

Best Practices:



1. Better site design can also reduce the need to clear and grade 35% to 60% of total site area.

2. Virginia Model Development Principles state: "Clearing and grading of forests and native vegetation at a site should be limited to the minimum amount needed ..."

Better Home Values:



\$500,000

Number of
Bedrooms: 4
Baths: 3
Total Sq. Ft:
3250
Lot Size: **0.45**
acres

3. Property next to green belts can be 5% to 30% more valuable.

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Water Treatment

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5. Peugeot Sound Area spent **\$2,300,000,000** on storm water retention facilities because they lost 37% of their tree cover over 20 years.

Atlanta, Georgia will have to spend **\$2,000,000,000** on storm water retention for losing 20% tree cover.

6. Riparian forest buffers remove an estimated 21 lbs of nitrogen per acre per year for **\$0.30 per pound**, compared to **\$3 to \$5 per pound** for the Washington, D.C. area wastewater treatment facilities (CBP, 1998).

Reduce Energy Costs



7. "Energy savings of 10% can result by adding as little as 10% tree cover to buffers near buildings (CBP, 1998)."

Some people and businesses have seen as much as 20%-40% savings.

Reduce County Taxes

8. A home build without the needed trees left standing "costs that locality **\$1600** more than is returned in taxes and other revenues" said a Prince William County, Virginia report in 1998.
9. "The cost to treat the quality and quantity of storm water from a single impervious acre can range from **\$30,000 to \$50,000** (CWP, 1997).

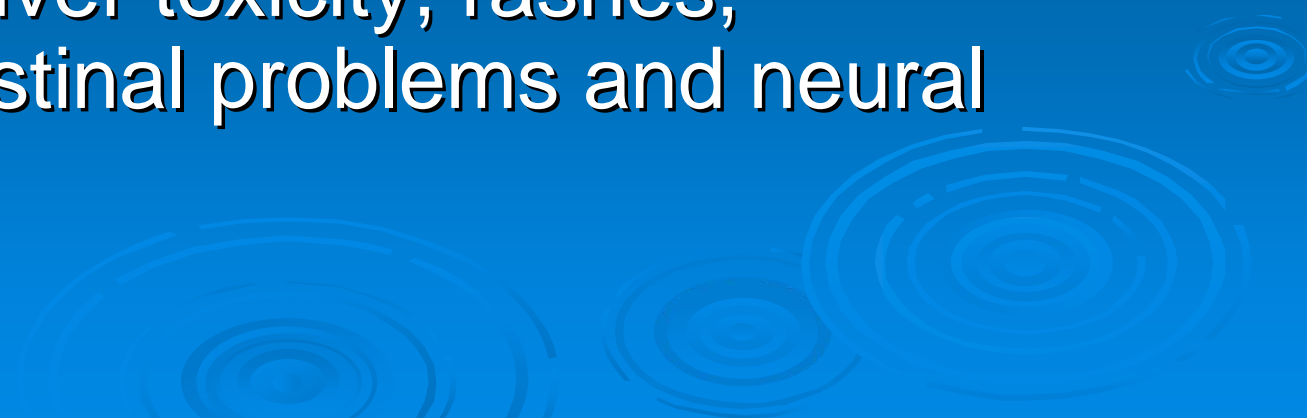
Control Flood Damage



Photo: Todd Hesterman

10. Farmers in Conservation Program Fared Better in Ohio Floods.

Health Costs of Bad Water

11. The Black & Veatch study show significant increases in blue-green algae from 1996 -2006.
 12. The blue-green algae blooms create toxins that cause death in animals and possible health effects in humans including liver toxicity, rashes, gastrointestinal problems and neural toxins.
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- The background of the slide is a solid blue color. In the lower right quadrant, there are several decorative, semi-transparent white ripples that resemble water droplets or raindrops, adding a visual texture to the slide.

Trees Lower Runoff

Issue: Brandermill & Woodlake could not have been built using a maximum 0.16 lbs of phosphorus per acre per year standards.

More information: Current county run off calculations do not give enough credits to the developers for saving trees. The main Brandermill stream has been measured at 0.12 lbs for five years.

Suggestion: Chesterfield county could revise its engineering calculations to give enough credits for developments like Brandermill that have a lower runoff level due to trees saved.

Resolution: Proposed LID Standard will include credits for trees to meet a standard on no net increase of pollution.

Notes

- 1. Pg 5 [http://www.dcr.virginia.gov/soil & water/documents/swmecon.pdf](http://www.dcr.virginia.gov/soil%20&%20water/documents/swmecon.pdf)
- 2. Pg 6 [http://www.dcr.virginia.gov/soil & water/documents/swmecon.pdf](http://www.dcr.virginia.gov/soil%20&%20water/documents/swmecon.pdf)
- 3. Pg 20 [http://www.dcr.virginia.gov/soil & water/documents/swmecon.pdf](http://www.dcr.virginia.gov/soil%20&%20water/documents/swmecon.pdf)
- 4. Pg 21 [http://www.dcr.virginia.gov/soil & water/documents/swmecon.pdf](http://www.dcr.virginia.gov/soil%20&%20water/documents/swmecon.pdf)
- 5. Pg 20 [http://www.dcr.virginia.gov/soil & water/documents/swmecon.pdf](http://www.dcr.virginia.gov/soil%20&%20water/documents/swmecon.pdf)
- 6. Pg 23 [http://www.dcr.virginia.gov/soil & water/documents/swmecon.pdf](http://www.dcr.virginia.gov/soil%20&%20water/documents/swmecon.pdf)
- 7. Pg 22 [http://www.dcr.virginia.gov/soil & water/documents/swmecon.pdf](http://www.dcr.virginia.gov/soil%20&%20water/documents/swmecon.pdf)
- 8. Pg 24 [http://www.dcr.virginia.gov/soil & water/documents/swmecon.pdf](http://www.dcr.virginia.gov/soil%20&%20water/documents/swmecon.pdf)
- 9. Pg 25 [http://www.dcr.virginia.gov/soil & water/documents/swmecon.pdf](http://www.dcr.virginia.gov/soil%20&%20water/documents/swmecon.pdf)
- 10. <http://www.edf.org/article.cfm?contentID=7678>
- 11. “Master Plan: Addison-Evans Water Treatment Plant”, January 2008. Ch.2 2-36; Fig 2-11 & 2-12. Table 2-7 details algal blooms from December 1996 to April 2006.
- 12. " " [P 3-23 or p149 in electronic report]