



Loudoun Soil and Water Conservation District ANNUAL REPORT 2007

Letter from the Chairman....

On behalf of the Directors and staff of the Loudoun Soil and Water Conservation District, I am pleased to present our 2007 Annual Report. The following pages provide an overview of our programs as well as a summary of our efforts during the past year.

For over 60 years, Loudoun County has been served by a Soil and Water Conservation District. Initially, the focus was upon agricultural land use and its effect on the environment. Today, environmental challenges spring from a complex mix of land uses, including residential, commercial, industrial, and agricultural, a growing population, and increasing vehicular traffic. To address these issues, the District and its federal, state, and local conservation partners offer a variety of programs specifically designed for the agricultural sector, rural and suburban communities, business, and industry.

Education is extremely important to "getting the word out" and is an integral part of District programs and activities. Audiences include local government, business and industry, schools, and the general public. Indoor and outdoor classrooms, field visits, hands on activities, such as stream monitoring and tree plantings, are examples of programs provided during the past year. The District also participates actively in local land use planning to promote conservation of soil and water resources as a priority and necessary component of planned development.

In closing, I wish to thank our conservation partners- the Virginia Department of Conservation and Recreation, USDA-Natural Resources Conservation Service, USDA-Farm Service Agency, Virginia Cooperative Extension Service, Virginia Department of Forestry, County of Loudoun, and the many individuals who work with us-for their support. By working together, we have the best chance to create a cleaner, more productive environment for all.

Sincerely,


James B. Christian
Chairman

Who we are

Soil and water conservation districts are an important part of the nationwide partnership of federal, state, and local agencies working together to conserve natural resources and improve water quality. The Loudoun District is one of 47 districts in Virginia. The districts, which are political subdivisions of the Commonwealth of Virginia, are alike in many ways, but each one has unique aspects.

The Loudoun District works with Federal, State, and local authorities and the private sector to address Loudoun's soil and water conservation needs. It promotes educational and technical programs in the field of natural resources conservation, provides advice on the handling of conservation issues to governmental entities and private citizens, and administers programs aimed at specific goals.

District operations are directed by a Board of five Directors (three elected in the general election process, two appointed by the Virginia Soil and Water Conservation Board) and carried out by professional staff. Conservation efforts are further enhanced by the District's Associate Directors and the programs of cooperating agencies.

State and local appropriations, grants, and proceeds from District special programs account for the District's income. The District is professionally audited on a regular basis.

District Directors, staff, and representatives of cooperating agencies meet the first Wednesday of each month. The public is welcome to attend. Board work sessions and standing committee meetings are held as needed.

Mission Statement: The Loudoun Soil and Water Conservation District is responsible for the conservation work within its boundaries (Loudoun County)*. The mission of the District is to provide leadership in recognizing and addressing soil and water conservation issues and problems, both existing and potential, and to promote and develop education and technical programs which will meet the agricultural and urban conservation needs of our District.

*Soil and Water Conservation Law, Code of Virginia, Title 10.1.500

Vision Statement: The Loudoun Soil and Water Conservation District will be the medium through which individuals, organizations, and agencies promote and support a conservation ethic for land, water, and other natural resources to preserve the environment, aesthetics, and community assets of Loudoun County



Conservation Programs and Technical Assistance: Rural

The rural and urban conservation programs of the Loudoun Soil and Water Conservation District are specifically designed to help protect and enhance natural resources. Principal concerns are water quality and quantity of surface and ground water and the control of point source and nonpoint source pollution, soil conservation and prevention of erosion, and the wise use of forests and the preservation of tree cover. FY07 efforts included the following:

Ag BMP Programs

The Virginia Agricultural BMP (Best Management Practices) Cost-Share and Tax Credit Program administered by the District, is the largest program of its type in Loudoun County. In FY07, \$245,501.53, including \$25,404 related to the 319/TMDL Program, was paid in cost-share to farmers and landowners for implementation of BMPs which reduce the levels of nonpoint source pollution and protect Loudoun's streams and land. In addition, these practices, which reduce levels of nitrogen, phosphorus, sediment and bacteria in the waterways of the Potomac watershed, help Virginia meet the goals of the Potomac Tributary Strategy and the Catoclin TMDL Implementation Plan.

Summary of Practices Cost-Shared 07/01/06-06/30/07		
SL-1 Permanent Grass	139 acres planted	\$ 29,558.75
SL-6 Water Systems	21 systems installed	\$100,410.15
SL-8B Cover Crop	720 acres planted	\$ 19,789.50
SL-11 Critical Area	1.5 acres planted	\$ 3,150.00
WP-2 Stream Protection	7.1 miles fence	\$ 64,301.63
FR-1 Reforestation	16.5 acres planted	\$ 2,887.50
AG BMP C-S PAYMENTS		\$220,097.53
TMDL C-S PAYMENTS	(See Page #4)	\$ 25,404.00
TOTAL PAYMENTS		\$ 245,501.53

In FY07, 39 land users/owners who implemented certain BMPs also qualified for a Virginia Tax Credit. The tax credit rate is 25% of the total eligible cost, not to exceed \$17,500. Only the portion of the total cost of the BMP that the land user/owner contributed is used to determine the tax credit. Contact District Agronomist Patricia McIlvaine at (703) 777-2075, ext. 104 to learn more about this program.

Other programs available to Loudoun farmers and landowners through the USDA-Natural Resources Conservation Service (NRCS) included USDA's Conservation Reserve Program, Conservation Reserve Enhancement Program, Farm and Ranchland Protection Program, Environmental Quality Incentive Program, Grassland Reserve Program, Wetlands Reserve Program and Wildlife Habitat Incentive Program. The Leesburg

NRCS Field Office is co-located with the Loudoun District; for information about these federal programs, contact NRCS District Conservationist Larry Wilkinson at (703) 777-2075, ext. 102.

Conservation Farm Plans

In FY07 USDA-NRCS and District staff assisted local farmers and others in the preparation and implementation of 197 conservation plans for approximately 4,415 acres of land. These plans are an excellent land management tool and help owners to meet requirements for participation in certain state and federal ag-related programs as well as in the agricultural or horticultural options of the County's Land Use Tax (LUT) Assessment Program.

A database has been created to allow staff to better coordinate with Loudoun County government about land in LUT, land up for Ag/Forestral District renewal, and applications for barn permits.

Older farm plans are being updated to include new GIS maps that provide soils, floodplain, mountainside, and topographic information.

Technical Assistance

Rural: Designing BMPs, working with the farmer or landowner during the implementation, following up to make sure a practice is "performing" as it should, or making field visits on request to talk about changes or modifications to a farmer/land owner operation are all a part of technical assistance. This interaction between the land user and District and NRCS technical staff typically results in the implementation of the best BMPs to protect the environment and water quality. During the past year, approximately 2,600 contacts were made. Other sources of technical assistance included the Virginia Department of Conservation and Recreation, Virginia Department of Forestry, the Virginia Cooperative Extension Service, and the County Office of Agricultural Development within the County Department of Economic Development.



Urban/Suburban: District Directors and staff worked with units of government and agencies (federal, state, and local), homeowners, homeowners associations, and groups and organizations involved in conservation and environmentally-oriented special projects. Highlights included the following programs and activities:

- District Liaison Peter Holden continued to serve on the County Department of Building and Development's Environmental Review Team which meets weekly to review development plans and makes field visits if needed.
- District staff provided technical assistance to individual homeowners and HOAs, most common problems being erosion and drainage, improper lawn care, and, in the case of HOAs, maintenance of open space.
- District Agronomist Patricia McIlvaine continued her work with Wancopin Watershed Neighbors, the Town of Middleburg, The Hill School, Middleburg Elementary School and other groups and individuals to do stream monitoring, plant riparian buffers, provide educational opportunities and conduct the sixth Annual Middleburg Arbor Day Celebration in the Wancopin Watershed.
- Directors and staff continued to partner with the Town of Leesburg to further the storm drain marking project with other groups throughout Leesburg and especially Leesburg elementary schools. Classroom presentations of the Enviroscape Watershed Model were used to educate students about the effects of pollution on our local watershed.
- The District sponsored the Loudoun Arbor Day Poster Contest, set up exhibits, conducted a tree planting activity and provided free tree seedlings for about 500 participants at the 19th Annual Loudoun Arbor Day Celebration.

In addition to the above referenced programs and activities, Directors and staff continued to serve on a variety of Boards and Committees concerned with environmental issues including the County Water Resource Technical Advisory Committee, Strategic Watershed Management Steering Committee, the Goose Creek Scenic River Advisory Committee, the Potomac Council, the Potomac Watershed Roundtable, Virginia Association of Conservation District Employees Association Committee, and the Virginia Association of Soil and Water Conservation Districts Education Committee.

News Notes

CONSERVATION AWARDS

On October 3, 2006 before the Loudoun County Board of Supervisors and, following the meeting, at a special awards lunch, Arlene Janney and John Janney (Bay Friendly/Clean Water Farm Award), Robert Peeler and Valerie Hubanks (Conservation Farmer), Eric Wells and Mark Hassinger of West Dulles Properties, LLC, (Urban Conservationist) and the Environmental Review Team of the County Department of Building and Development (Conservation Group) were recognized for their efforts in natural resources conservation.



Pete Holden presents "Conservation Group" award to William Marsh, Loudoun County Environmental Review Team.



Jay Frankenfield, Conservation Technician and family

LSWCD Welcomes New Staff Member

Jay Frankenfield accepted the position of part-time Conservation Technician in January 2007.

Jay graduated from the University of Richmond Robins School of Business in 1991 and received a MBA from Pennsylvania State University in 1999. In 2005 he earned a Certificate of Graduate Study in Natural Resources at Virginia Tech, focusing on ecosystem management, conservation ecology, energy resources, and geographic information systems.

Prior to working at the LSWCD, Jay worked in the environmental remediation industry, participating in hazardous waste cleanups on military bases, in oil refineries and on a Superfund site. In 2002, he moved to Loudoun County while working for MCI as a systems analyst. He has also worked as the winemaker's assistant at Tarara Winery in Lucketts, Virginia.

Jay lives in Lucketts with his wife, Barbara, and daughter Lily, born in March 2007.



Special Water Quality Initiatives

Catoctin Creek TMDL Implementation Plan

The Catoctin Creek TMDL Agricultural Program is entering its third year with its continuing focus on reducing the level of fecal coliform bacteria in Catoctin Creek. The creek and its tributaries are located in the northwest portion of Loudoun County including northern Hamilton and Purcellville, southern Lovettsville, along with Waterford, Hillsboro, Taylorstown, and Paeonian Springs.

A large part of the TMDL program involves gaining farmer and landowner participation in the Virginia Best Management Practices Cost-Share Program. In the Catoctin Watershed this includes BMPs such as cover crops, livestock stream fencing, tree plantings, and water systems. The advantages for the environment include less animal waste and sediment entering the water. The benefits for farmers and livestock include keeping animals from wet areas which can lead to hoof diseases and providing clean healthy sources of drinking water.

Currently, the cost-share opportunities mean that up to 75 percent of the cost of a water trough and stream fencing system could be covered under the Catoctin Creek TMDL Program. In addition, cost-share is now available for winter cover crops.



Susan Canada examines her new water trough with Chris Van Vlack. The trough was installed with Catoctin TMDL cost-share assistance.

Approximately \$70,000 in cost-share has already been dispersed to landowners in the watershed for completed BMPs/projects, with a number of other practices under construction. Farms with all sorts of livestock from horses and cattle, to sheep and llamas have been included in the program so far.

As part of the effort to spread the word about the program, flyers are regularly posted at local businesses such as Southern States, T.W. Perry, Loudoun Milling, and Tractor

Supply. Displays have also been set up at fairs and other community gatherings. If you are interested in getting more information about the Catoctin Creek TMDL Program, contact Chris Van Vlack, TMDL Agricultural Specialist, at (703) 777-2075, extension 107 or by email: chris.vanvlack@va.nacdnet.net.



SUMMARY OF PRACTICES COST-SHARED

07/01/06 – 06/30/07

SL-6 Water System	6 systems, 3,294' of fence	\$22,698.00
WP-2 T Stream Protection	902' of fence	\$ 2,706.00
TOTAL		\$25,404.00

WHAT IS TMDL?

What does TMDL Mean to Loudoun County?

Total Maximum Daily Load (TMDL) is the specific pollutant that a water body can receive and still maintain water quality standards. Section 303(d) of the 1972 Clean Water Act enhanced the TMDL process for identifying and restoring the quality of impaired waters.

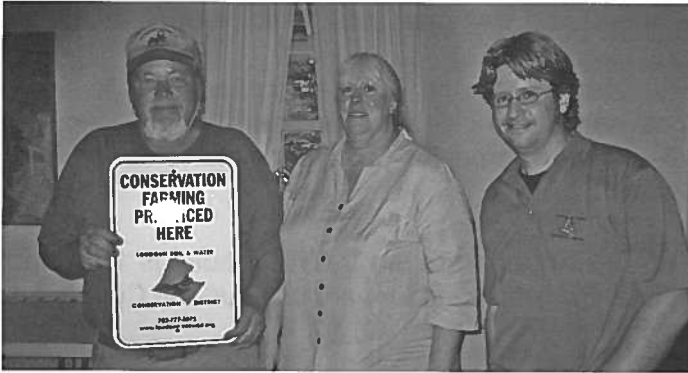
In Virginia, TMDL is a three-step process: the first step identifies impairment sources and calculates the daily load; the second step is the development of an implementation plan that addresses allocation of allowable pollutant loads so the water body will meet the water quality standard, and the third step is implementation of the plan.

Loudoun County's water quality is impacted by nine stream segments listed on Virginia's 1998 303(d) list as exceeding acceptable levels of fecal coliform and one stream segment with benthic (aquatic life) impairment. Fecal contamination of water bodies is from point and nonpoint source contributions. Nonpoint sources of fecal contamination include human, livestock, and wildlife. DEQ lists 3 segments in the Catoctin Creek watershed exceeding fecal coliform water quality standards; one segment in the Goose Creek watershed for benthic life impairment and 5 segments for fecal coliform; and in Piney Run watershed, DEQ lists one segment for fecal coliform impairment. The TMDL development for impaired segments in Loudoun County was completed in 2004.

In Virginia, the Departments of Environmental Quality (DEQ) and Conservation and Recreation (DCR) are the lead agencies working in partnership with EPA, local and state governments, private consultants and local stakeholders to develop all listed TMDLs.

Outreach

During FY07, outreach activities of the TMDL Ag Specialist included hosting a Twilight Dinner for Catoctin Watershed farmers and landowners, providing a display at the Forum for Rural Innovation, judging at the Loudoun County Regional Science and Engineering Fair, presenting a program on soil erosion and layering at the Mountain View Elementary School Science Olympiad, and distributing signs proclaiming "Conservation Farming Practiced Here" to interested farmers and landowners in the Catoctin Watershed who are participants in the Virginia Ag BMP Cost-Share Program (note: the signs are available to all interested cost-share participants in Loudoun County).



Robert Peeler and Valerie Hubanks accept their conservation project sign from Chris Van Vlack.



Phillipa Brunt, Paul Wilson and their children accept their conservation farming sign for their project in Lovettsville.

Water Quality Monitoring

The District's TMDL (Total Maximum Daily Load) stream monitoring program, begun in 1999, collects data on water quality parameters of stream segments impaired for fecal coliform bacteria. Stream samples are collected for fecal coliform bacteria, nitrate, phosphate, dissolved oxygen, water temperature, and pH. Aquatic insect surveys also help to provide data for use in determining water quality conditions and trends. The stream monitoring information is available to the public on the District's website at <http://www.loudoun.vaswcd.org/>.

Statewide Educational Outreach

Public Information and Education Specialist Suzanne Brown served on the Virginia Association of Soil and Water Conservation Districts Education Committee and chaired the Environmental Education Exchange Subcommittee. The goal of the committee is to sponsor 3 environmental education workshops across the state each year. This year the environmental education exchanges were held in Suffolk, Harrisonburg, and at Hungry Mother State Park. The theme for the workshops was "Bringing the Outdoors to a Classroom Near You". The workshops were interactive and provided educators many new activities to take with them for use in the classroom. The presenters included staff from the VASWCD, local SWCDs, Virginia Department of Forestry, Virginia Department of Environmental Quality, and the Local Litter Councils.



Participants learn how to make paper at the educational workshop in Suffolk

The Public Information/Education Specialist served as a member of the Virginia Association of Conservation District Employees Committee planning training opportunities for District employees at the 2007 NACD SE Regional Meeting in Williamsburg.

District Liaison Peter Holden assisted the VASWCD Environmental Education Fund in procuring auction items for the fund-raising activities held at the Annual Meeting in Roanoke.

The District contributed to the education fund of Farm Bureau's "Ag In The Classroom". Peter Holden serves on the AITC Technical Advisory Board.

The District contributed to the scholarship fund of the Virginia Department of Forestry's 2007 Holiday Lake Forestry Camp.

Education Outreach



Directors and staff of the Loudoun Soil and Water Conservation District recognize that one of the keys to success in natural resources conservation and protection and enhancement of the environment is education. For this reason, every effort is made to provide informative and useful programs for people of all ages so that they will have the knowledge and skills needed to make meaningful contributions. FY07 programs and activities included school programs, exhibits, field trips, support and/or sponsorship of special events, mini-grants to educators, and the District newsletter.

In FY07 the District provided 24 school programs for pre-K through 5th grade.

Through grant funding of \$5,500 from the Chesapeake Bay Restoration Fund, the District provided educational programs, exhibits and materials promoting the importance of trees and the benefits of riparian buffers at the Family Stream Day event at Seneca Ridge Middle School, the Loudoun County Arbor Day Celebration at Banshee Reeks Nature Preserve, the Middleburg Arbor Day, and at the Loudoun County Fair. The Fish and Forests Aquatic Ecosystem exhibit and the Soil Tunnel exhibit demonstrate the importance of protecting our soil and water. Over 5,000 tree seedlings were distributed to students, along with educational materials for teachers. Materials were provided for establishing and enhancing riparian buffers and wildlife corridors at five sites: Tuscarora Creek, a head water area of Big Spring Creek, a tributary to Limestone Branch, Little River, and South Fork Catoctin Creek.

The District participated in the 4-H Agricultural Field Days at Temple Hall Farm, organized by the Loudoun Cooperative Extension office, for elementary school students.

The District organized and conducted the FFA Forestry Competition at the Dennis Farm for Loudoun County High School, C. S. Monroe Technology Center, and Loudoun Valley High School students.

The District participated in the Family Stream Day event, organized by Loudoun Watershed Watch, at Seneca Ridge Middle School.

District staff presented programs on watersheds and soils at the Science Olympiad at Mountain View Elementary School which is within the Catoctin TMDL watershed.

District staff assisted Trout Unlimited with stream stabilization and riparian buffer planting at Big Springs Creek, noted by Virginia Department of Game and Inland Fisheries for being the only stream in Northern Virginia supporting a reproducing trout population. Assistance was also provided at the annual Trout Unlimited Fishing Show where the watershed education exhibit provided hands-on educational opportunity and information promoting the benefits of riparian buffers and best management practices.

The District sponsored three awards for environmental projects at the Loudoun County Regional Science and Engineering Fair (see back page for listing of award winners) and staff members participated in the judging.

The District provided 7,790 educational publications to local schools to celebrate Soil and Water Stewardship Week; the theme for this year was "Conservation's Power".

The District contributed 3,650 seedlings to schools, riparian projects, and for various Loudoun County Arbor Day programs.

The District sponsored the 19th Annual Loudoun Arbor Day Poster Contest for kindergarten through 12th grade; the Arbor Day Committee selected the top 50 winners from over 675 entries.

The District awarded 4 mini-grants (each \$500) to teachers for environmental projects at Middleburg and Potowmack Elementary Schools, Seneca Ridge Middle School, and The Hill School.

Staff participated in the Area II Envirothon competition sponsored by the Virginia Association of Soil and Water Conservation Districts.

The District provided a scholarship to a Loudoun County High School student to attend VASWCD's Youth Conservation Camp.

The District published an Annual Report and one issue of the District newsletter, each of which was distributed to more than 2,500 cooperators and other interested individuals.

The 2007 Seedling Program generated approximately \$7,000 for District educational programs and activities.



LOUDOUN SOIL AND WATER CONSERVATION DISTRICT

DIRECTORS

James B. Christian	Chairman
Michael A. Megeath	Vice-Chairman
Steve W. Cawthron	Director
C. Corey Childs	Director
James K. Wylie	Director

ASSOCIATE DIRECTORS

Alex Blackburn	Soil Scientist
Marian Czarnecki	Former Director
George Franklin	Farmer
Vicki Jo Holstead	Secondary School Dean
Gary Hornbaker	Former Director
Kenneth Lowery	Former Director
Dr. Joseph Rogers	Former Director

DISTRICT STAFF

Suzanne M. Brown	Public Information/Education Specialist
Anne B. Burgess	Administrative Assistant
Jay B. Frankenfield	Conservation Technician/Assistant
Peter R. Holden	District Liaison
Patricia J. McIlvaine	Agronomist
Chris Van Vlack	TMDL Ag Specialist

COOPERATING AGENCIES / ENTITIES

County of Loudoun, Board of Supervisors
County of Loudoun Government
Loudoun Cooperative Extension Service
Metropolitan Washington Council of Governments
Northern Virginia Planning District Commission
Towns of Leesburg, Purcellville, Hillsboro, Hamilton, and Round Hill
USDA-Farm Service Agency
USDA-Natural Resources Conservation Service
Virginia Department of Conservation and Recreation
Virginia Department of Forestry
Virginia Department of Transportation

All programs and services are offered on a nondiscriminatory basis without regard to race, color, religion, national origin, gender, age, disability, political beliefs, sexual orientation, marital or family status.

SOURCE OF FUNDS

County of Loudoun
Virginia Agricultural Best Management Practices Program
Virginia Department of Conservation and Recreation
Water Quality Improvement Fund
Chesapeake Bay Restoration Fund
Chesapeake Bay Mini-Education Grants
District Tree Seedling Sale

The Commonwealth of Virginia supports the Loudoun Soil and Water Conservation District through financial and administrative assistance provided by the Department of Conservation and Recreation.

The Loudoun County Board of Supervisors supports the Loudoun Soil and Water Conservation District through an annual grant and provides administrative assistance through the Department of Management and Financial Services, Division of Payroll and Benefits, to administer payroll and benefit matters.

LSWCD AWARDS PROGRAM 2007

COUNTY SCIENCE AND ENGINEERING FAIR

James M. Rowley Award: best project related to water quality:

Michael C. Schmitt, Dominion High School

"An Analysis of Ocean Wind Turbine Vibrations on Fish Physiology"

Leslie W. King Award: best project related to natural resources conservation:

Nicole Ivey, Briar Woods High School

"The Effect of Housing Development and Human Activity on the Fecal Coliform Count in the Potomac River"

**Jack Brown Award: best project related to conservation/environmental concerns
judged by staff to be "best of fair":**

Cathleen L.T. Nguyen, Dominion High School

"Antibiotic Resistance in Bacteria as a result of Water Pollution Runoff"

SCHOLARSHIP

Youth Conservation Camp: Carolyn Trent, Loudoun County High School

Loudoun Soil and Water Conservation District

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www.loudoun.vaswcd.org

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