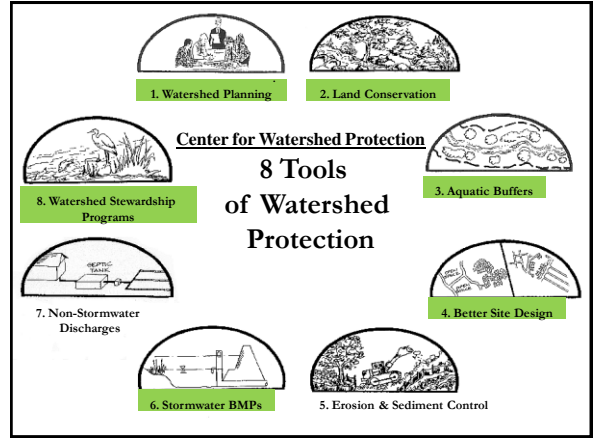


Piedmont Environmental Council

Looking Back at the 2003 Goose Creek Watershed Assessment Study: Are We Achieving the Study's Recommendations?

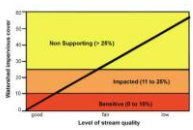
March 9, 2011




Center for Watershed Protection
8 Tools of Watershed Protection

1. Watershed Planning
2. Land Conservation
3. Aquatic Buffers
4. Better Site Design
5. Erosion & Sediment Control
6. Stormwater BMPs
7. Non-Stormwater Discharges
8. Watershed Stewardship Programs

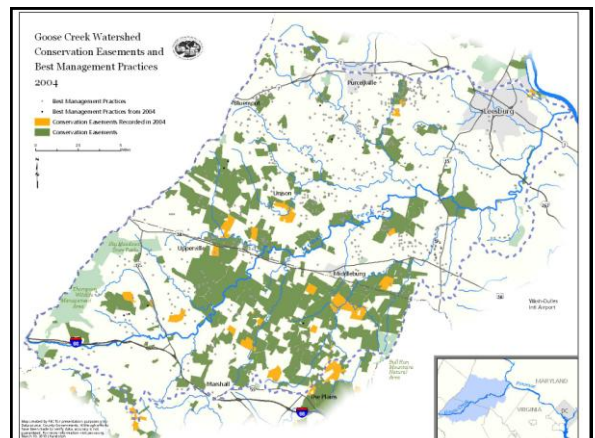
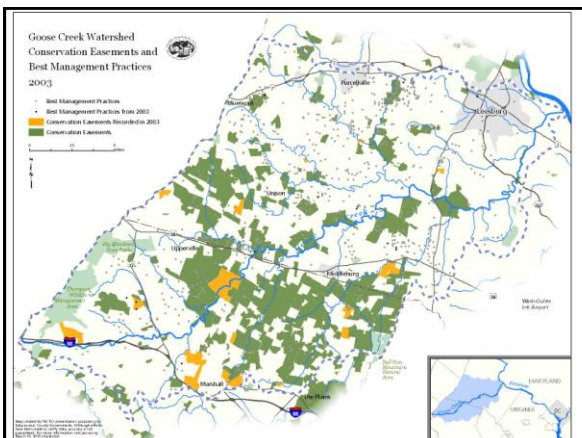
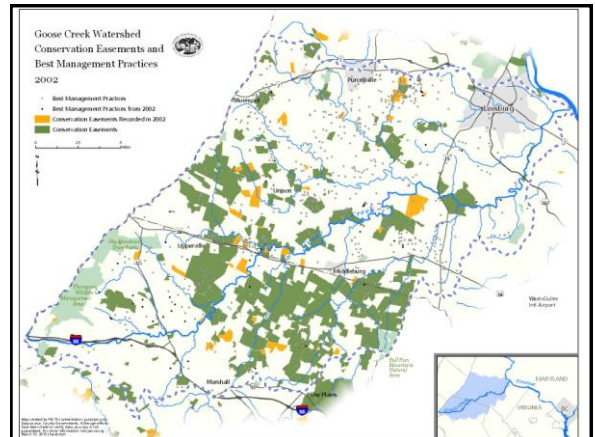
Land Conservation

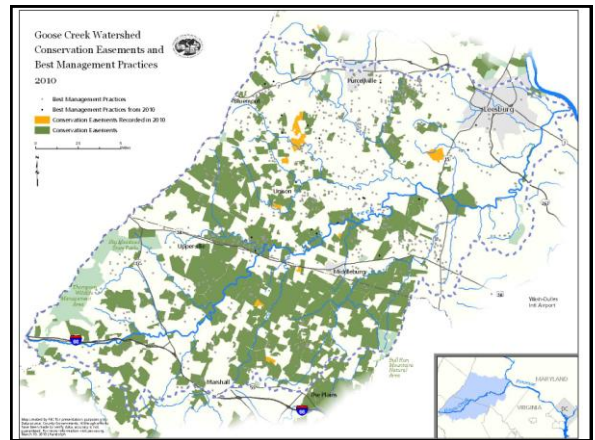
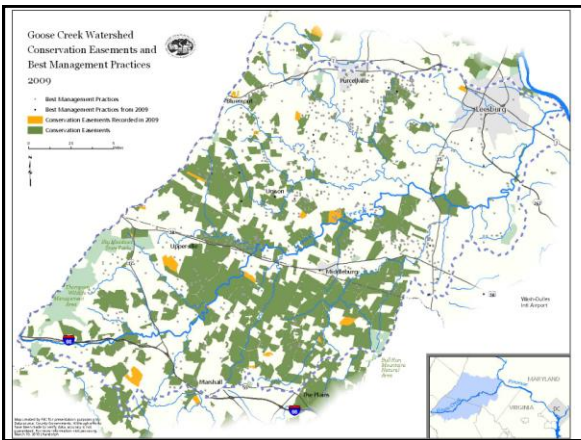
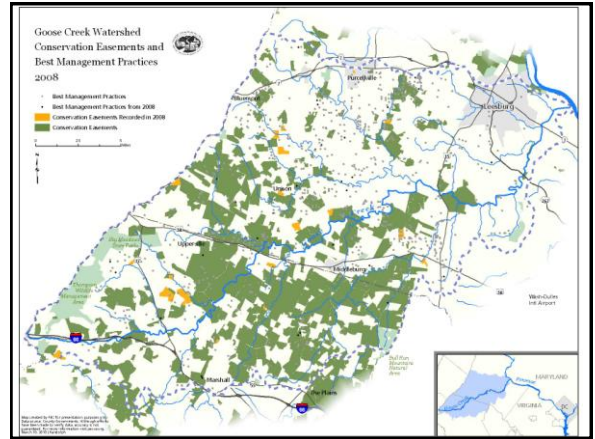
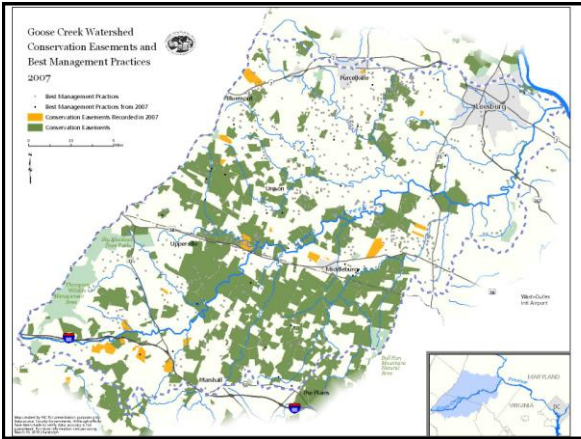
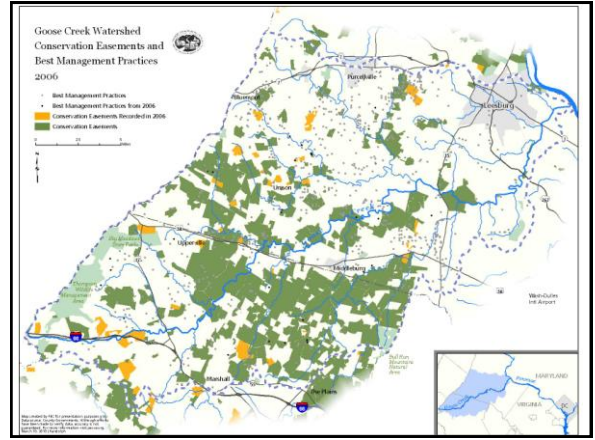
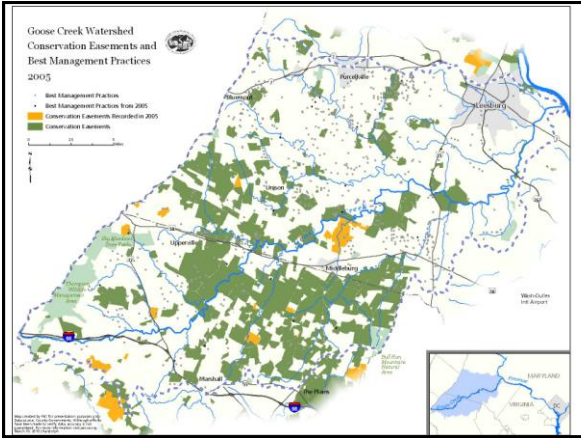


WHAT: Efforts that limit impervious surface while conserving undeveloped areas of natural, historical, or cultural value.



WHY: Increasing impervious surfaces in watershed is associated with declining condition of streams

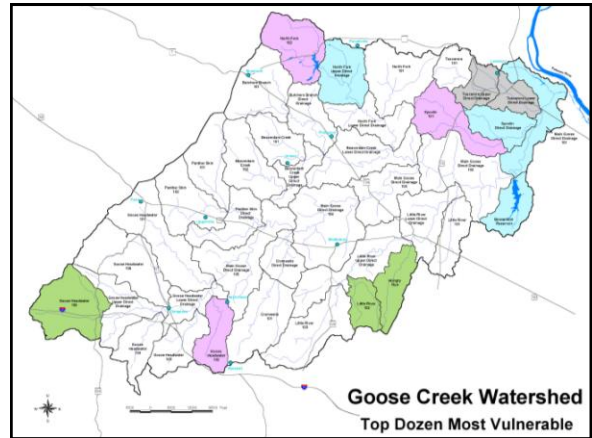




Land Conservation in the GC Watershed

Keys to Success

- Virginia Land Preservation Tax Credit
- Consistent program of outreach and education to landowners by multiple organizations
- Creating professional education programs
- More robust mapping and data analysis capabilities, permitting greater identification and targeting of priorities
- Supporting initiatives like the James Rowley / Goose Creek Conservation Fund



Land Conservation Priorities

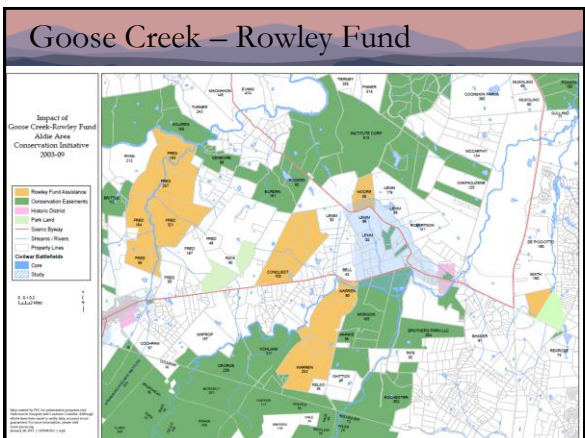
Conservation Easement Acreage in Vulnerable Sub-Areas, 2001-2010

	<i>Watershed</i>	2001 (acres)	2010 (acres)	Change (acres)	Change (%)	% of Unit
102	Little River	1,834	2,232	398	18%	52%
102	Hungry Run	2,206	2,206	0	0%	49%
105*	Goose Creek Headwaters	0	994	994	100%	12%
102	Goose Creek Headwaters	248	1044	796	76%	24%
102*	North Fork	461	580	119	21%	21%
101	Sycolin	505	818	313	38%	12%
DD*	North Fork Upper DD	357	619	262	42%	10%
	Goose Creek Watershed	44,352	81,464	37,112	46%	33%


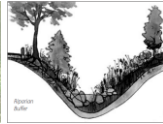

Land Conservation Priorities

General study recommendations on land conservation

- Target large contiguous tracts of forested areas
- Target land along the Blue Ridge abutting the AT
- Target large parcels throughout the watershed



Aquatic Buffers

WHAT: Strips of grass, shrubs, and, ideally, trees and shrubs along the banks of rivers and streams.

WHY: Buffers can trap pollutants and nutrients, slow the velocity of the water running off the land, stabilize stream banks and streambeds, cool water temperature, and provide wildlife habitat

Aquatic Buffers

Study Recommendations




- Revise local ordinances to more explicitly include stream protection provisions
- Explore and distribute information on funding sources for agricultural practices
- Strengthen PDR Programs to protect key resources on a property and include measures to enhance and preserve the stream buffers
- Conservation Easement Buffer Initiative in selected sub-watersheds

Aquatic Buffers


Conservation Easements and Aquatic Buffers

- Since completing the study, riparian buffer provisions in conservation easements have gone from "recommended" to "essential".
- This change has resulted in a significant increase in the number of stream miles protected by riparian buffer provisions in the watershed between 2005 and 2010.
- In addition, numerous easement amendments in the watershed between 2005 and 2010 have resulted in "old" easements being strengthened with riparian buffer provisions


Watershed Planning and Stewardship


Tuscarora Creek Field Baseline Assessment



Funding provided by:
National Fish and Wildlife Foundation,
Fairfax County Water Authority, Timberland



Tuscarora Upper and Lower DD

Subwatershed	<u>Current</u> Impervious %	<u>Current</u> Management Category
Tuscarora Upper DD	22	Urban Impacted
Tuscarora Lower DD	15	Urban Impacted

Subwatershed	<u>Future</u> Impervious %	<u>Future</u> Management Category
Tuscarora Upper DD	34	Non-Supporting
Tuscarora Lower DD	36	Non-Supporting

Outcomes To Date:

- Town-initiated watershed stakeholder group
- Specific recommendations for Town action
- New stormwater pond policy
- Active partnership with town and other non-profits
- Three demonstration projects completed
- Currently developing recommendations for Low Impact Development (LID) practices
- Better Site Design workshop




Summary

Success Stories

- Dramatic increase in protected land watershed-wide will contribute to minimizing impervious surface in the future
- Growing priority placed on riparian buffer provisions in conservation easements will result in significantly more protected stream miles over the long term
- Persistent outreach and education contributing to creation of community-wide "conservation ethic"
- Community involvement leads to changes in governmental policies

Summary

Challenges & Opportunities

- Need to more explicitly include stream protection provisions in local ordinances
 - Watershed-wide land conservation success tempered by need for more conservation in areas prioritized in study
 - Opportunity for landowners with “older” conservation easements to strengthen with riparian buffer provisions
 - Opportunity to achieve greater implementation by landowners of riparian buffers and other voluntary agricultural BMPs through increased funding(?), outreach, and education.
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Piedmont Environmental Council

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