Conditions

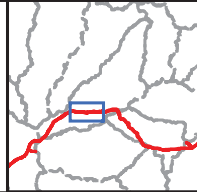


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- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

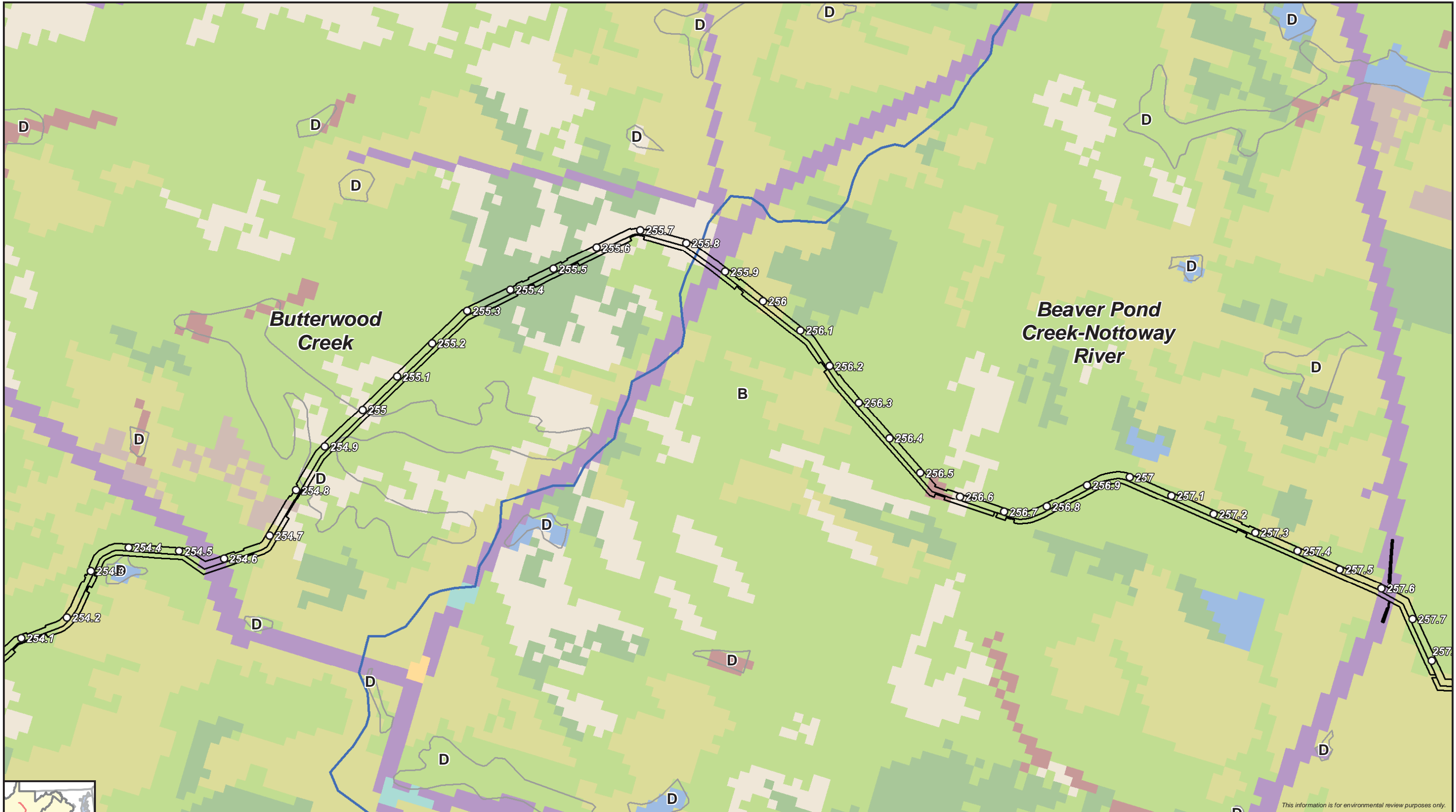
- Land Cover**
- Agriculture
 - Barren Land
 - Developed, Open Space
 - Forest
 - Grassland
 - Open Water
 - Shrub
 - Wetlands



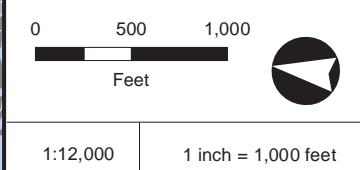
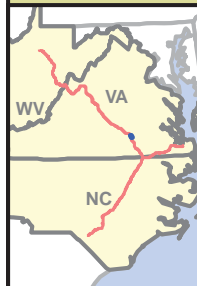
Atlantic Coast Pipeline

Virginia Water Quality
Pre-Development Conditions

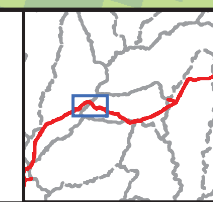




This information is for environmental review purposes only.



○ Milepost	Land Cover	Developed, Open Space	Wetlands
□ PCSM Analysis Workspaces	Agriculture	Forest	
□ HUC-12 Watershed	Barren Land	Grassland	
□ Hydrologic Soil Group	Developed, Low Intensity	Open Water	
	Developed, Medium Intensity	Shrub	

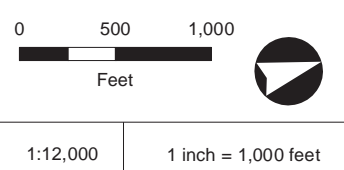


Virginia Water Quality
Pre-Development Conditions

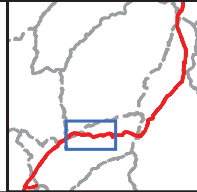




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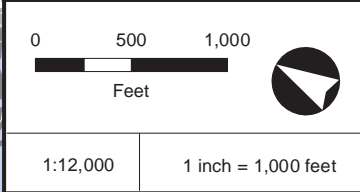
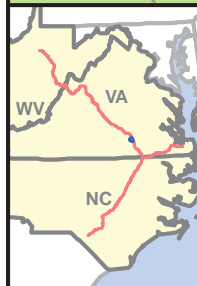


○ Milepost	Land Cover	Forest
□ PCSI Analysis Workspaces	Agriculture	Grassland
□ HUC-12 Watershed	Barren Land	Open Water
□ Hydrologic Soil Group	Developed, Medium Intensity	Shrub
	Developed, Open Space	Wetlands



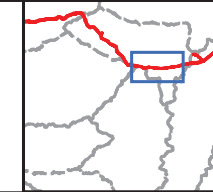
Virginia
Water Quality
 Pre-Development Conditions





- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

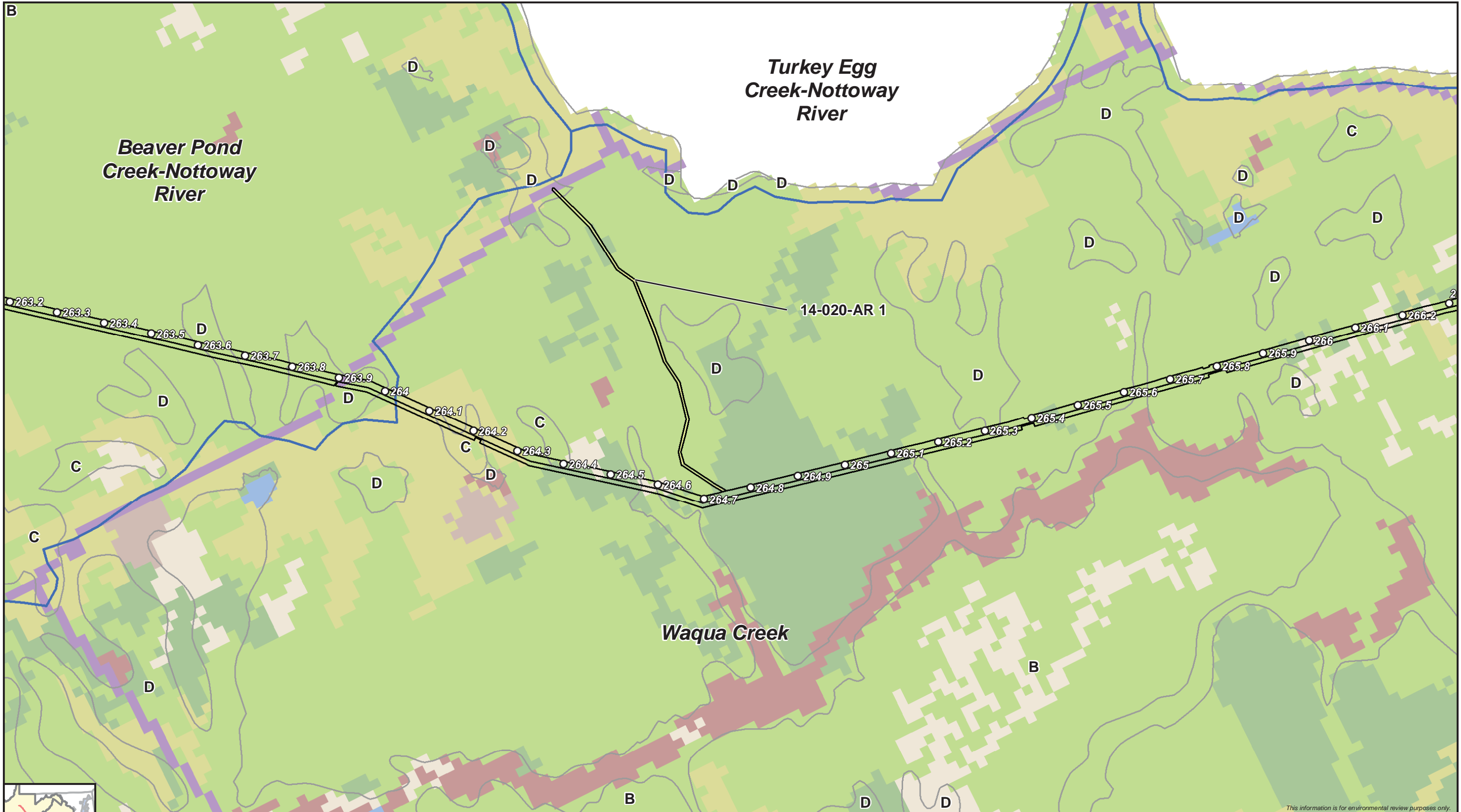
- Land Cover**
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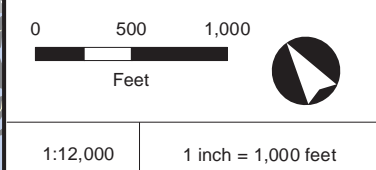
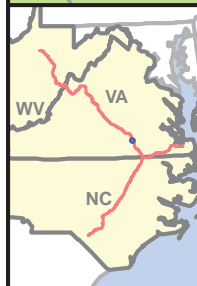
Virginia Water Quality
Pre-Development Conditions



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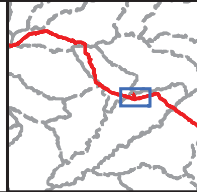


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- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Barren Land
 - Developed, Open Space
 - Forest
 - Grassland
 - Gravel
 - Open Water
 - Shrub
 - Wetlands



Atlantic Coast Pipeline

Virginia Water Quality
Pre-Development Conditions



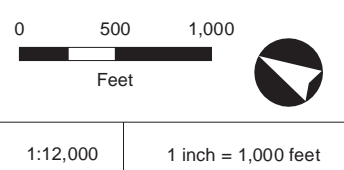
**Turkey Egg
Creek-Nottoway
River**



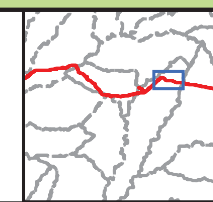
Waqua Creek

**Sturgeon
Creek**

This information is for environmental review purposes only.



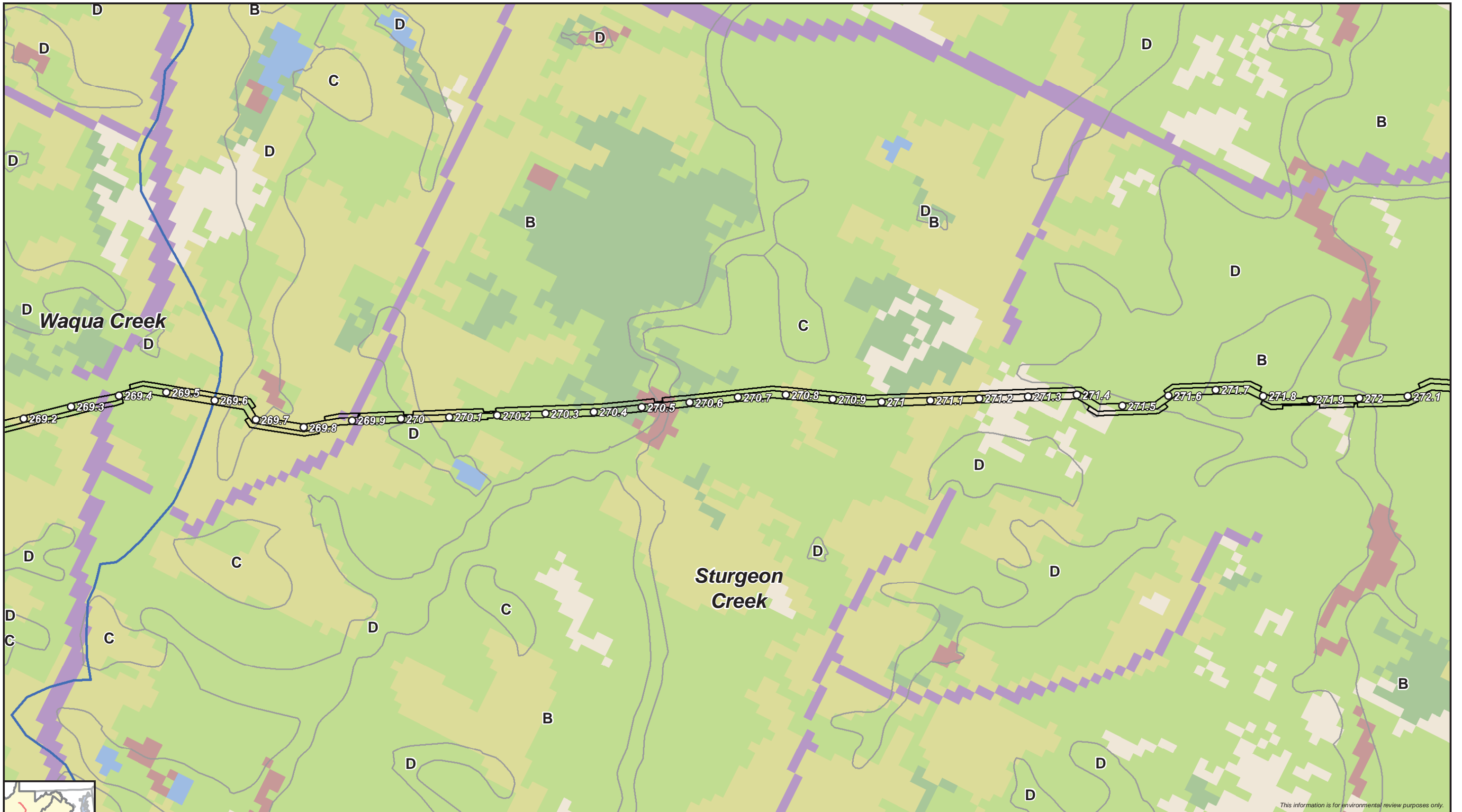
○ Milepost	Land Cover	Grassland
□ PCSM Analysis Workspaces	Agriculture	Open Water
□ HUC-12 Watershed	Developed, Low Intensity	Shrub
□ Hydrologic Soil Group	Developed, Open Space	Wetlands
	Forest	



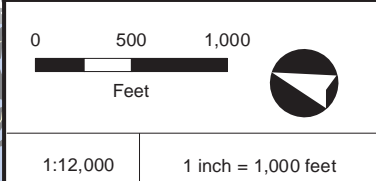
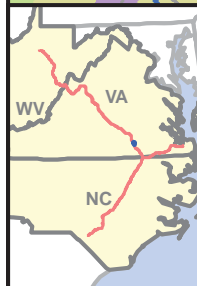
**Atlantic
Coast
Pipeline**

**Virginia
Water Quality
Pre-Development Conditions**

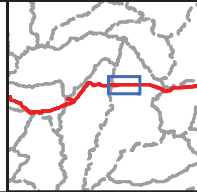




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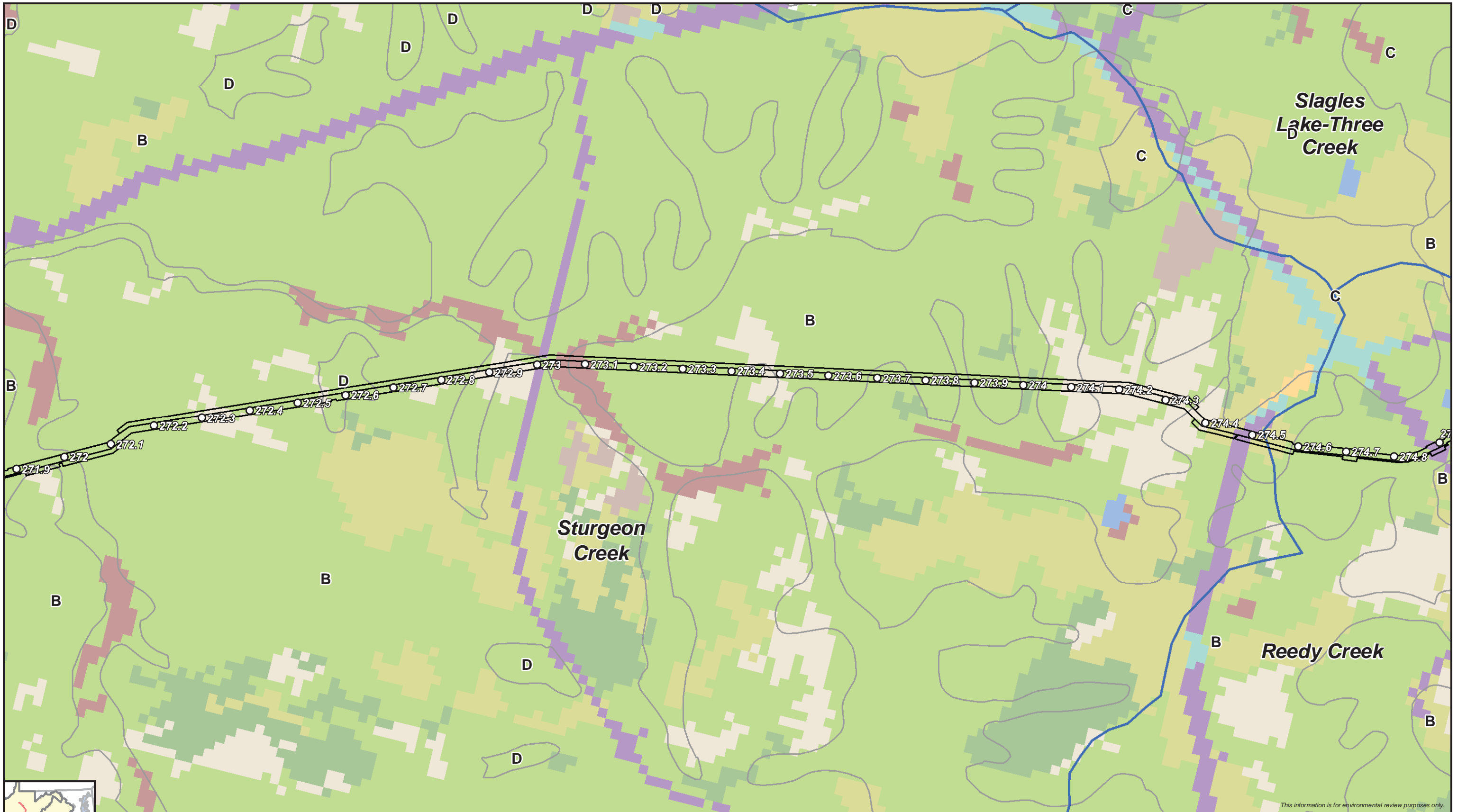


○ Milepost	Land Cover	■ Open Water
□ PCSI Analysis Workspaces	■ Agriculture	■ Shrub
■ HUC-12 Watershed	■ Developed, Open Space	■ Wetlands
■ Hydrologic Soil Group	■ Forest	
	■ Grassland	

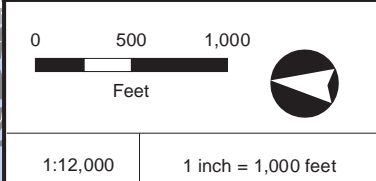
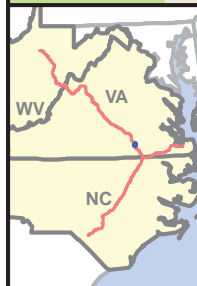


Virginia Water Quality
Pre-Development Conditions



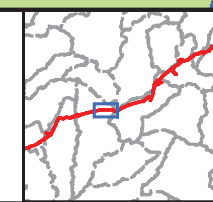


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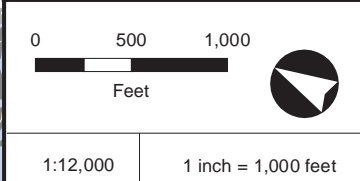
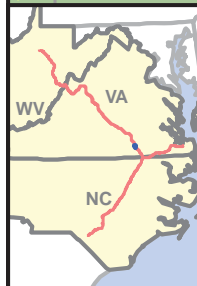
- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Barren Land
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Open Water
 - Shrub
 - Wetlands



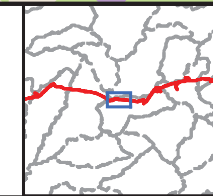
Virginia Water Quality
Pre-Development Conditions





- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

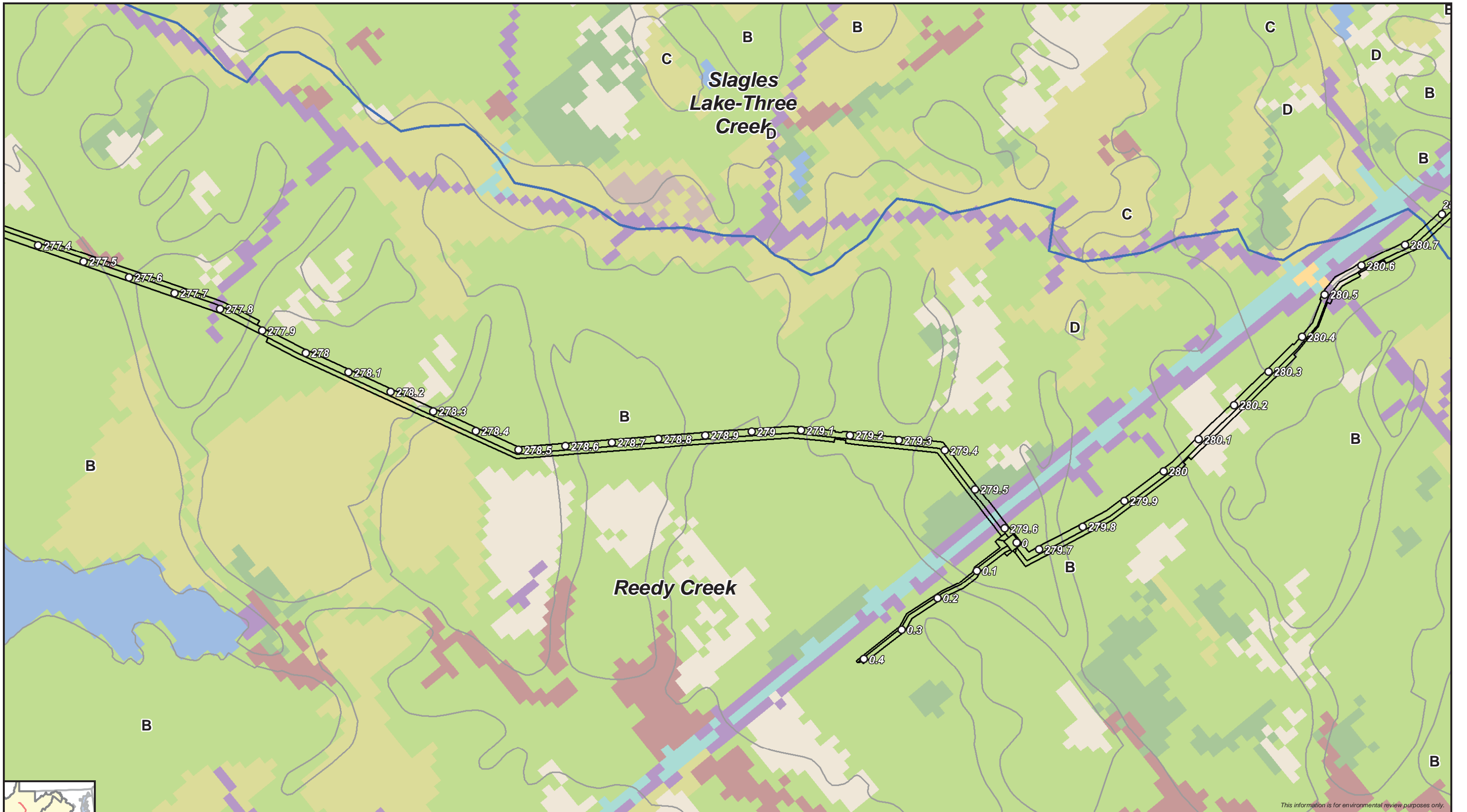
- Land Cover**
- Agriculture
 - Barren Land
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Open Water
 - Shrub
 - Wetlands



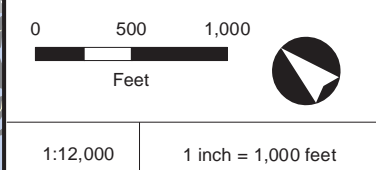
Virginia Water Quality
Pre-Development Conditions



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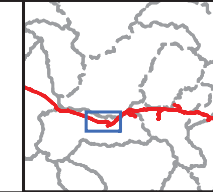


This information is for environmental review purposes only.



- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

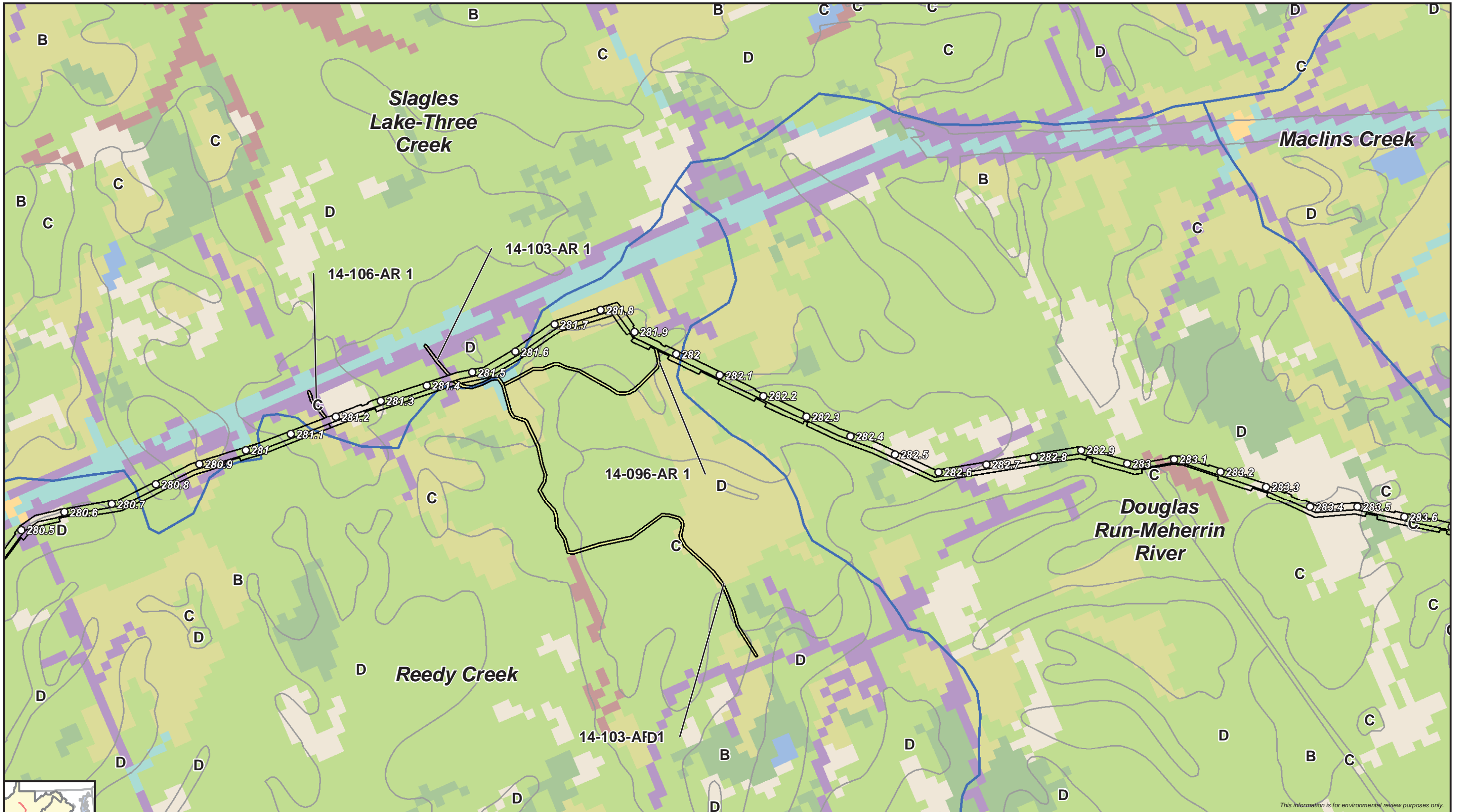
- Land Cover**
- Agriculture
 - Barren Land
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Open Water
 - Shrub
 - Wetlands



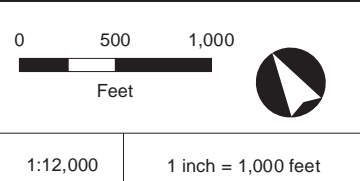
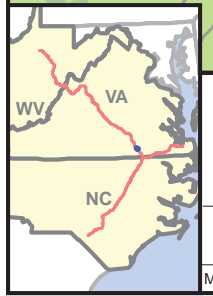
Atlantic Coast Pipeline

Virginia Water Quality Pre-Development Conditions

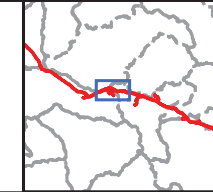




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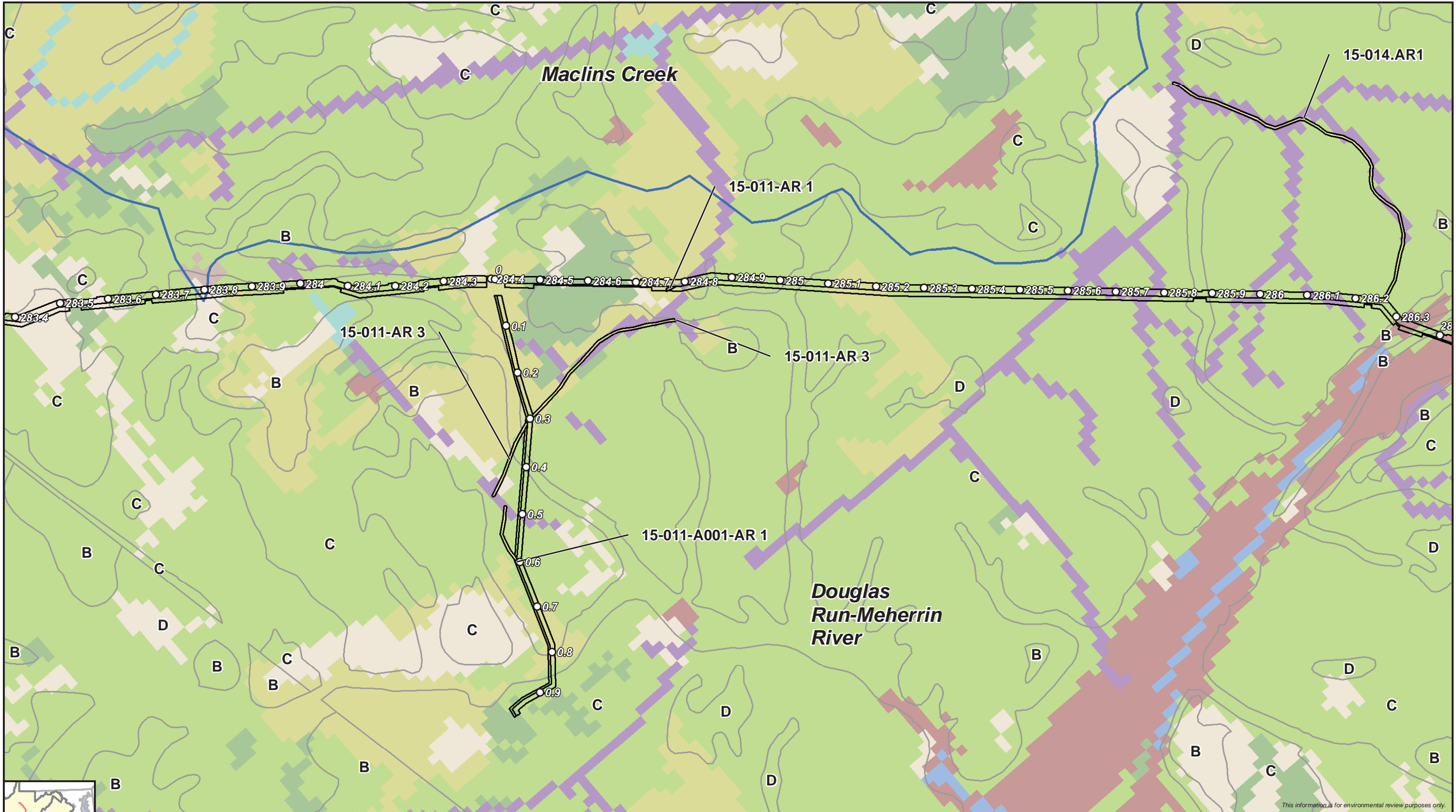


○ Milepost	Land Cover	Forest	Wetlands
□ PCSM Analysis Workspaces	Agriculture	Grassland	
□ HUC-12 Watershed	Developed, Low Intensity	Gravel	
□ Hydrologic Soil Group	Developed, Medium Intensity	Open Water	
	Developed, Open Space	Shrub	

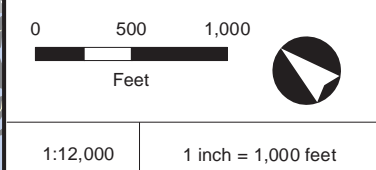


Virginia Water Quality
Pre-Development Conditions

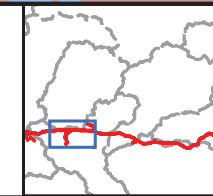




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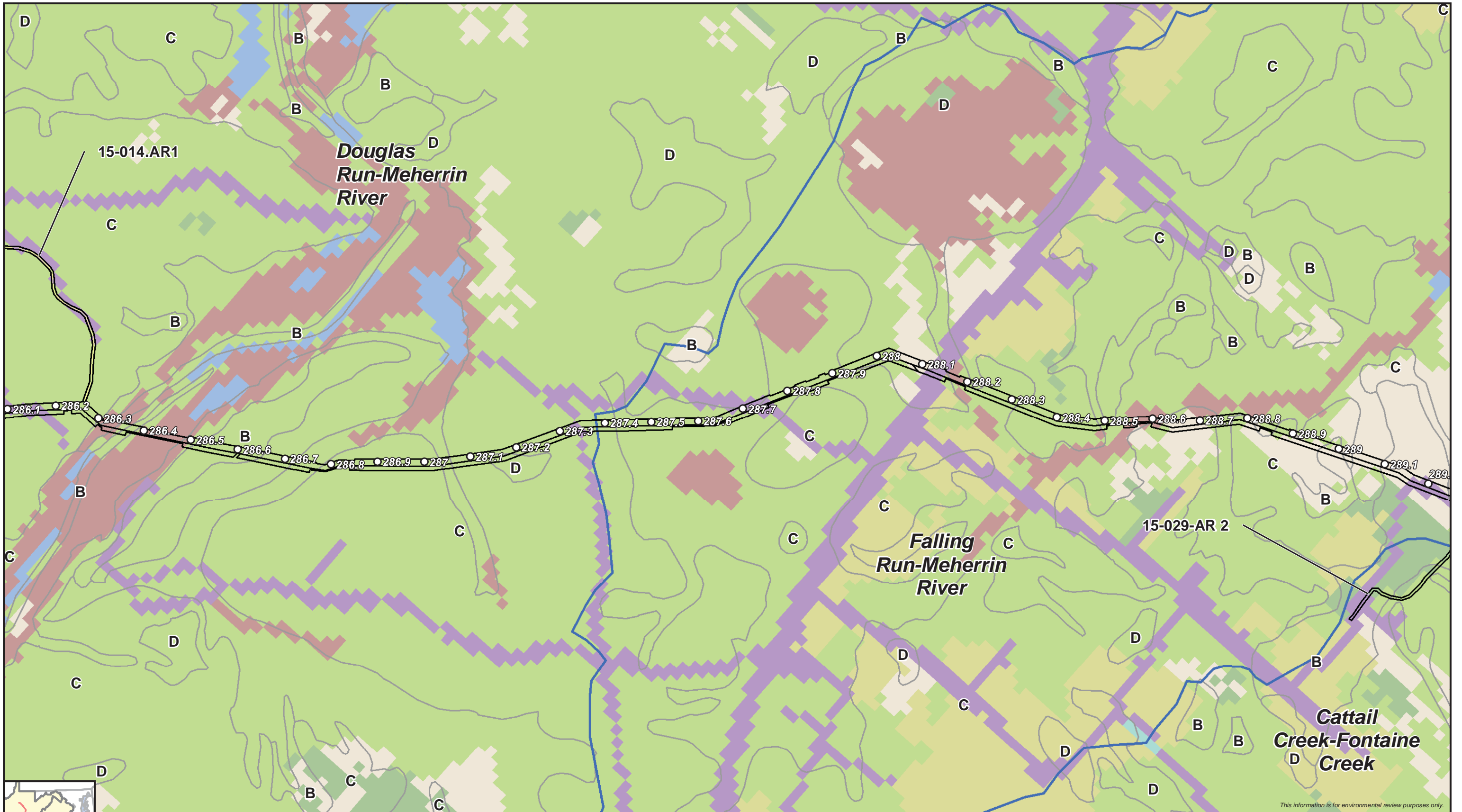


○ Milepost	Land Cover	Forest	Wetlands
□ PCSI Analysis Workspaces	Agriculture	Grassland	
□ HUC-12 Watershed	Barren Land	Gravel	
□ Hydrologic Soil Group	Developed, Low Intensity	Open Water	
	Developed, Open Space	Shrub	

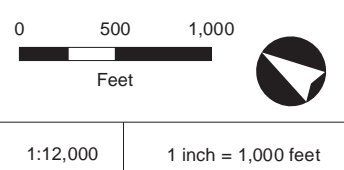


Virginia Water Quality
Pre-Development Conditions

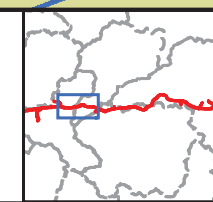




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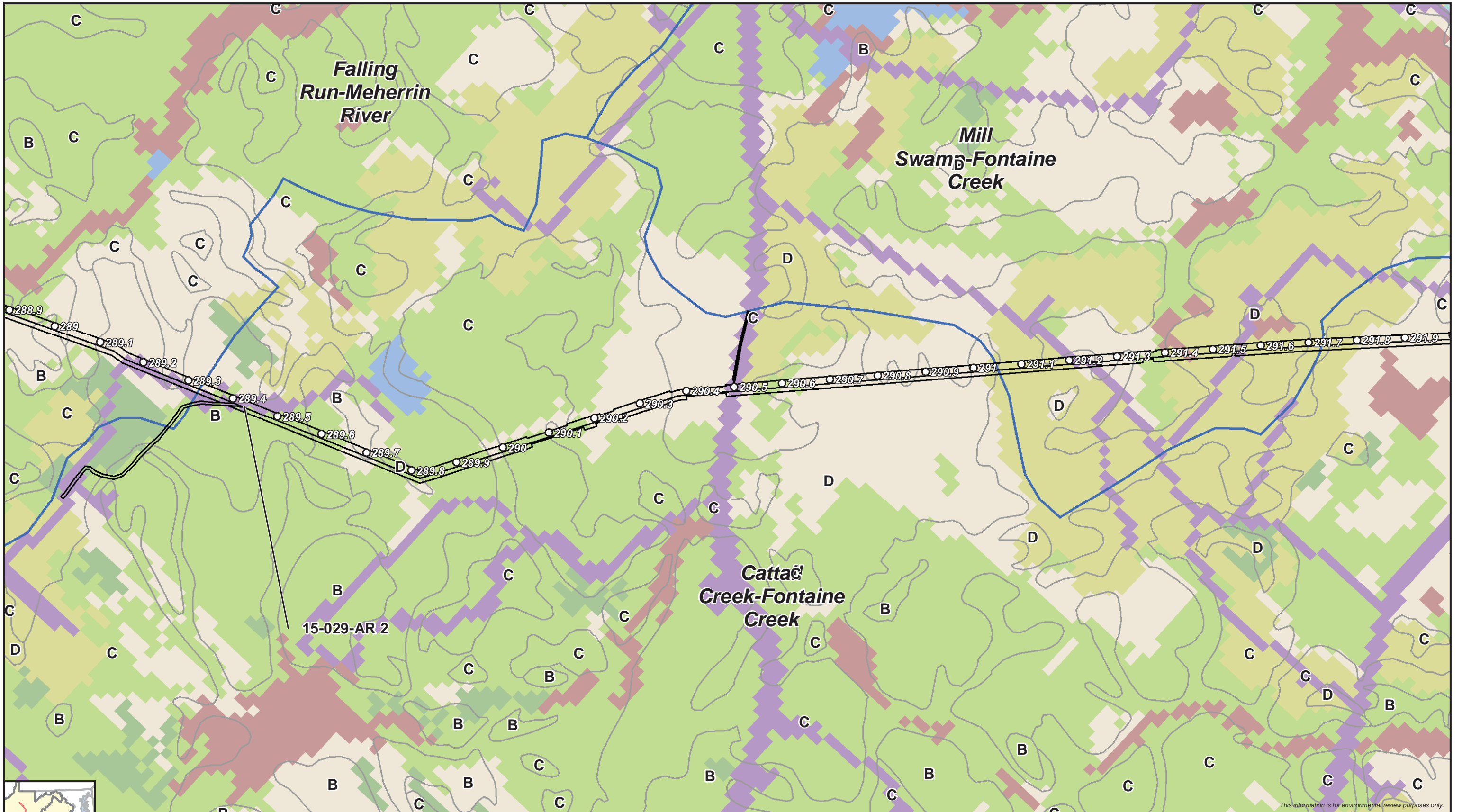


Milepost	Land Cover	Grassland
PCSM Analysis Workspaces	Agriculture	Gravel
HUC-12 Watershed	Developed, Low Intensity	Open Water
Hydrologic Soil Group	Developed, Open Space	Shrub
	Forest	Wetlands

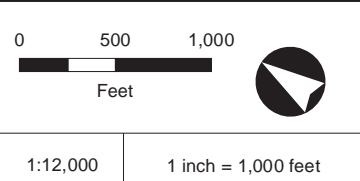
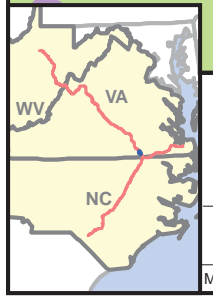


Virginia
Water Quality
Pre-Development Conditions

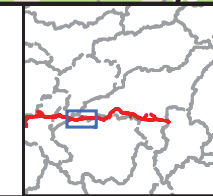




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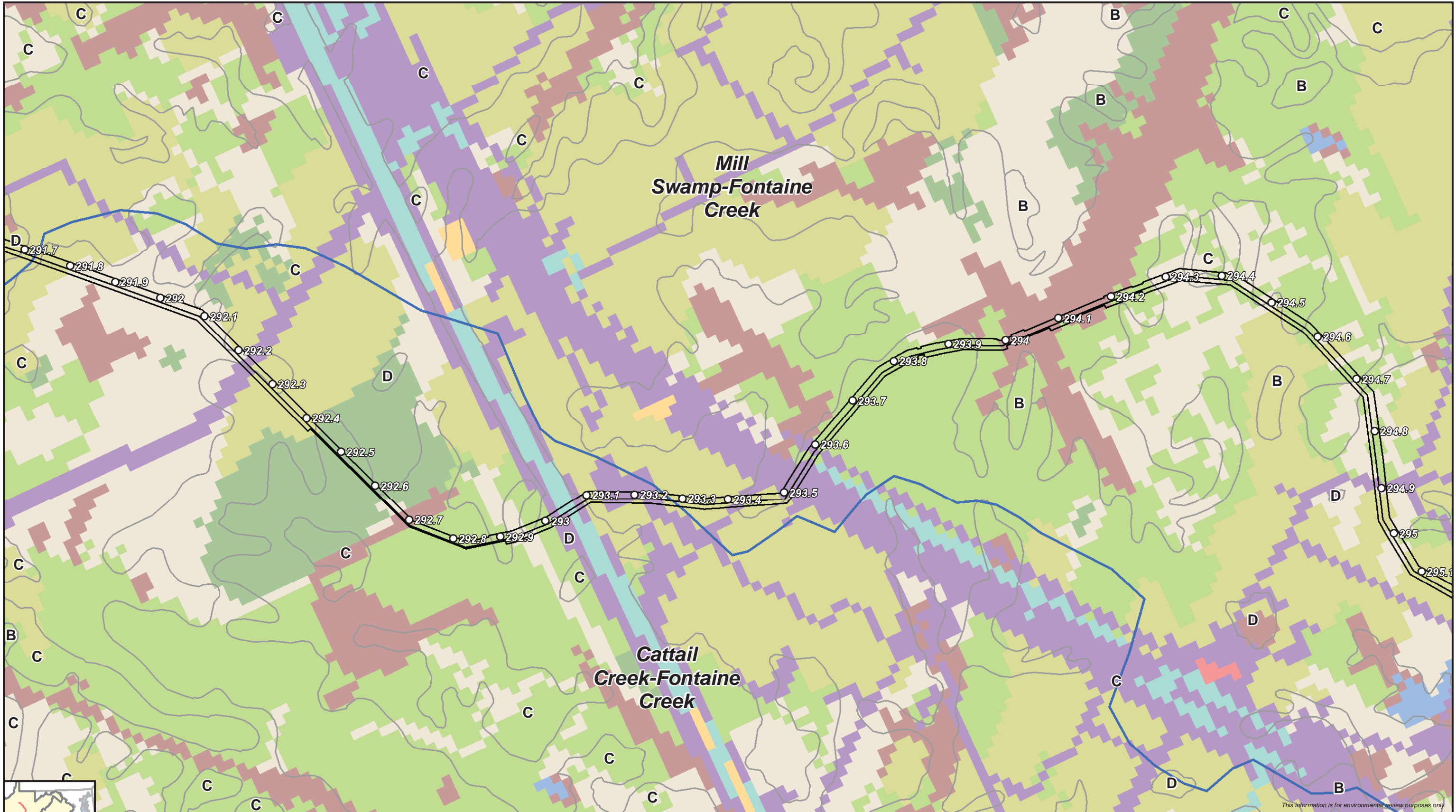
○ Milepost	Land Cover	Forest
□ PCSM Analysis Workspaces	Agriculture	Grassland
□ HUC-12 Watershed	Developed, Low Intensity	Open Water
□ Hydrologic Soil Group	Developed, Medium Intensity	Shrub
	Developed, Open Space	Wetlands



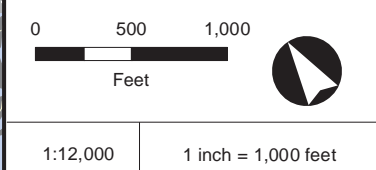
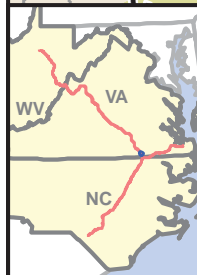
Virginia
Water Quality
Pre-Development Conditions



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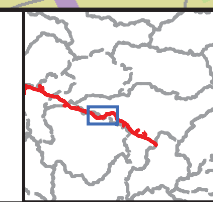


This information is for environmental review purposes only.



- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

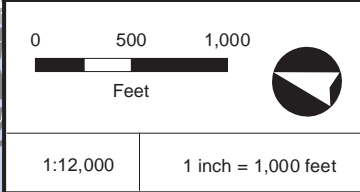
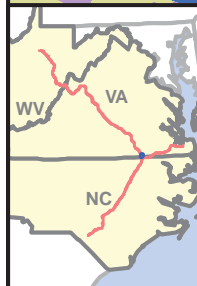
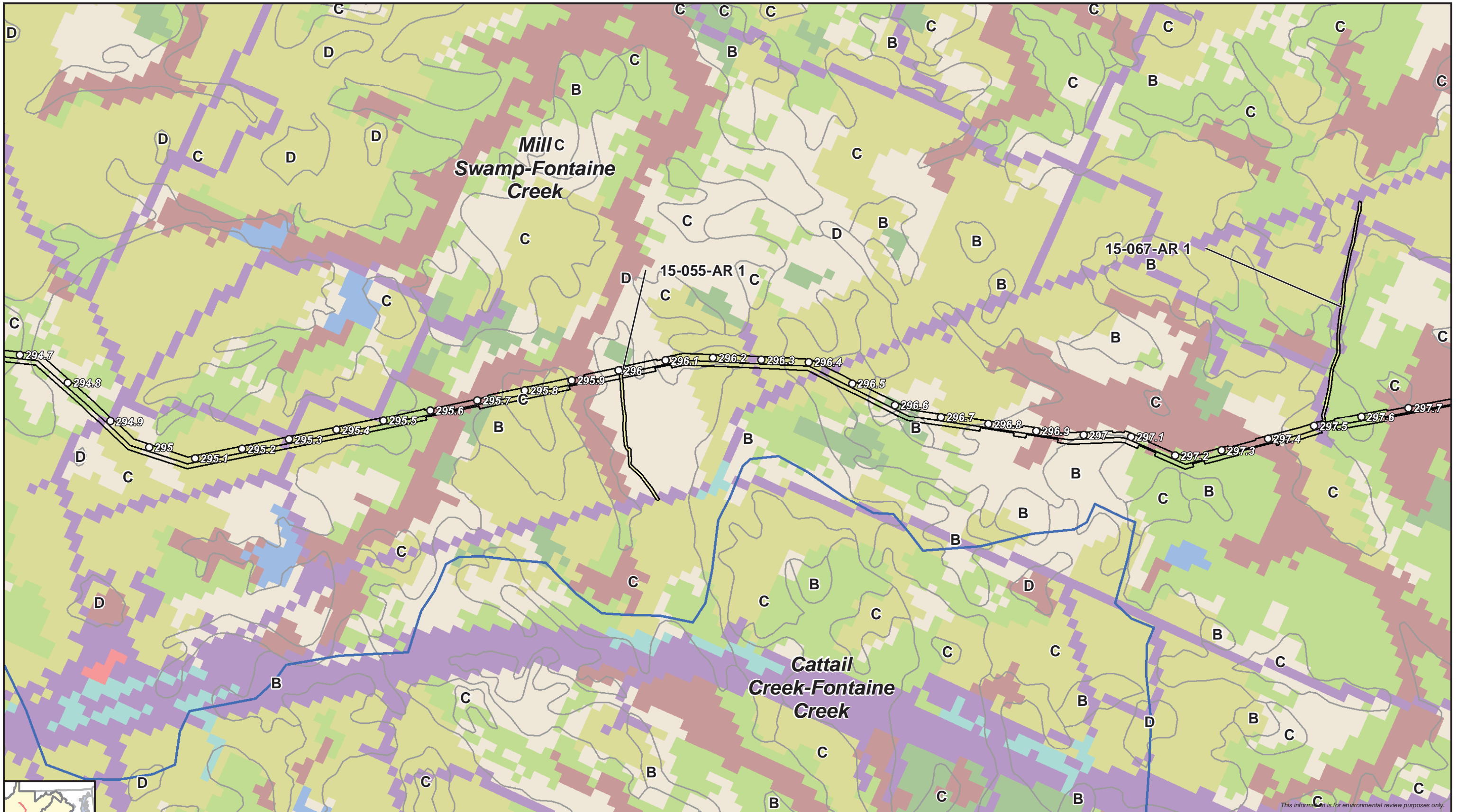
- Land Cover**
- Agriculture
 - Developed, High Intensity
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Open Water
 - Shrub
 - Wetlands



Atlantic Coast Pipeline

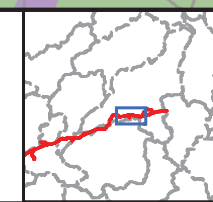
Virginia Water Quality
Pre-Development Conditions





- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Developed, High Intensity
 - Developed, Low Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Gravel
 - Open Water
 - Shrub
 - Wetlands

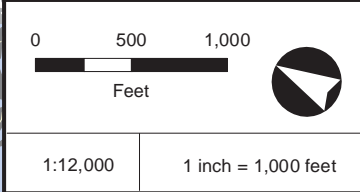


American
Coast
Pipeline

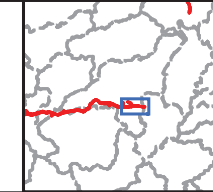
Virginia
Water Quality
Pre-Development Conditions



This information is for environmental review purposes only.



○ Milepost	Land Cover	Grassland
□ PCSM Analysis Workspaces	Agriculture	Gravel
□ HUC-12 Watershed	Developed, High Intensity	Open Water
□ Hydrologic Soil Group	Developed, Open Space	Shrub
— State Boundary	Forest	Wetlands

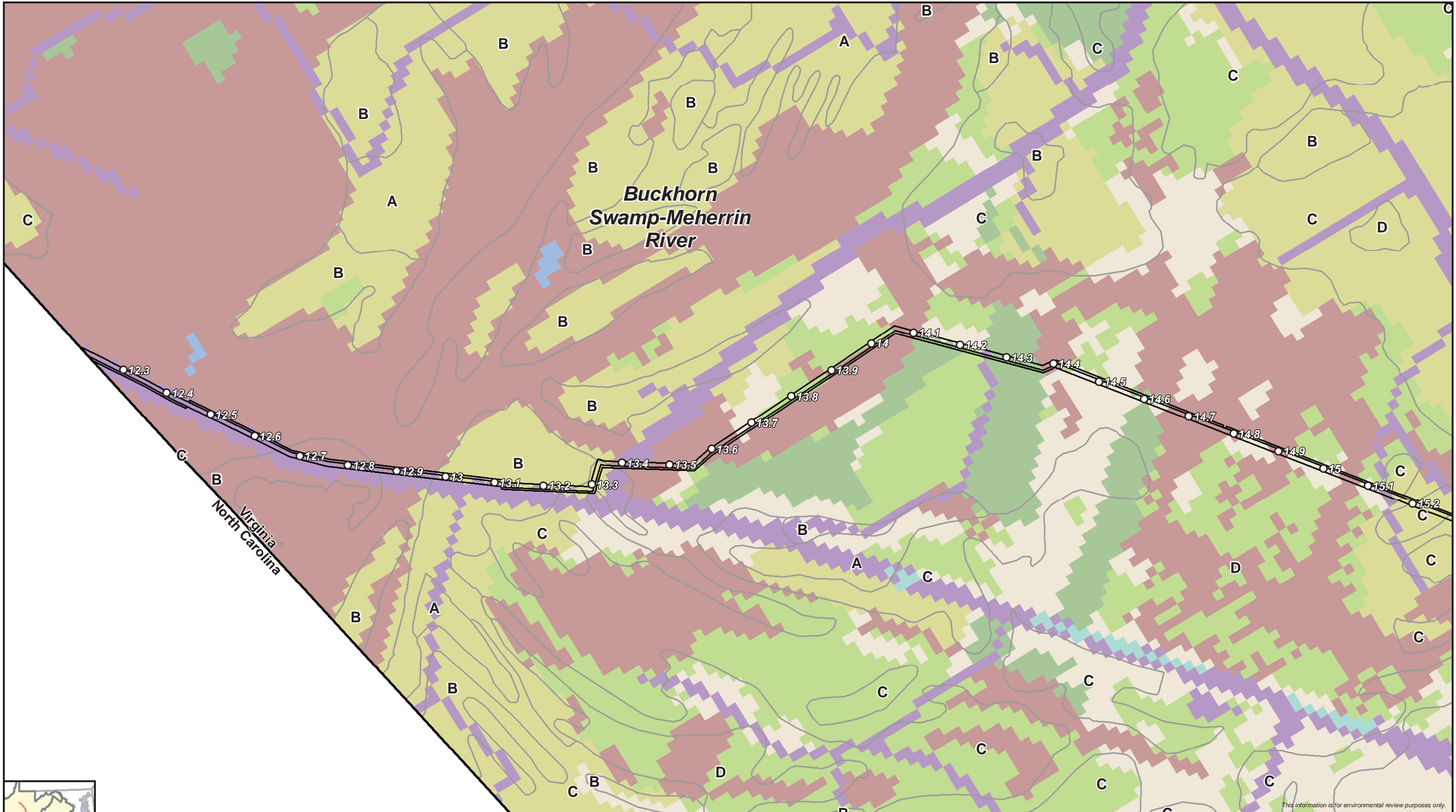


Atlantic Coast Pipeline

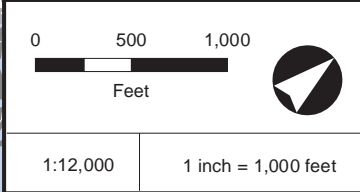
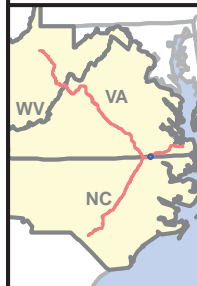
Virginia Water Quality
Pre-Development Conditions



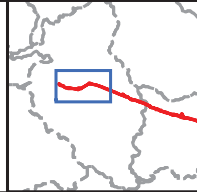
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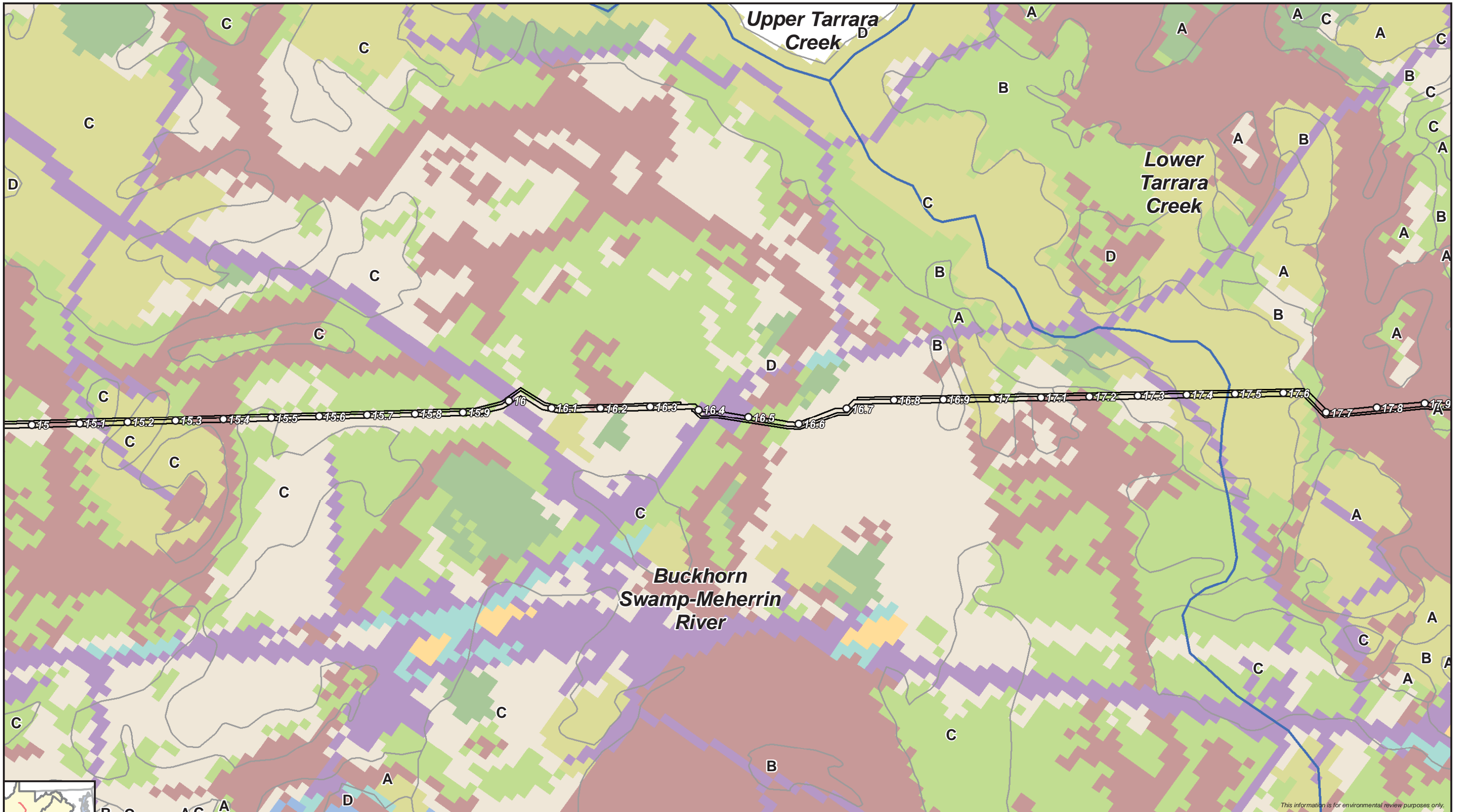
○ Milepost	Land Cover	Grassland
□ PCSI Analysis Workspaces	■ Agriculture	■ Open Water
■ HUC-12 Watershed	■ Developed, Low Intensity	■ Shrub
■ Hydrologic Soil Group	■ Developed, Open Space	■ Wetlands
— State Boundary	■ Forest	



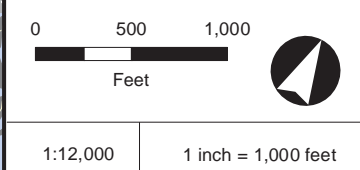
Atlantic Coast Pipeline

Virginia Water Quality Pre-Development Conditions

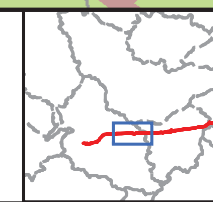




This information is for environmental review purposes only.



Milepost	Forest
PCSM Analysis Workspaces	Grassland
HUC-12 Watershed	Open Water
Hydrologic Soil Group	Shrub
	Wetlands
Agriculture	
Developed, Low Intensity	
Developed, Medium Intensity	
Developed, Open Space	

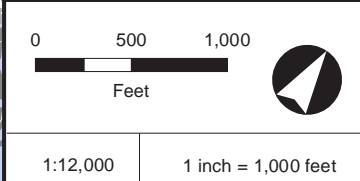
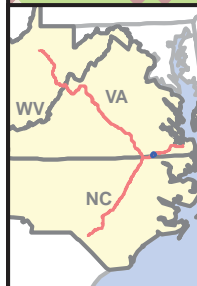


Virginia
Water Quality
Pre-Development Conditions



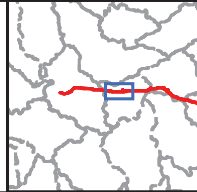


This information is for environmental review purposes only.



- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Developed, High Intensity
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
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 - Open Water
 - Shrub
 - Wetlands



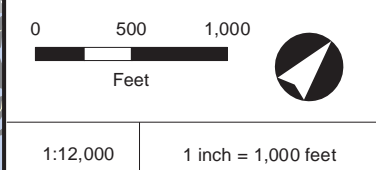
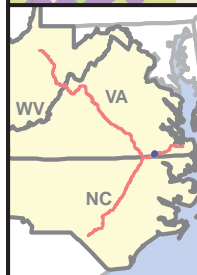
Atlantic Coast Pipeline

Virginia Water Quality Pre-Development Conditions



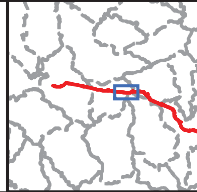


This information is for environmental review purposes only.



- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

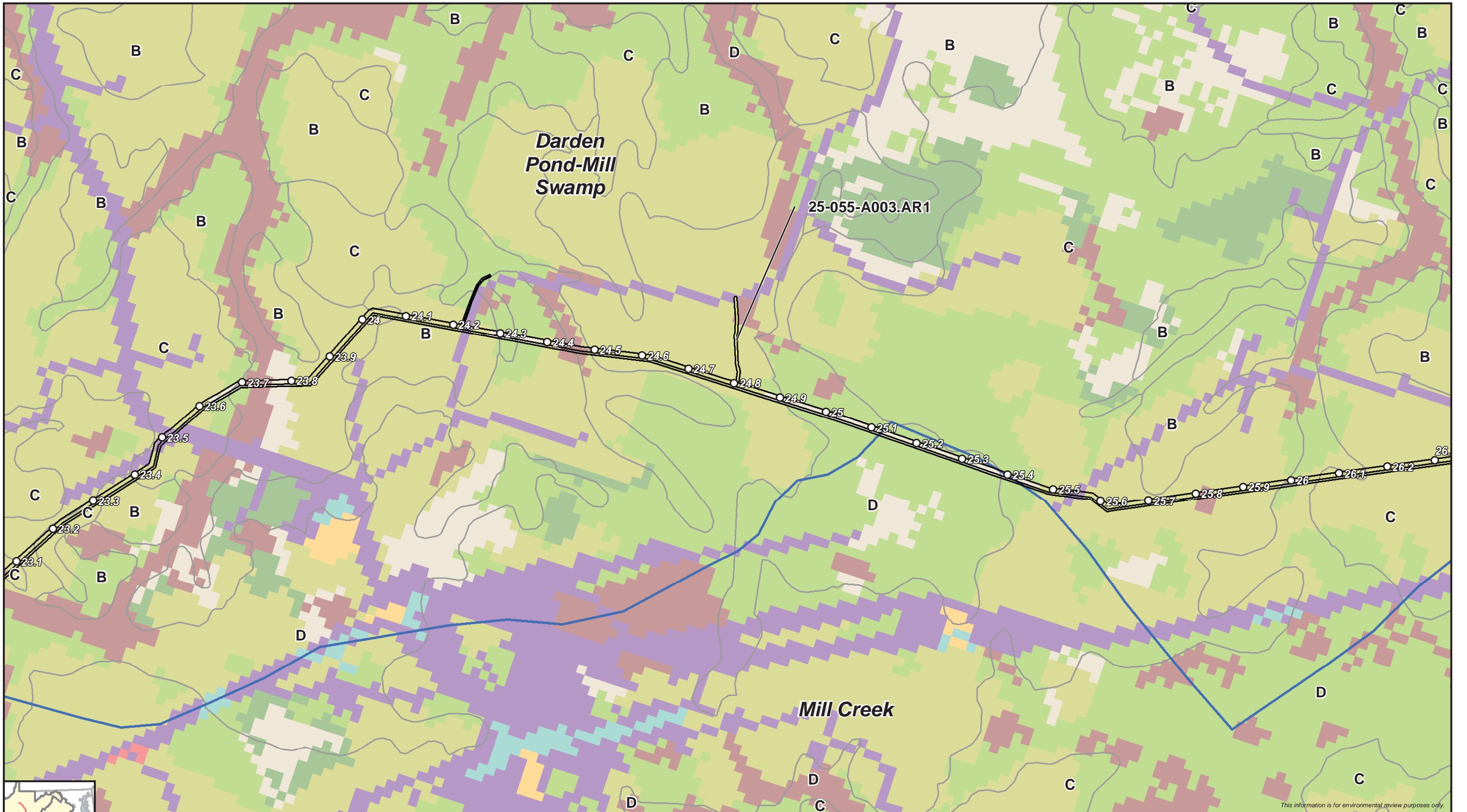
- Land Cover**
- Agriculture
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 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Gravel
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 - Shrub
 - Wetlands



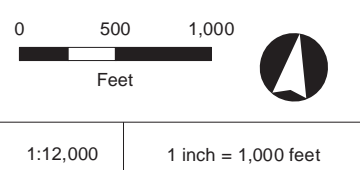
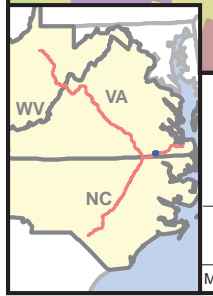
Atlantic Coast Pipeline

Virginia Water Quality Post-Development Conditions

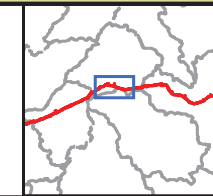




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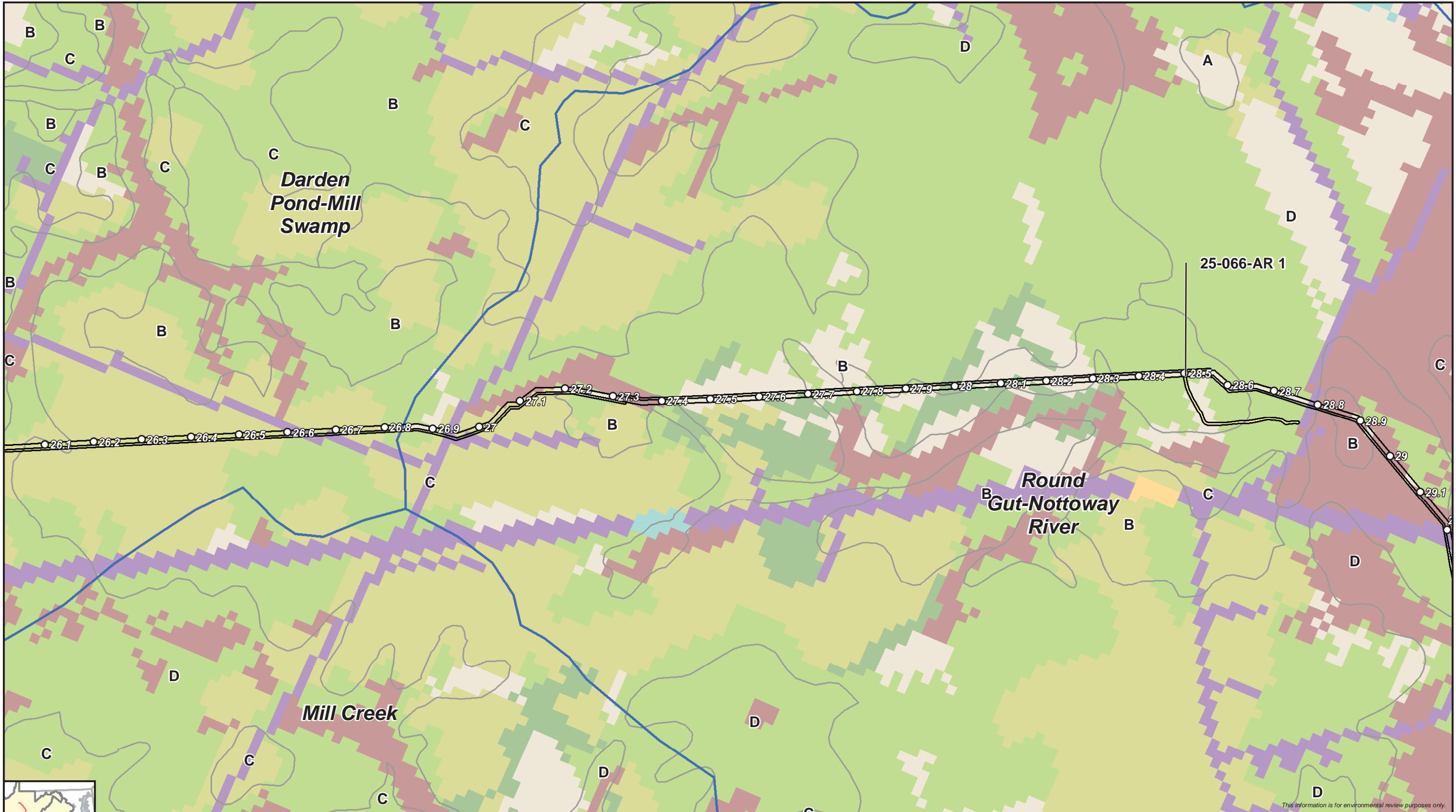


○ Milepost	Land Cover	■ Developed, Open Space	■ Wetlands
□ PCSI Analysis Workspaces	■ Agriculture	■ Forest	
■ HUC-12 Watershed	■ Developed, High Intensity	■ Grassland	
■ Hydrologic Soil Group	■ Developed, Low Intensity	■ Gravel	
	■ Developed, Medium Intensity	■ Shrub	

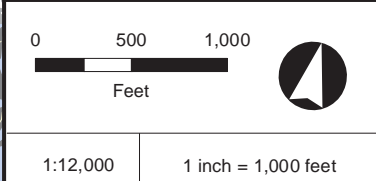
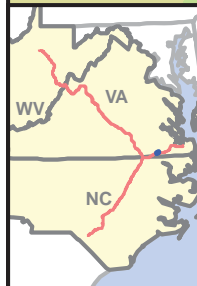


Virginia Water Quality Post-Development Conditions

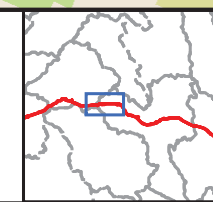




This information is for environmental review purposes only.



○ Milepost	Land Cover	Forest
□ PCSI Analysis Workspaces	Agriculture	Grassland
□ HUC-12 Watershed	Developed, Low Intensity	Gravel
□ Hydrologic Soil Group	Developed, Medium Intensity	Shrub
	Developed, Open Space	Wetlands

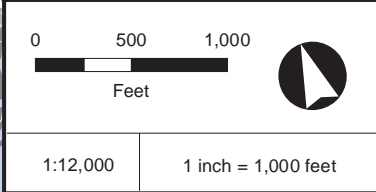
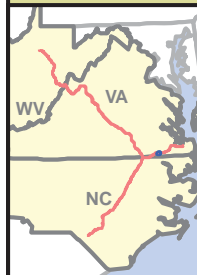


Virginia Water Quality
Post-Development Conditions



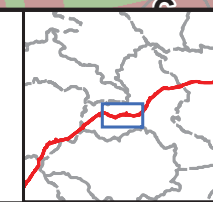


This information is for environmental review purposes only.



- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

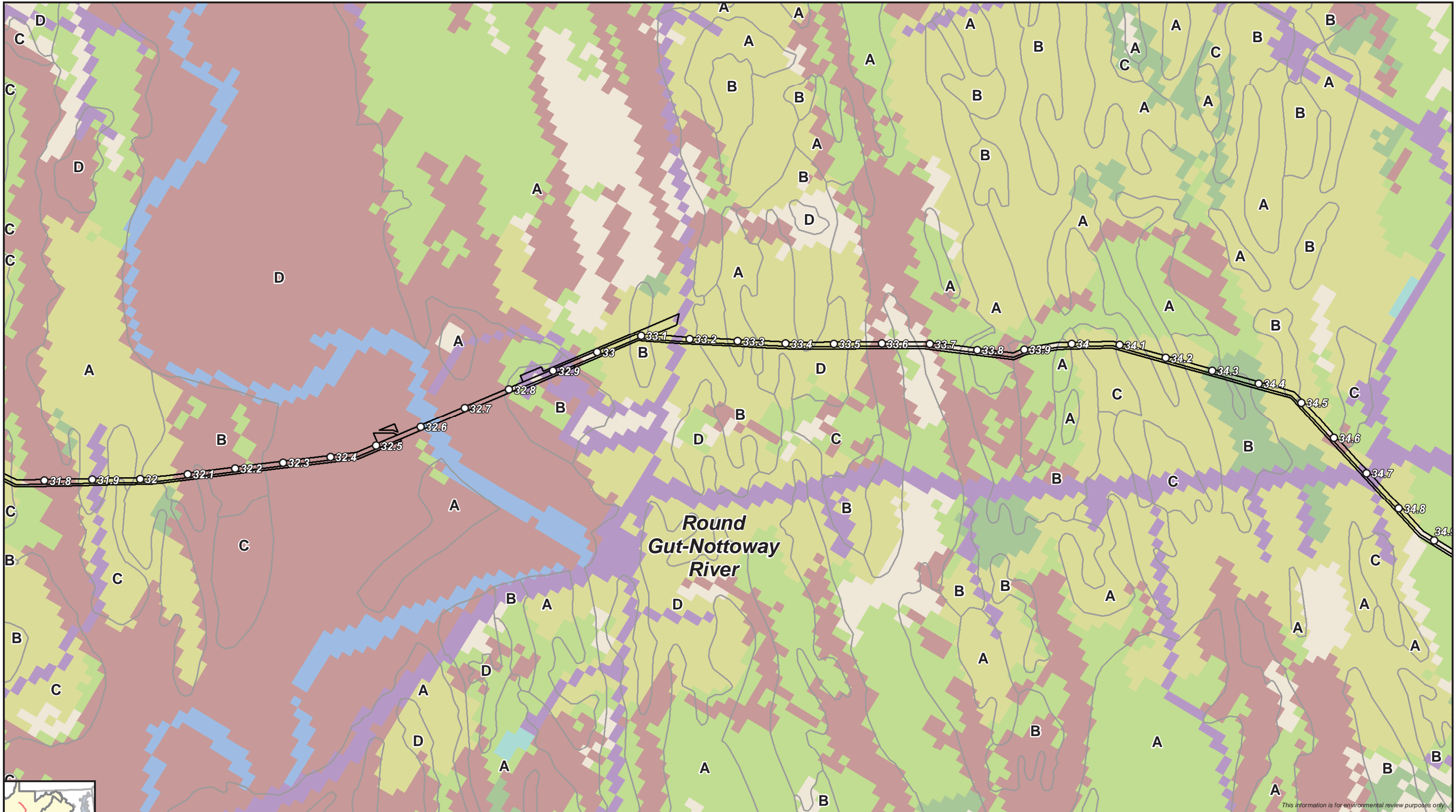
- Land Cover**
- Agriculture
 - Developed, Open Space
 - Forest
 - Grassland
 - Gravel
 - Open Water
 - Shrub
 - Wetlands



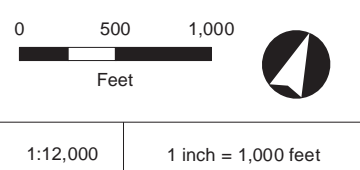
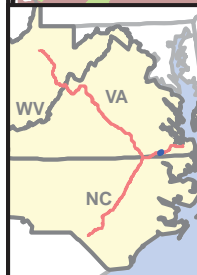
Atlantic Coast Pipeline

Virginia Water Quality Post-Development Conditions

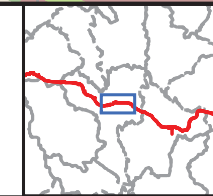




This information is for environmental review purposes only.



○ Milepost	Land Cover	Grassland
□ PCSI Analysis Workspaces	Agriculture	Open Water
□ HUC-12 Watershed	Developed, Low Intensity	Shrub
□ Hydrologic Soil Group	Developed, Open Space	Wetlands
	Forest	

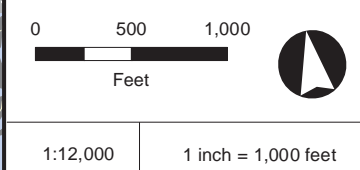


Virginia Water Quality
Post-Development Conditions



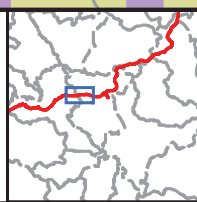


This information is for environmental review purposes only.



- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Developed, Low Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Shrub
 - Wetlands



Atlantic Coast Pipeline

Virginia Water Quality Post-Development Conditions





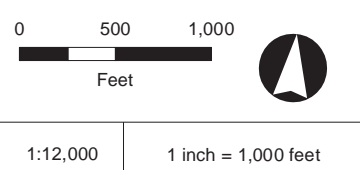
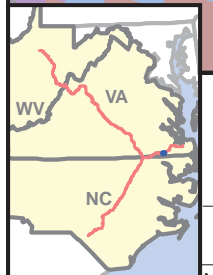
Union Camp Holding Pond-Blackwater River

March Swamp-Somerton Creek

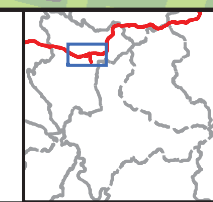
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This information is for environmental review purposes only.



○ Milepost	Land Cover	Forest	Wetlands
□ PCSM Analysis Workspaces	Agriculture	Grassland	
□ HUC-12 Watershed	Developed, Low Intensity	Gravel	
□ Hydrologic Soil Group	Developed, Medium Intensity	Open Water	
	Developed, Open Space	Shrub	



Atlantic Coast Pipeline

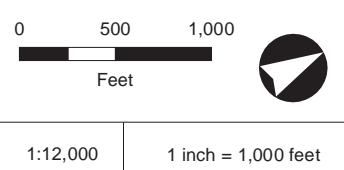
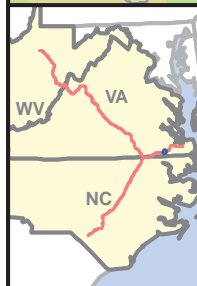
Virginia Water Quality Post-Development Conditions



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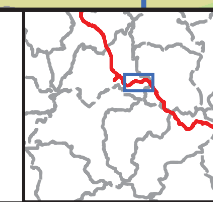


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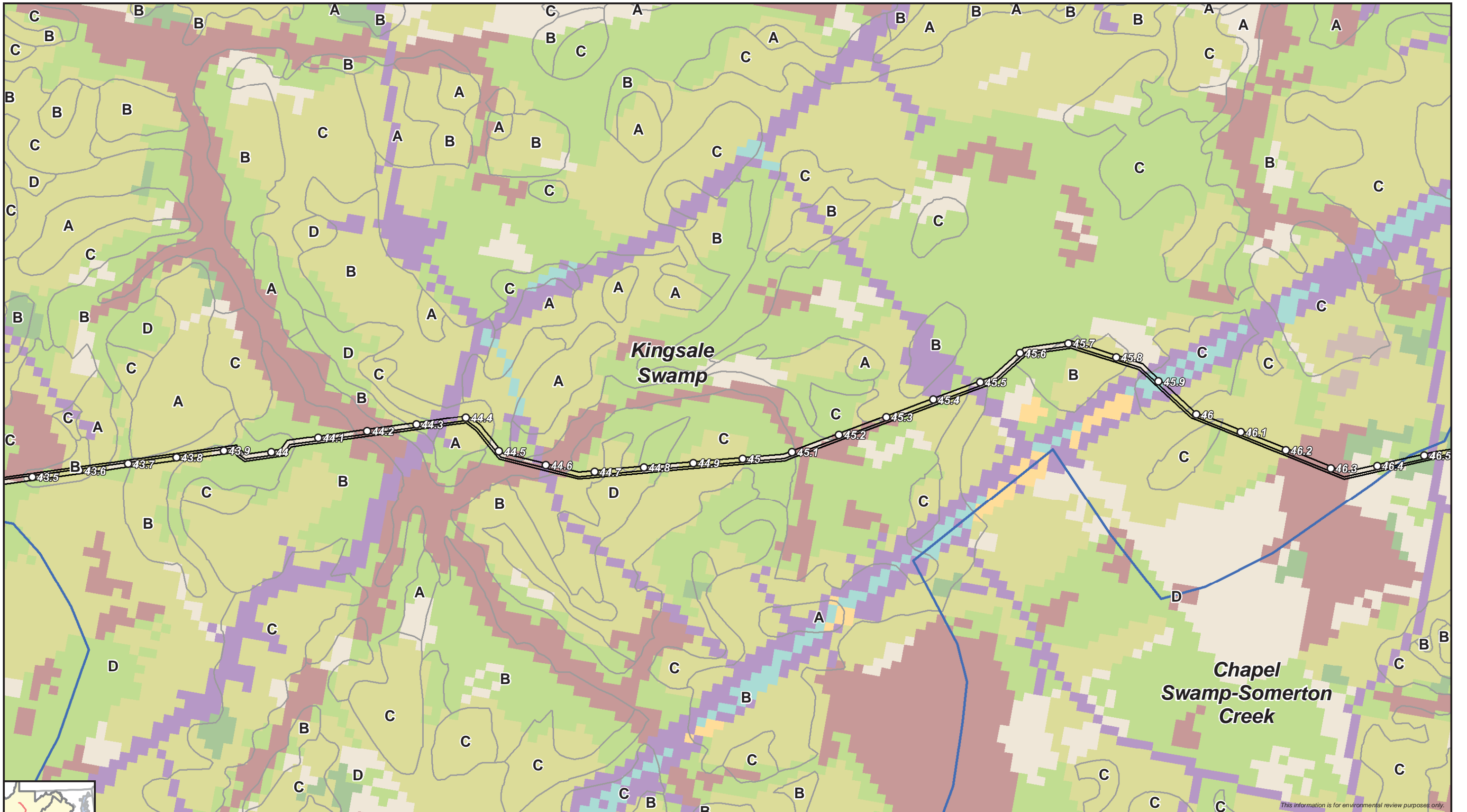
- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Open Water
 - Shrub
 - Wetlands

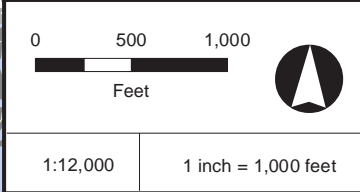


Virginia Water Quality Post-Development Conditions

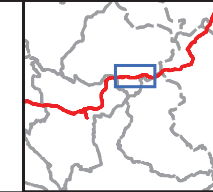




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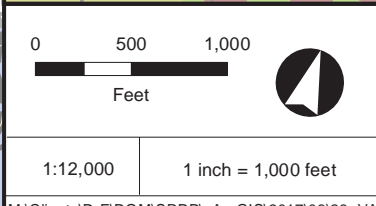
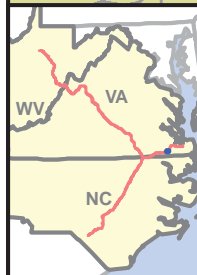
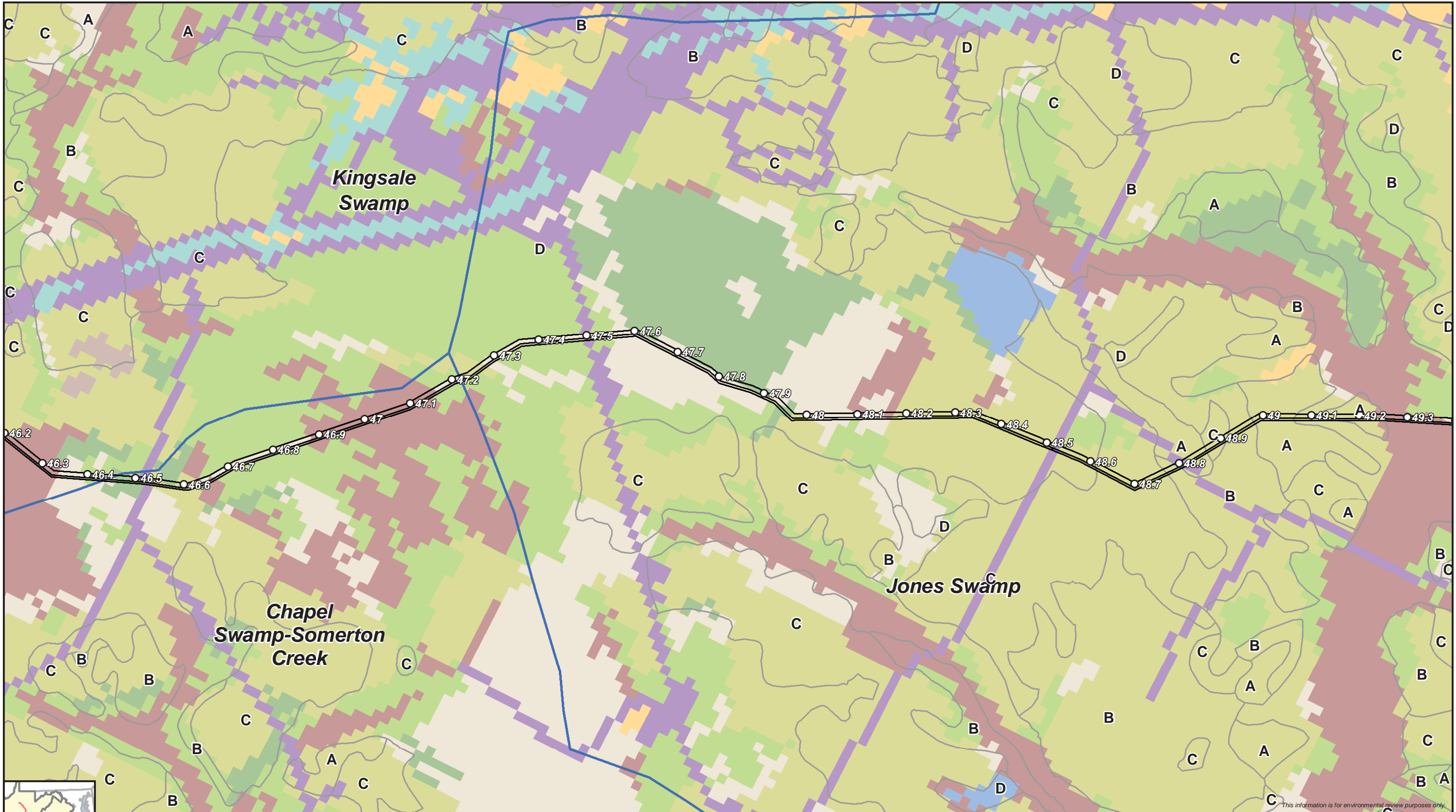
○ Milepost	Land Cover	■ Developed, Open Space
□ PCSI Analysis Workspaces	■ Agriculture	■ Forest
■ HUC-12 Watershed	■ Barren Land	■ Grassland
■ Hydrologic Soil Group	■ Developed, Low Intensity	■ Shrub
	■ Developed, Medium Intensity	■ Wetlands



Atlantic Coast Pipeline

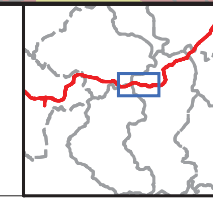
Virginia Water Quality Post-Development Conditions





- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Barren Land
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Open Water
 - Shrub
 - Wetlands



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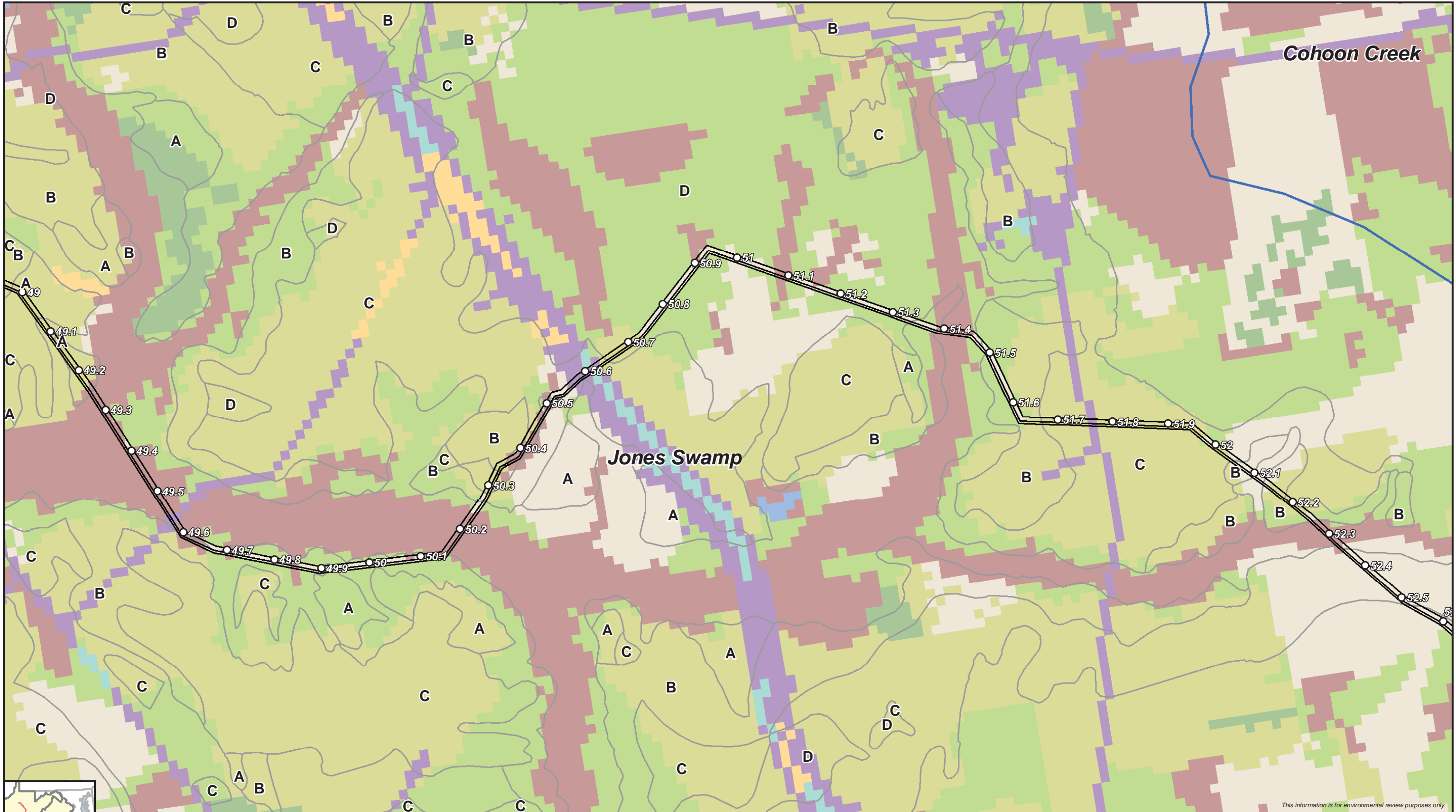
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Atlantic Coast Pipeline

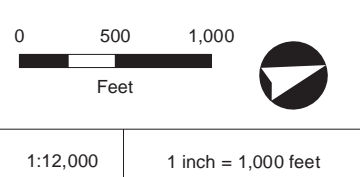
Virginia Water Quality Post-Development Conditions

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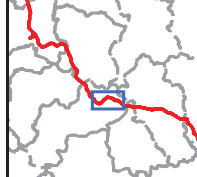
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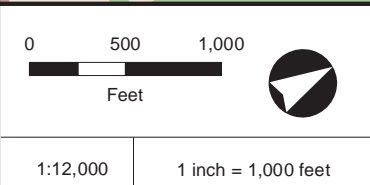
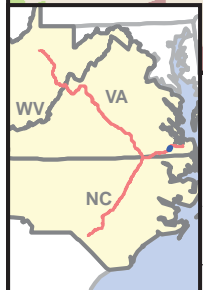
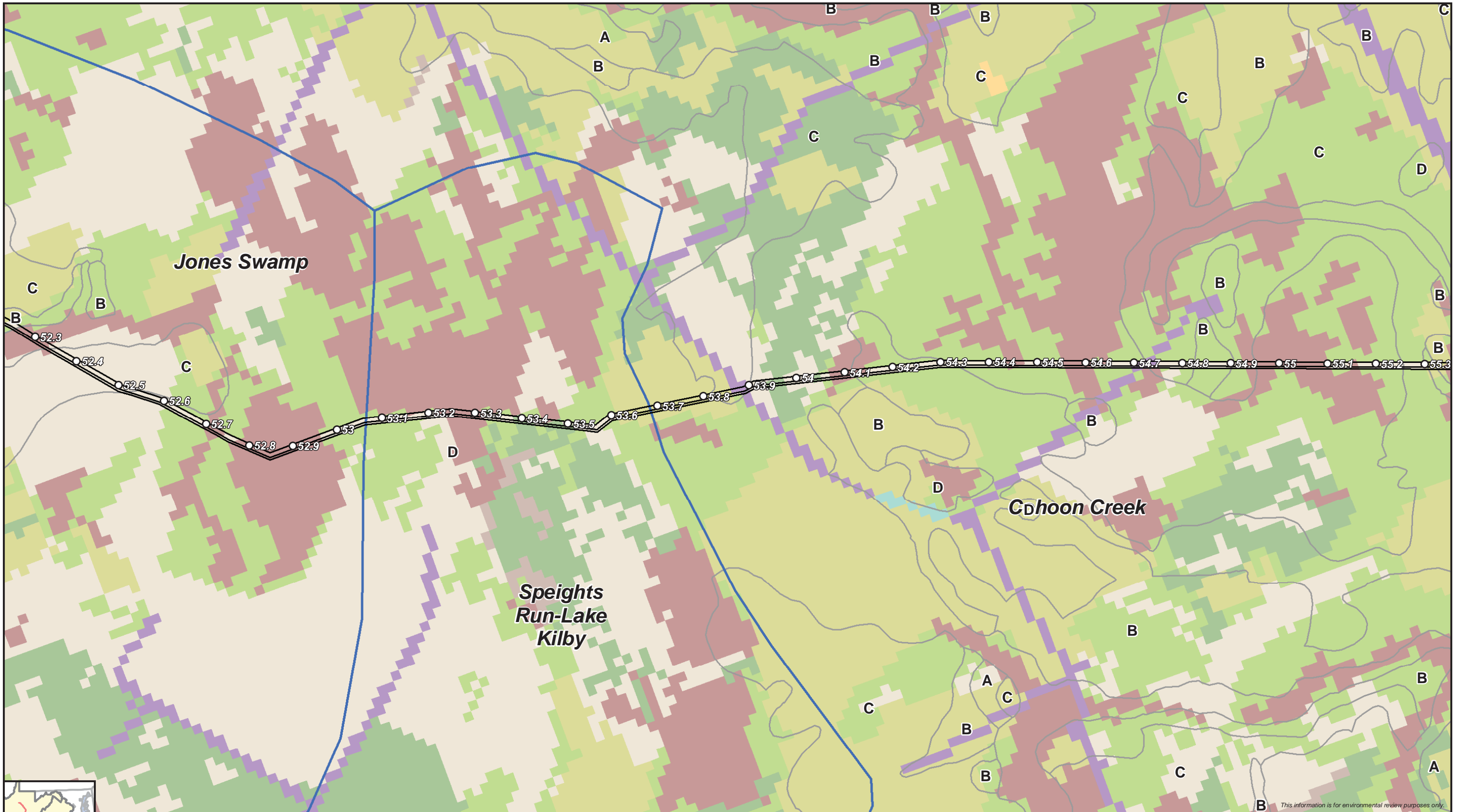


○ Milepost	Land Cover	Forest
□ PCSM Analysis Workspaces	Agriculture	Grassland
□ HUC-12 Watershed	Developed, Low Intensity	Open Water
□ Hydrologic Soil Group	Developed, Medium Intensity	Shrub
	Developed, Open Space	Wetlands



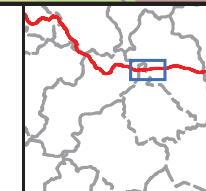
Virginia Water Quality
Post-Development Conditions





- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- | Land Cover | |
|-------------------------------|-------------------------|
| ■ Agriculture | ■ Developed, Open Space |
| ■ Barren Land | ■ Forest |
| ■ Developed, Low Intensity | ■ Grassland |
| ■ Developed, Medium Intensity | ■ Shrub |
| | ■ Wetlands |



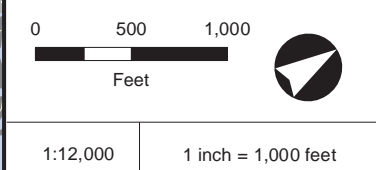
Virginia Water Quality
Post-Development Conditions



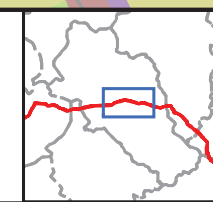
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This information is for environmental review purposes only.



Milepost	Forest
PCSM Analysis Workspaces	Grassland
HUC-12 Watershed	Open Water
Hydrologic Soil Group	Shrub
Agriculture	Wetlands
Developed, Low Intensity	
Developed, Medium Intensity	
Developed, Open Space	



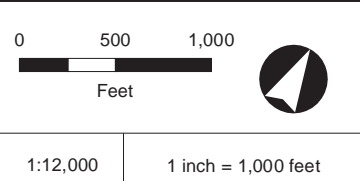
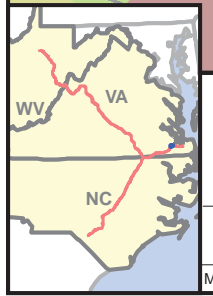
Atlantic Coast Pipeline

Virginia Water Quality Post-Development Conditions



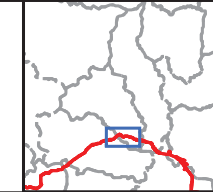


This information is for environmental review purposes only.



- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Open Water
 - Shrub
 - Wetlands

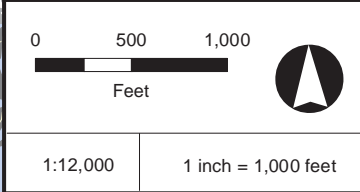
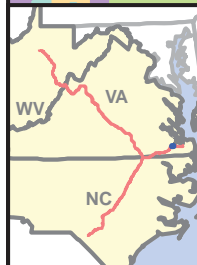


Atlantic Coast Pipeline

Virginia Water Quality Post-Development Conditions

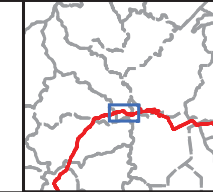


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- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- Land Cover**
- Agriculture
 - Developed, High Intensity
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Open Water
 - Shrub
 - Wetlands

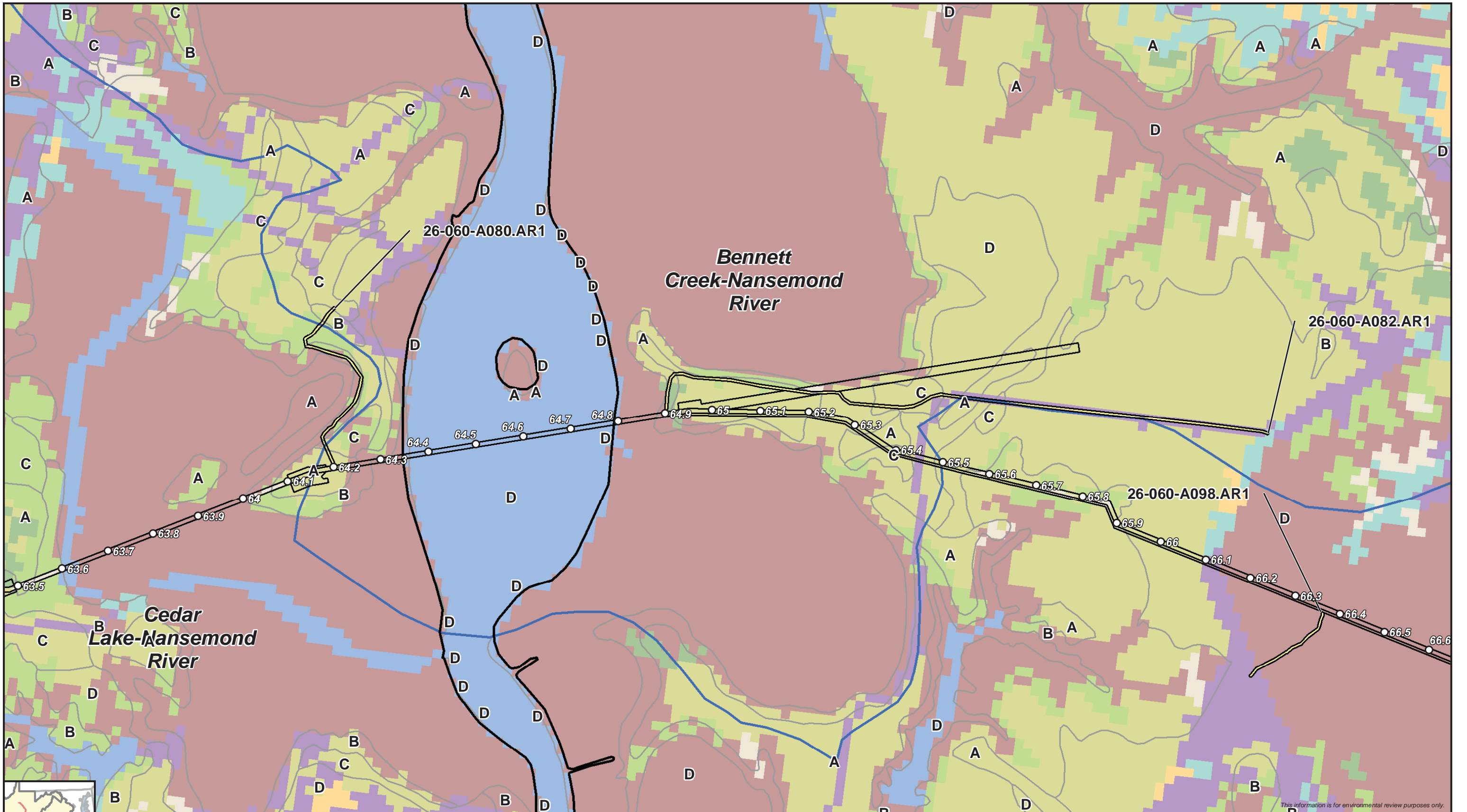


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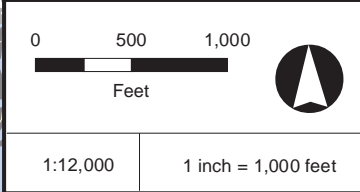
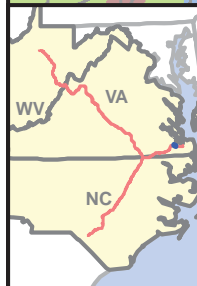


Virginia
Water Quality
Post-Development Conditions

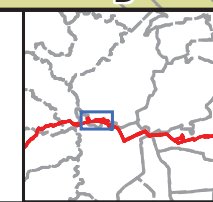




This information is for environmental review purposes only.



○ Milepost	Land Cover	Forest	Wetlands
□ PCSI Analysis Workspaces	Agriculture	Grassland	
□ HUC-12 Watershed	Developed, Low Intensity	Gravel	
□ Hydrologic Soil Group	Developed, Medium Intensity	Open Water	
— State Boundary	Developed, Open Space	Shrub	

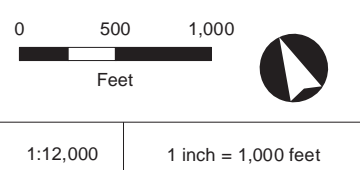


Virginia Water Quality
Post-Development Conditions



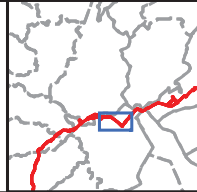


This information is for environmental review purposes only.



- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- | | | |
|---------------------------|-----------------------------|------------|
| Land Cover | Developed, Medium Intensity | Open Water |
| Agriculture | Developed, Open Space | Shrub |
| Barren Land | Forest | Wetlands |
| Developed, High Intensity | Grassland | |
| Developed, Low Intensity | Gravel | |

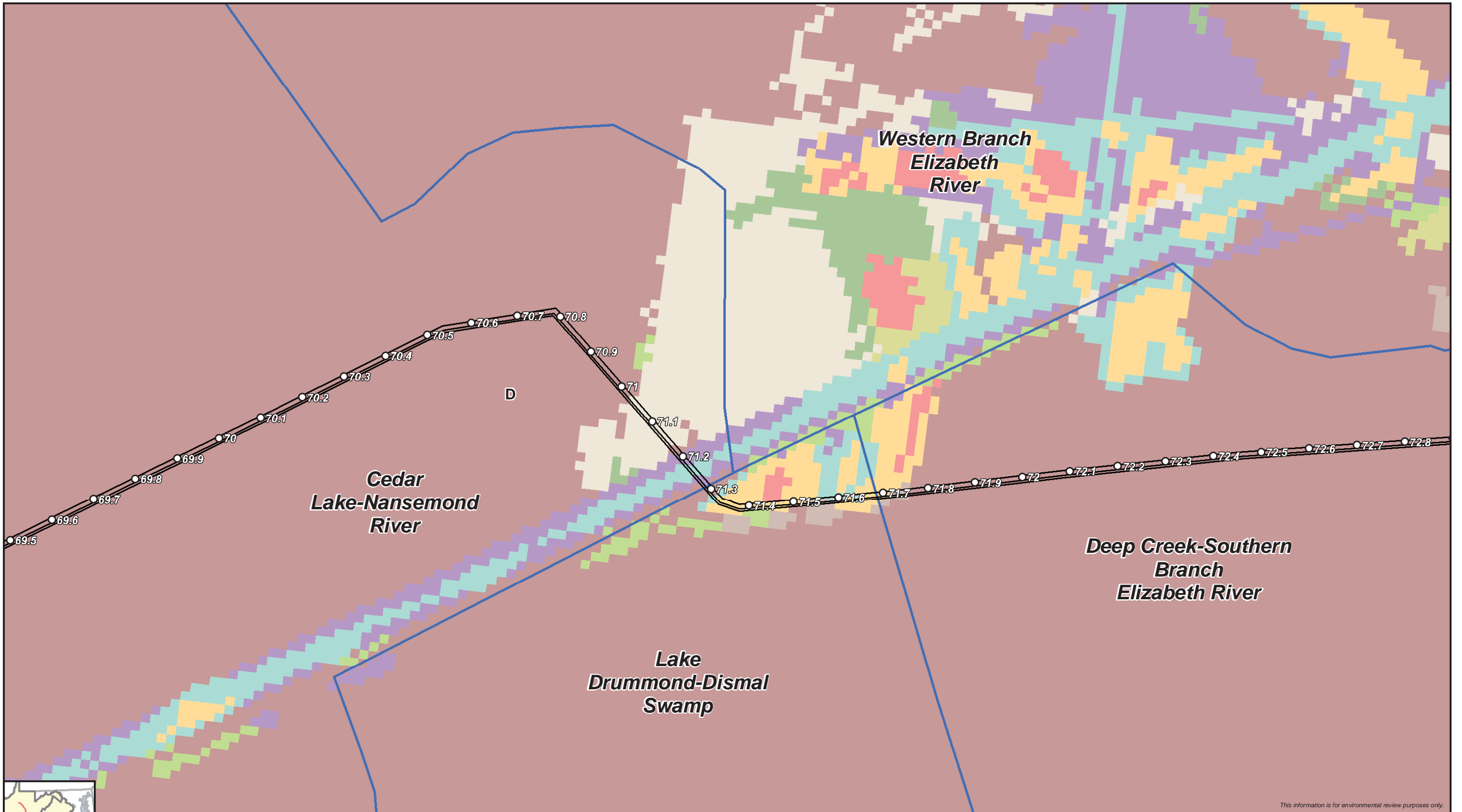


Atlantic Coast Pipeline

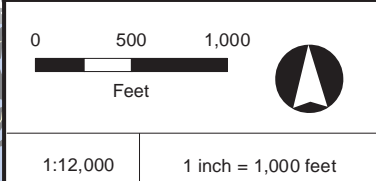
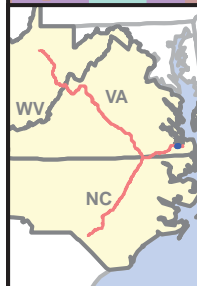
Virginia Water Quality
Post-Development Conditions



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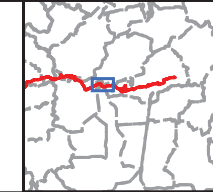


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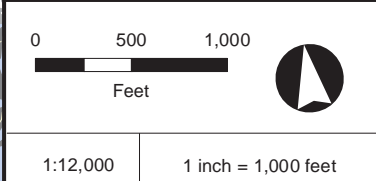
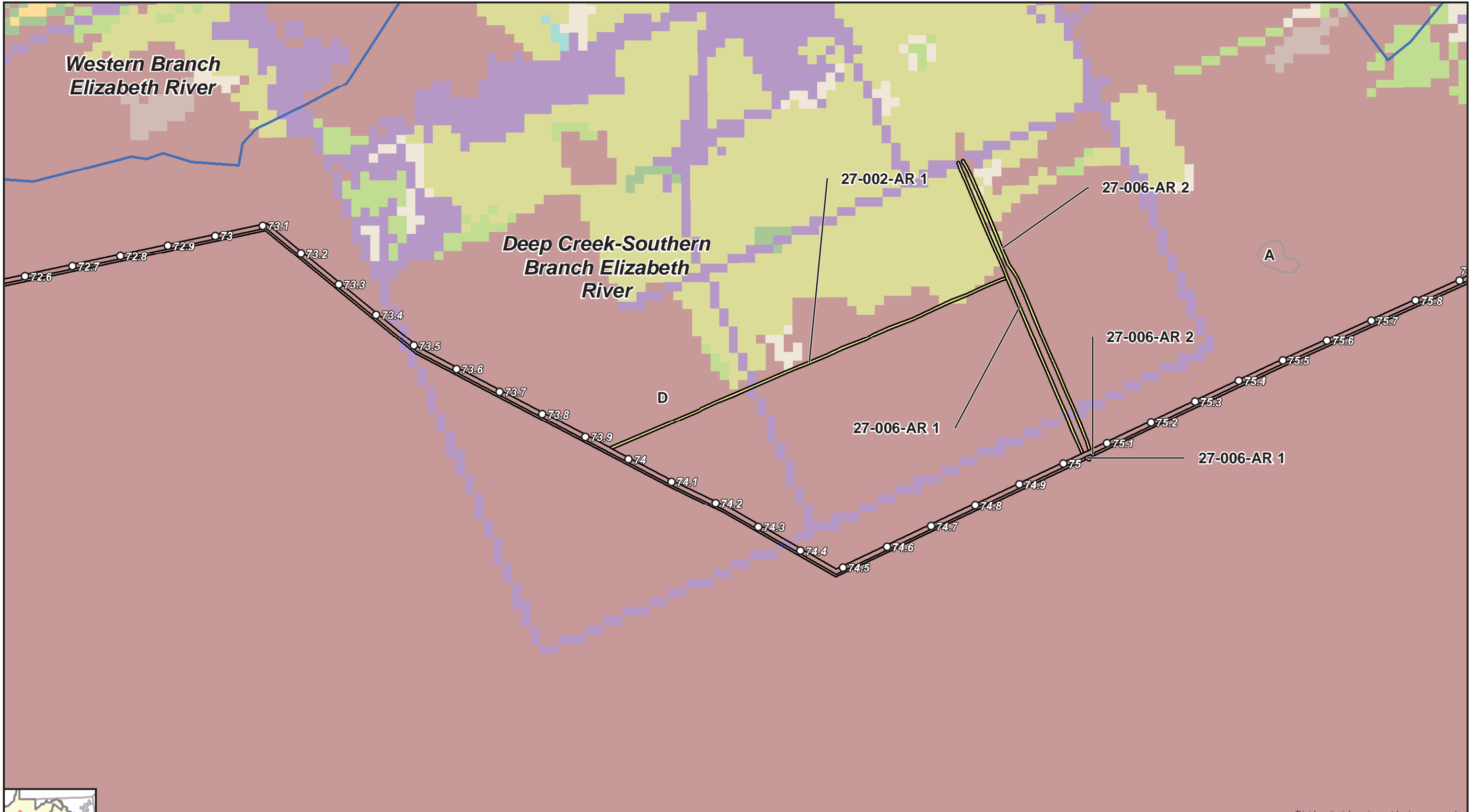
- Milepost
- PCSI Analysis Workspaces
- HUC-12 Watershed
- Hydrologic Soil Group

- | | | |
|---------------------------|-----------------------------|----------|
| Land Cover | Developed, Medium Intensity | Wetlands |
| Agriculture | Developed, Open Space | |
| Barren Land | Forest | |
| Developed, High Intensity | Grassland | |
| Developed, Low Intensity | Shrub | |

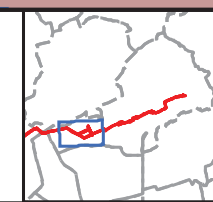


Virginia Water Quality
Post-Development Conditions



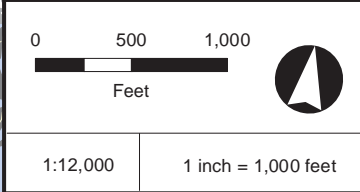
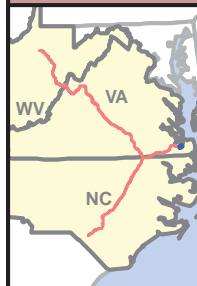
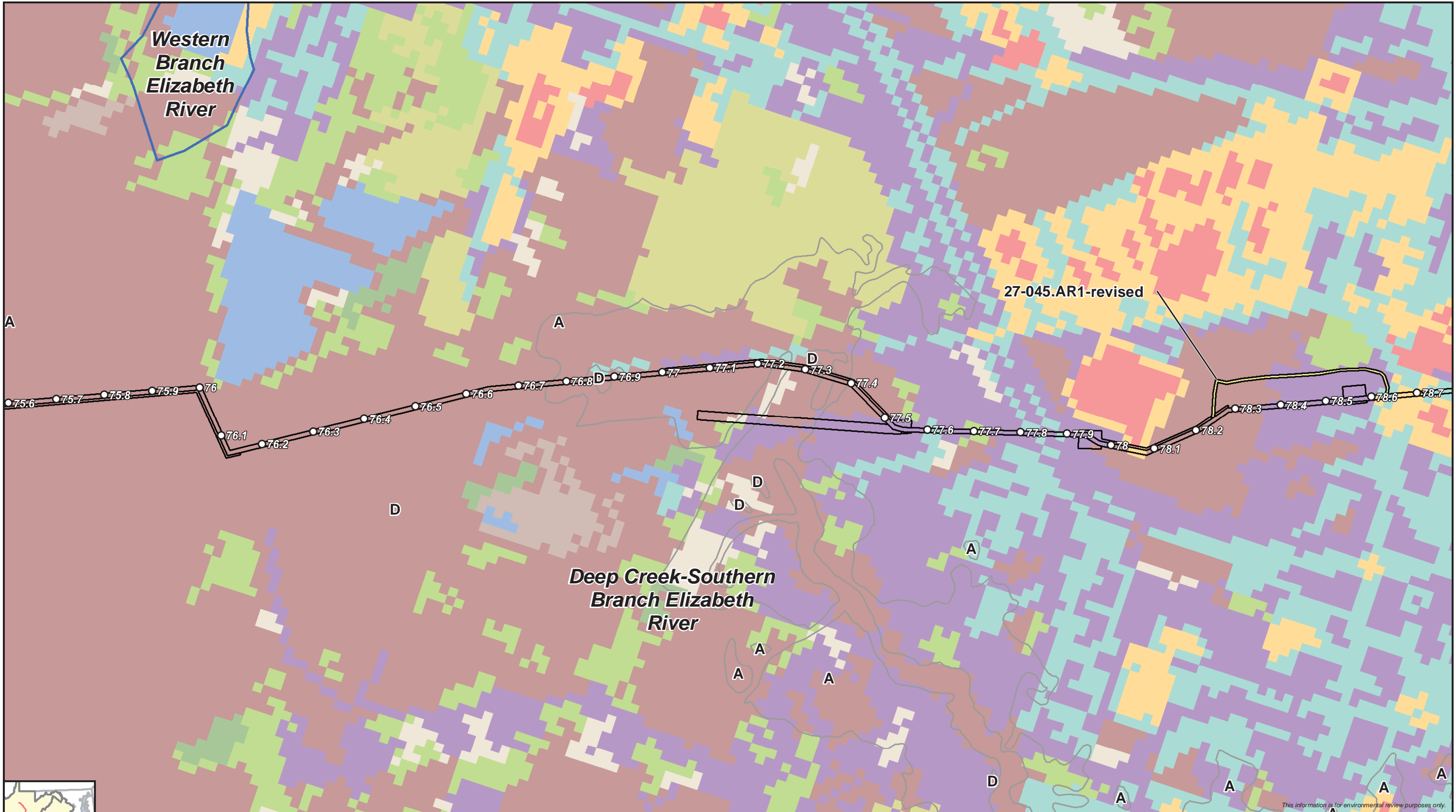


○ Milepost	Land Cover	■ Developed, Open Space	■ Wetlands
□ PCSI Analysis Workspaces	■ Agriculture	■ Forest	
■ HUC-12 Watershed	■ Barren Land	■ Grassland	
■ Hydrologic Soil Group	■ Developed, Low Intensity	■ Gravel	
	■ Developed, Medium Intensity	■ Shrub	



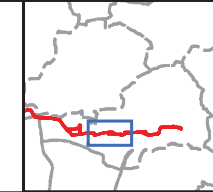
Virginia Water Quality
Post-Development Conditions





- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Ⓐ Hydrologic Soil Group

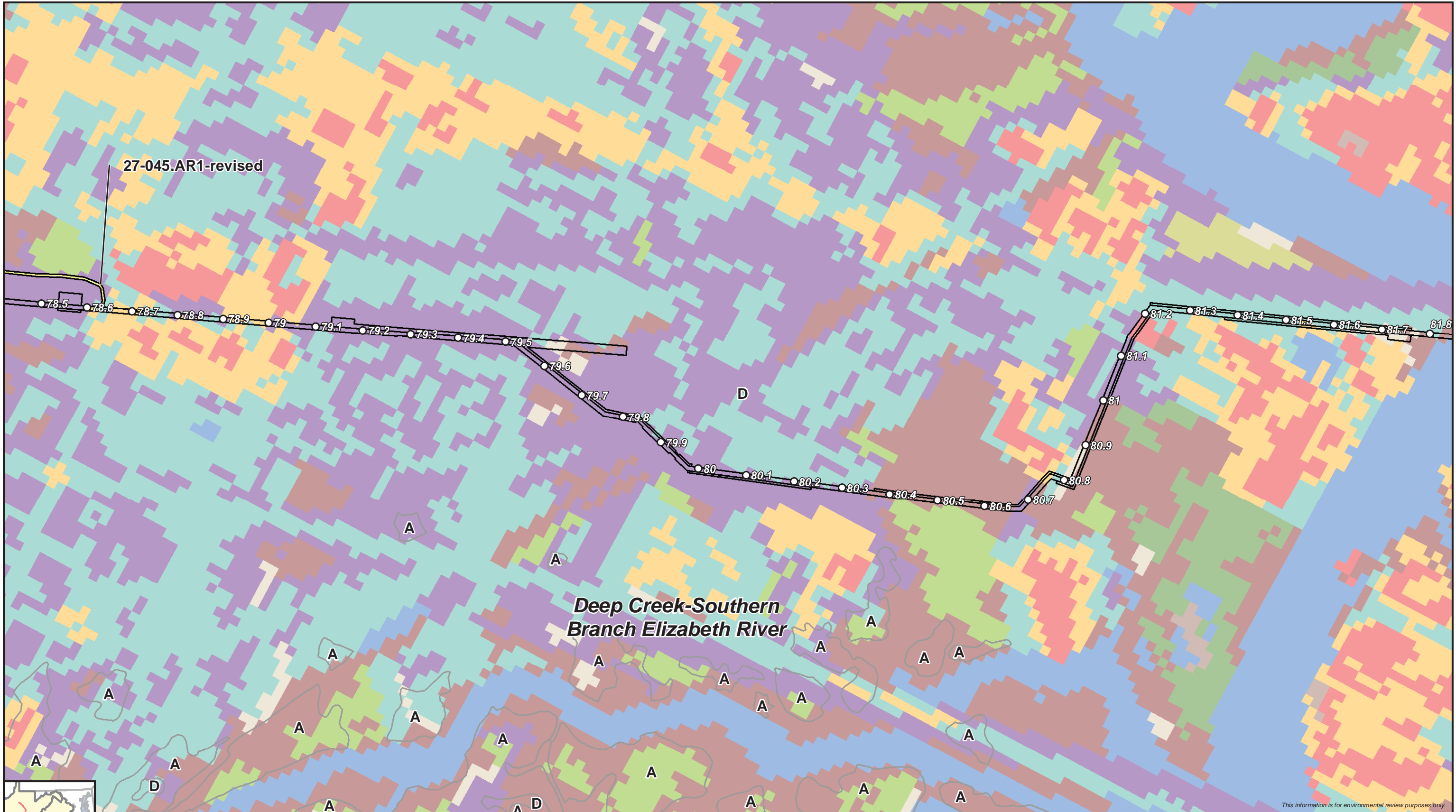
- Land Cover**
- Agriculture
 - Barren Land
 - Developed, High Intensity
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Gravel
 - Open Water
 - Shrub
 - Wetlands



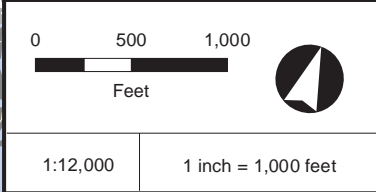
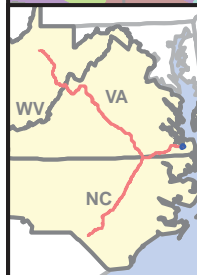
Virginia Water Quality
Post-Development Conditions



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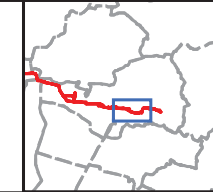


This information is for environmental review purposes only.



- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Ⓐ Hydrologic Soil Group

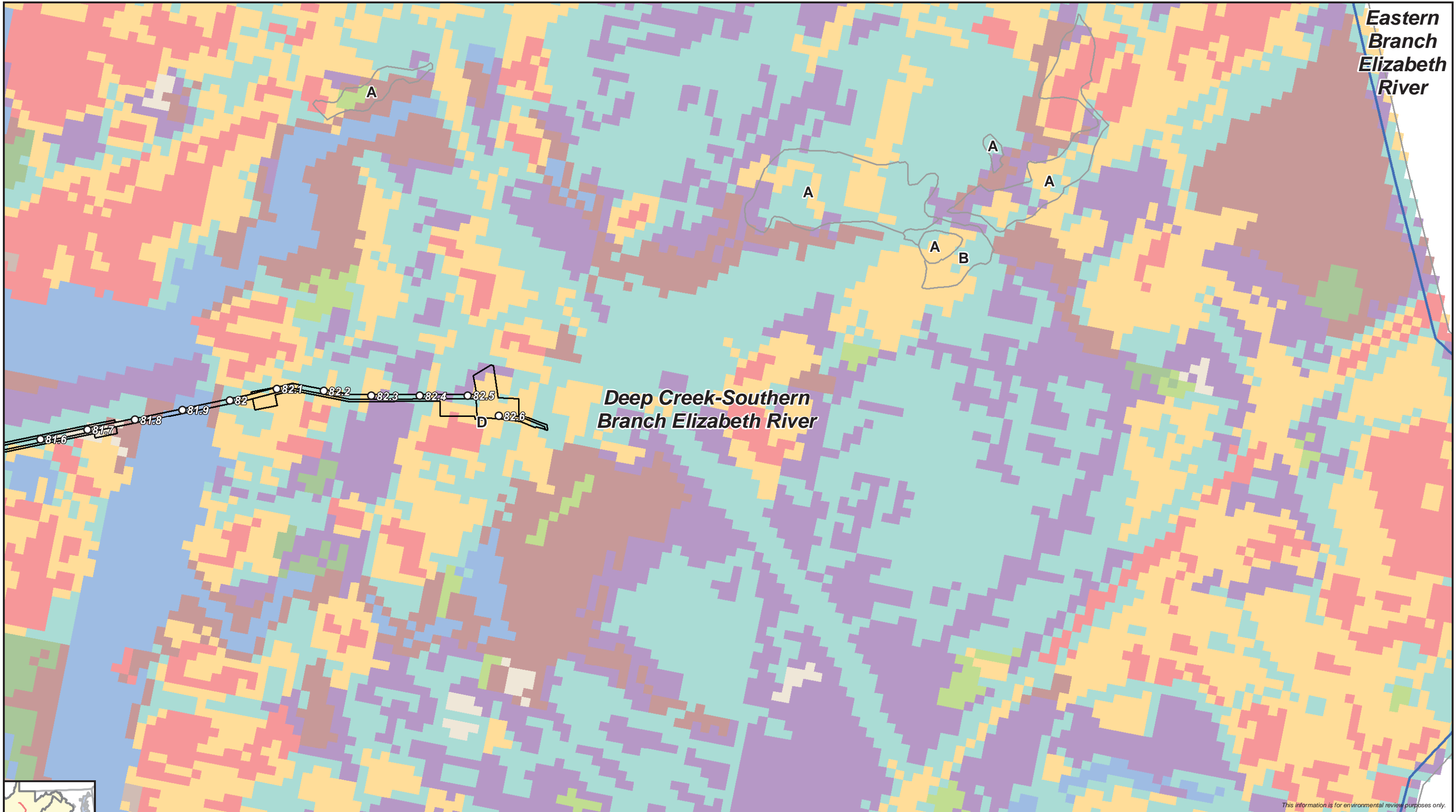
- Land Cover**
- Agriculture
 - Barren Land
 - Developed, High Intensity
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Gravel
 - Open Water
 - Shrub
 - Wetlands



Atlantic Coast Pipeline

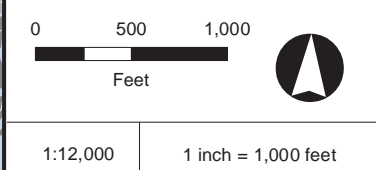
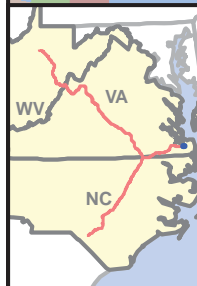
Virginia Water Quality Post-Development Conditions





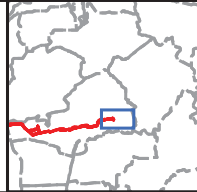
Eastern Branch Elizabeth River

Deep Creek-Southern Branch Elizabeth River



- Milepost
- PCSM Analysis Workspaces
- HUC-12 Watershed
- Ⓐ Hydrologic Soil Group

- Land Cover**
- Barren Land
 - Developed, High Intensity
 - Developed, Low Intensity
 - Developed, Medium Intensity
 - Developed, Open Space
 - Forest
 - Grassland
 - Open Water
 - Shrub
 - Wetlands



Atlantic Coast Pipeline

Virginia Water Quality Post-Development Conditions



ATTACHMENTS

Attachment 1.1 Culvert Drainage Areas, Permanent Access Roads,
Pre-Development Hydrographs

Attachment 1.2 Culvert Drainage Areas, Permanent Access Roads,
Post-Development Hydrographs

Attachment 1.3 Culvert Drainage Areas, Temporary Access Roads,
Construction Conditions

Attachment 2.1 DEQ Virginia Runoff Reduction Method New Development
Compliance Spreadsheets – Version 3.0

Attachment 2.2 DEQ Virginia Runoff Reduction Method Re-Development
Compliance Spreadsheets – Version 3.0

Attachment 3.1 Circular Pipe Flow Charts

Attachment 3.2 Riprap Outlet Protection Reference

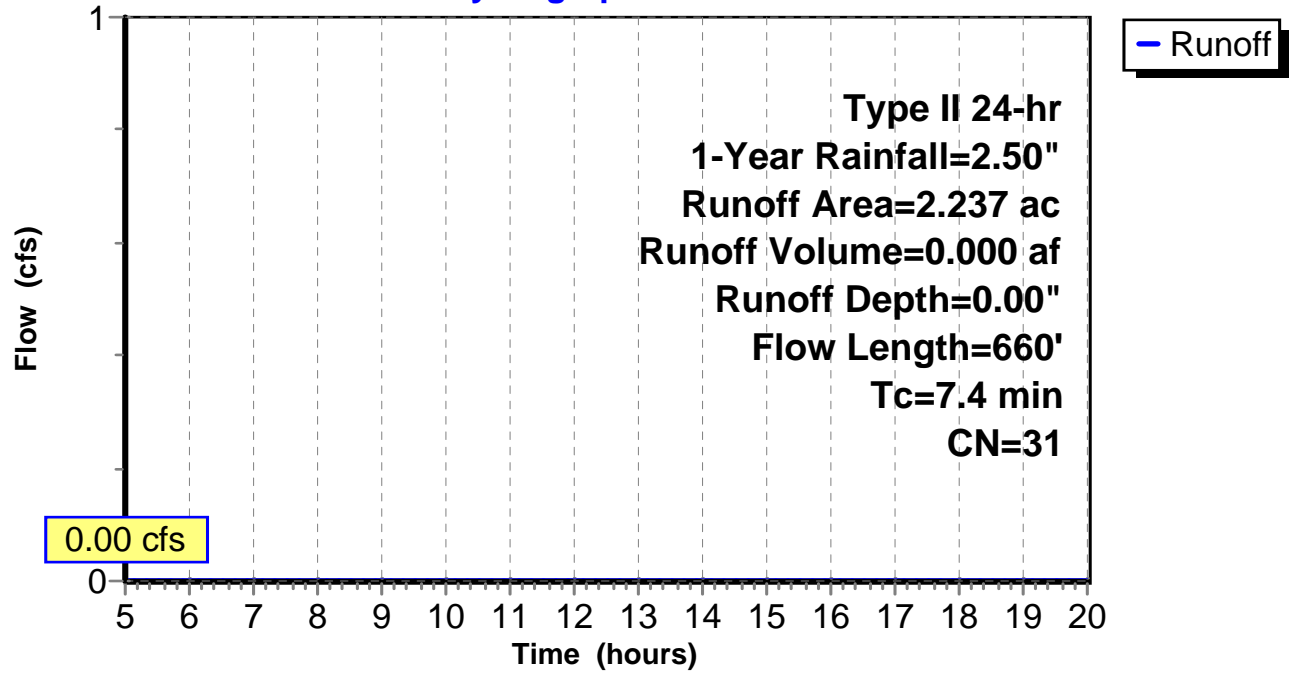
Attachment 3.3 Roadside Ditch Analysis Reference

ATTACHMENT 1.1

Culvert Drainage Areas, Permanent Access Roads, Pre-Development Conditions

Subcatchment 1: C AR-300.001

Hydrograph



Subcatchment 2: C AR-300.002

Hydrograph

