

# Cub Run & Bull Run Watersheds



# Watershed Conditions

## Water Quality in the Cub Run/Bull Run Watersheds

- 82 percent of streams in Fair or Poor condition
- 74 percent of bacteria samples greater than the state standard
- Bull Run downstream from the mouth of Cub Run is listed for benthic, fecal and PCB impairments



# Watershed Conditions

## Physical Characteristics of Cub Run/Bull Run Watersheds

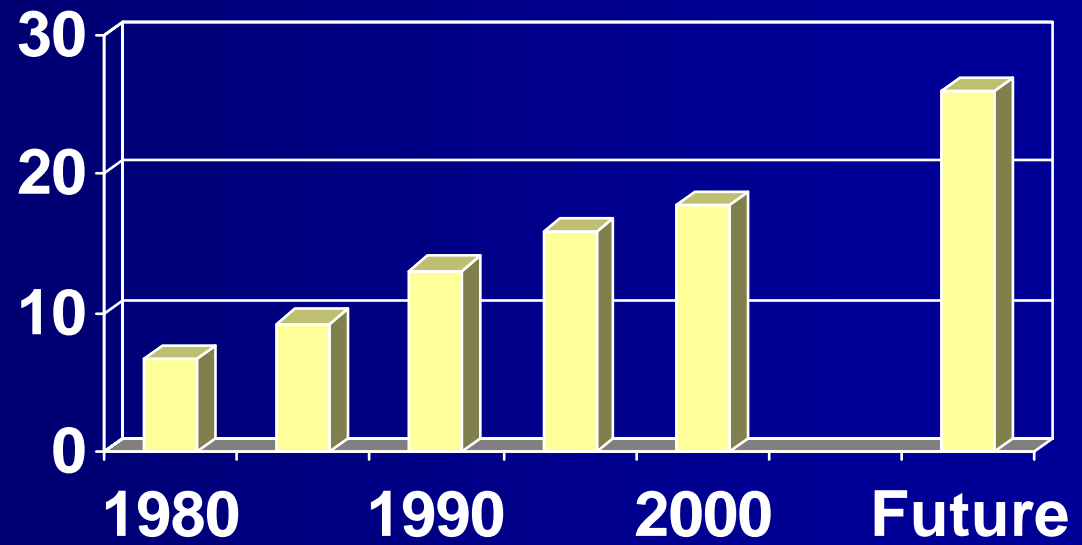
- 10.3 miles of buffer with width <100 ft
- 19.5 miles have unstable banks and severe erosion
- 56 miles in the watershed are actively deepening or widening





# Existing and Future Watershed Imperviousness

## Watershed Impervious Area Percentage



# Watershed Conditions

## Uncontrolled Stormwater Runoff

- Greenbriar/Birch Pond
- Brookfield
- Country Club Manor
- Pleasant Valley

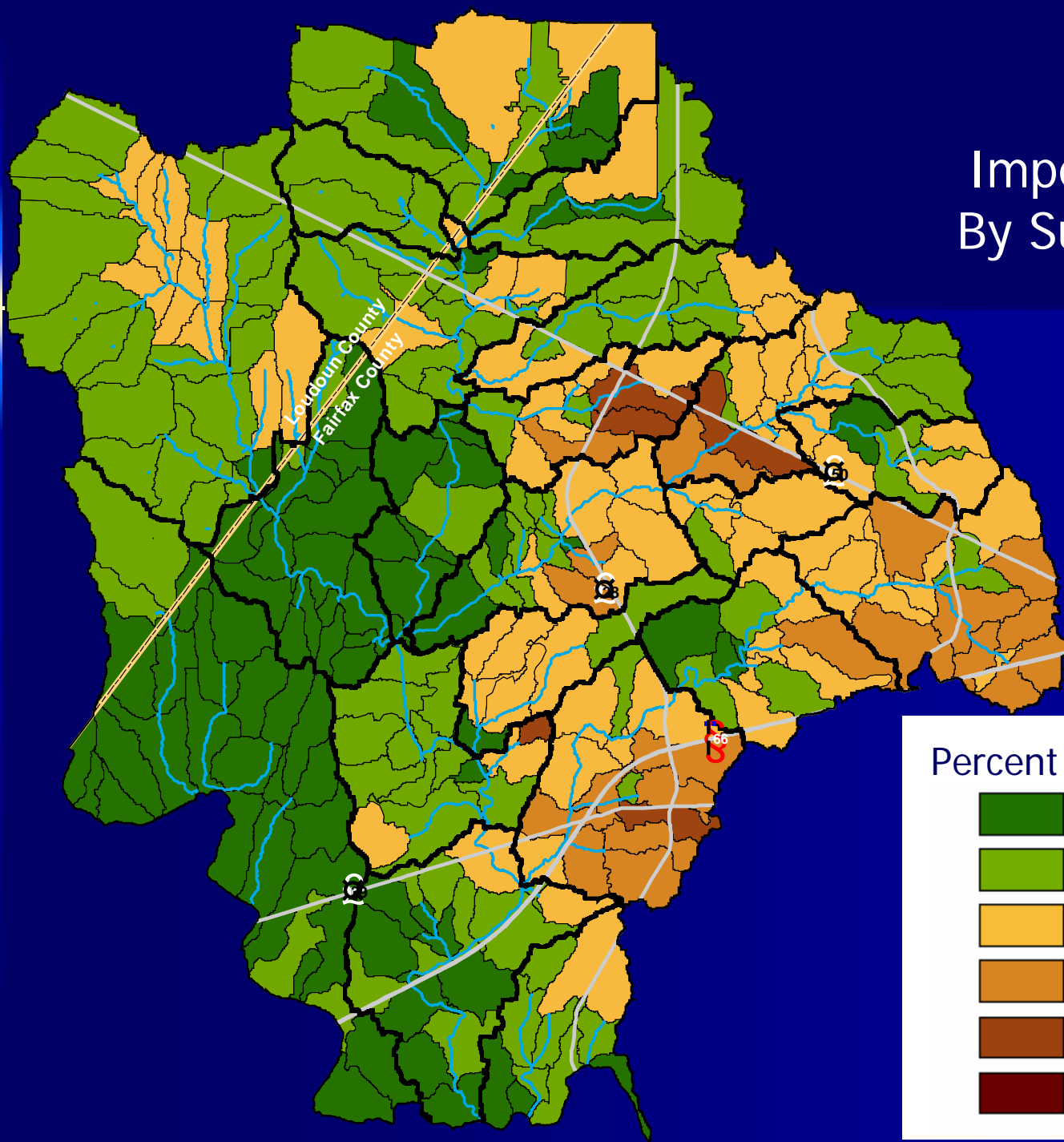


# Chantilly 1937 to 2002

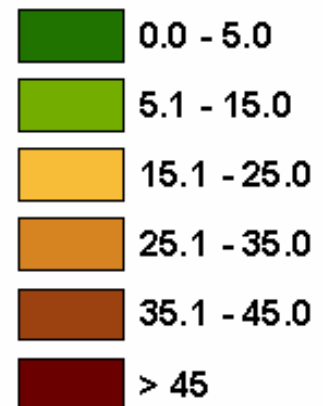
Near the Intersection of Routes 50 and 28



# Existing Imperviousness By Subwatershed

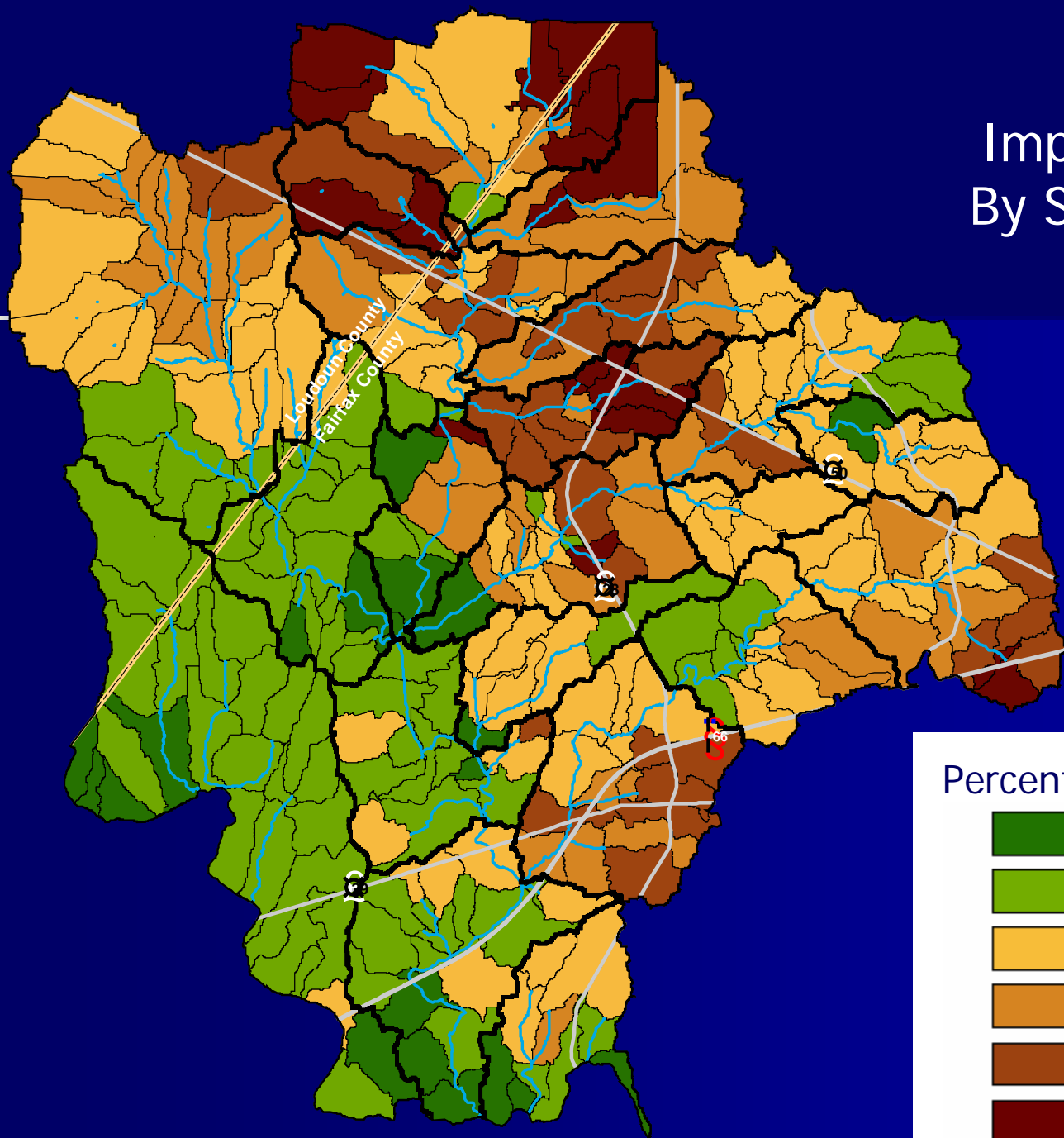


## Percent Imperviousness

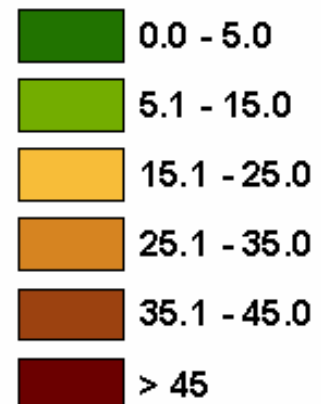




# Build Out Imperviousness By Subwatershed

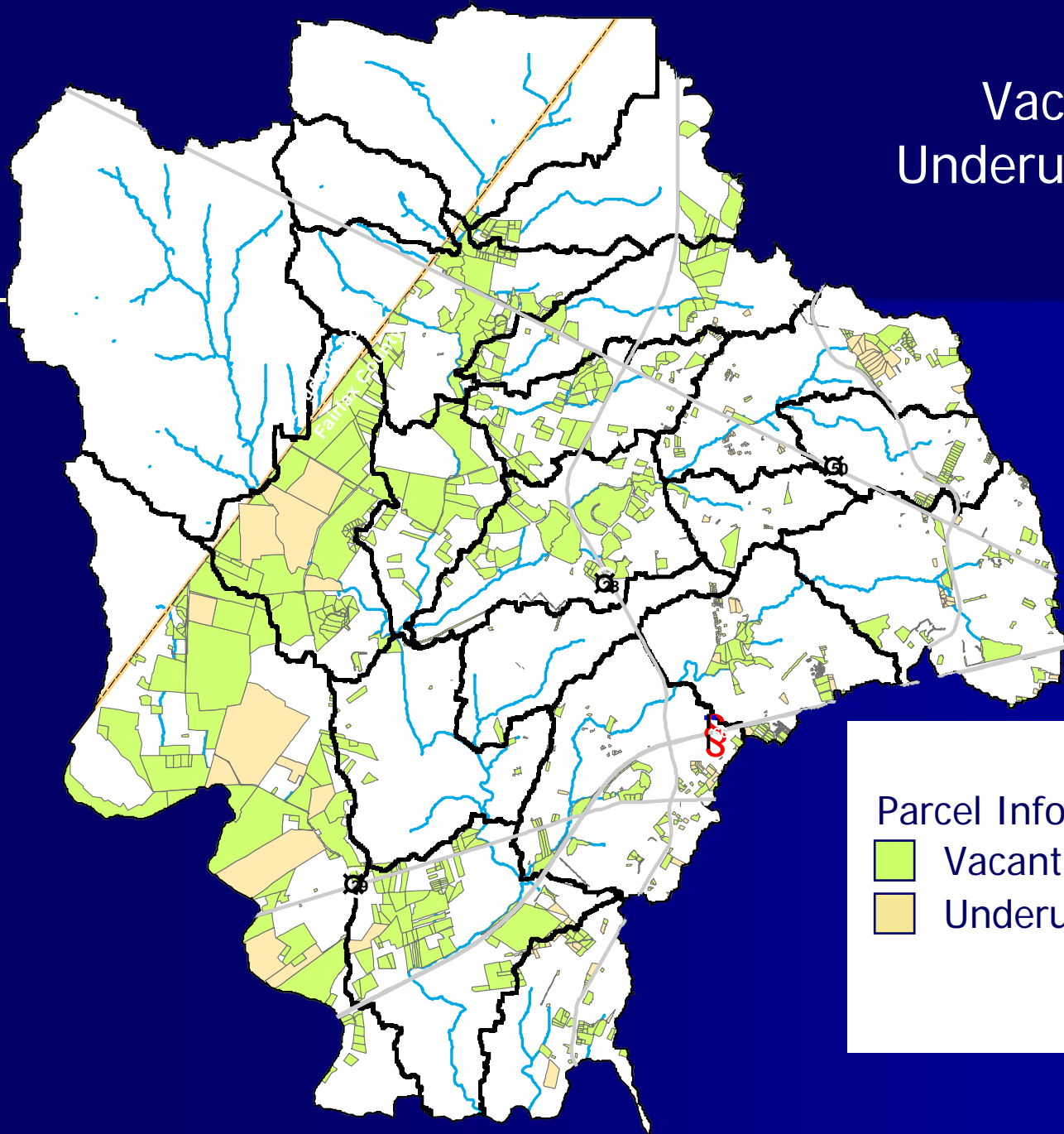


## Percent Imperviousness





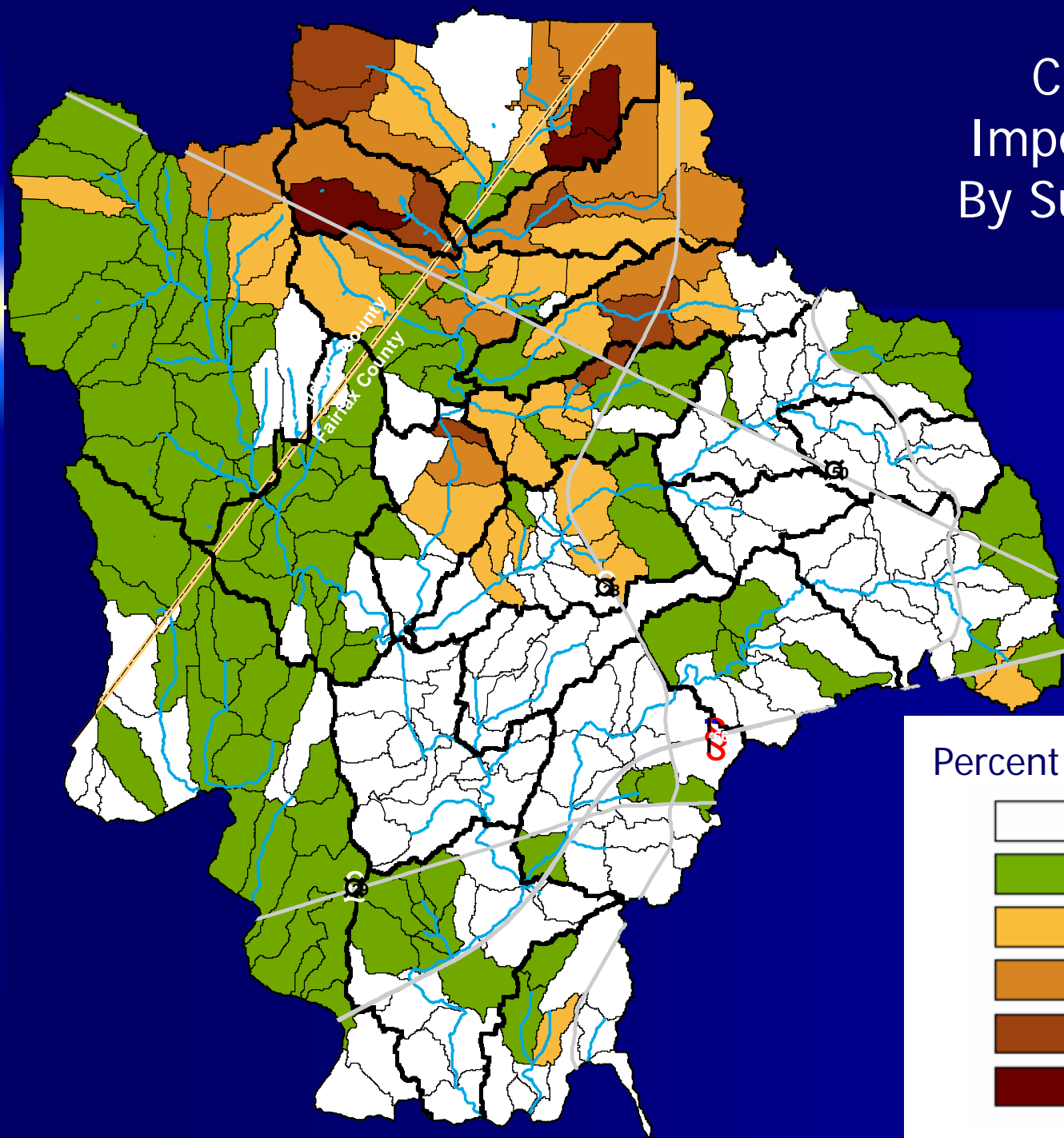
# Vacant and Underutilized Land

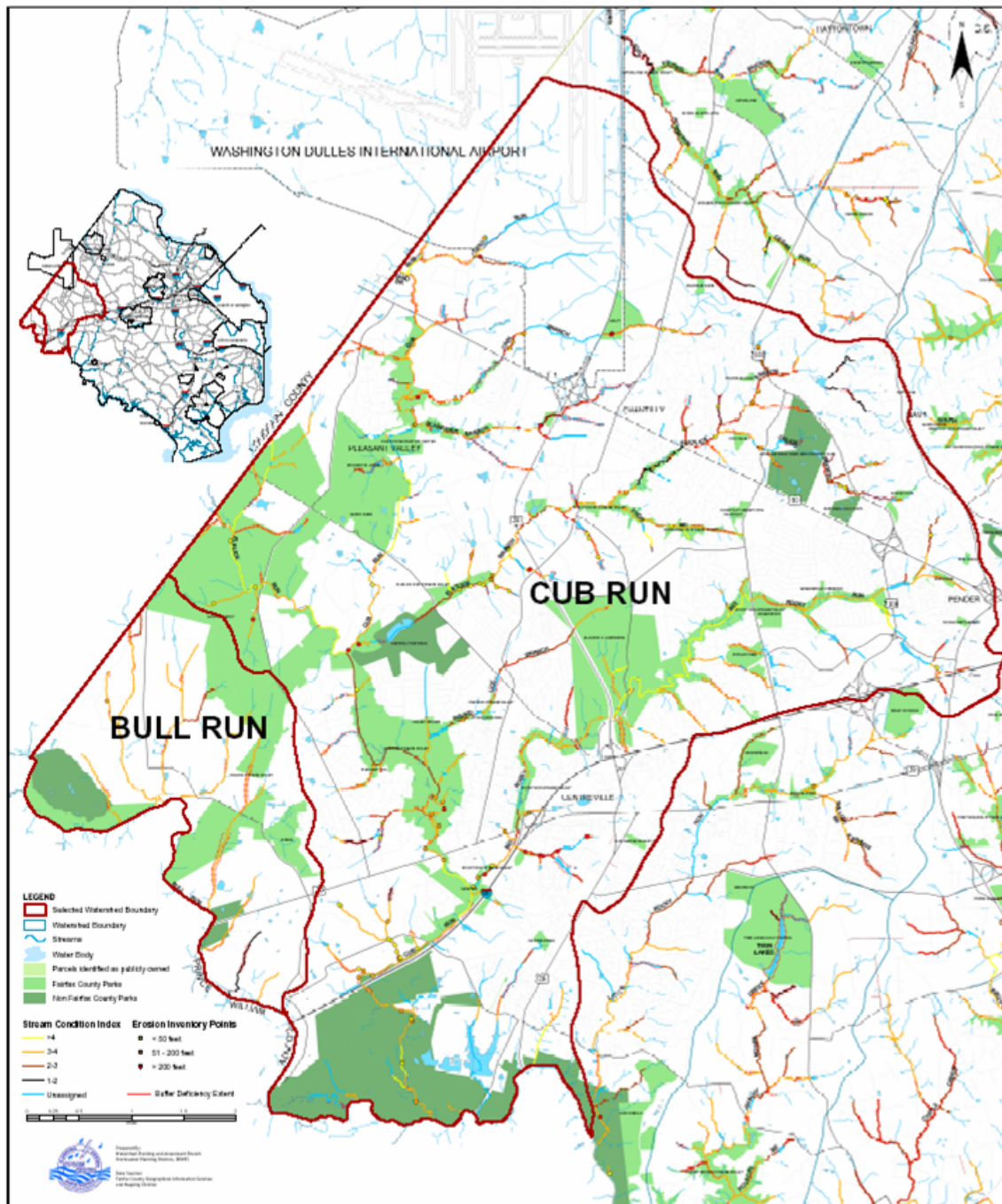


Parcel Information - 2003

-  Vacant
-  Underutilized Residential

# Change in Imperviousness By Subwatershed





# Major Issues

Identified by the Project Team, CAC, and Local Residents

- Uncontrolled Stormwater Runoff
- Polluted Runoff
- Trash
- Streambank Erosion
- Sedimentation
- Habitat Degradation



# Proposed Solutions

## Dry Pond Wetland Retrofits



Dry ponds at the Fairfax County Government Center

### Benefits to the Watershed

- 10 percent increase in phosphorous removal
- 25 percent increase in nitrogen removal
- Improved aesthetics
- Reduced maintenance costs
- Additional water quality protection of 2,600 acres

# Proposed Solutions

## Regional Ponds



### Watershed Benefits

- Best for control of both stormwater flows and pollutant loads
- Most effective tool in control of peak flows (2- and 10-year storms)
- Typically control 100 acres or more, allowing significant nutrient and pollutant removal



# Proposed Solutions

## Establishing Stormwater Controls in Neighborhoods and Schools



### Benefits to the Watershed

- Improve health of neighborhood streams
- Filter and remove pollution
- Innovative stormwater solutions
- Reduce stream erosion near stormwater outfalls



Water Quality Inlet



Rain Barrel



Green Roof

# Proposed Solutions

## Stream & Streambank Buffer Restorations



### Benefits to the Watershed

- Significantly reduce the amount of sediment, phosphorous, and nitrogen reaching the stream
- Improve aesthetics
- Protect existing infrastructure
- Improve in-stream and terrestrial habitat



# Bioengineering

Bioengineering combines biological (live plants) and engineering (structural) methods to provide a stream bank stabilization method that restores natural stream functions and habitat.



Not bioengineered using gabion



Bioengineered using Filtrex along banks

Other

# Proposed Solutions



Eliminating Dump Sites

- Replacing and Upgrading Road Crossings
- Evaluating and Retrofitting Existing Headwater Drainage Systems

## Benefits to the Watershed

- Eliminate contamination potential
- Improve aesthetics
- Reduce flooding
- Reduce stream erosion and sedimentation
- Improve overall headwater stream conditions

# Non-Structural and Policy Objectives

- Public Outreach and Education
- Interjurisdictional Cooperation
- Recreation
- Existing Development
- New Development
- Open Space

# Implementation

- Partnerships with local communities and Home Owners' Associations (HOAs)
- Inter-agency partnerships with Fairfax County Park Authority, Northern Virginia Regional Park Authority, Schools and others
- Continue to work with Loudoun and Prince William Counties, Dulles Airport and others
- Continuation and/or creation of volunteer-based watershed organizations





# Online Information

[www.fairfaxcounty-watersheds.net](http://www.fairfaxcounty-watersheds.net)


**Watershed Planning Project**  
- FAIRFAX COUNTY COMMUNITY -

Who is the Cub Run Planning Team? | Living here (Home) | Business | Visiting | Government | Contact Us

Watersheds Home | Find A Watershed | DPWES Home | Important Links

### Cub Run Watershed

**PROFILE**



Click map to see a larger version

**Description**  
Areas of Fairfax County in the Cub Run Watershed and the Bull Run Watershed Upstream from Little Rocky Run.

**Stream/Creek Name**  
Cub Run and portions of Bull Run

**Tributaries**  
Dead Run, Cain Branch, Flatlick Branch, Ellick Run, Round Lick Branch, and Big Rocky Run. Areas directly tributary to Bull Run.

**Watershed Size**  
47 Square Miles (Sq Mi.)

**Unique Features**  
14 square miles in Loudoun County drain to the watershed. While the impacts of these areas will be evaluated, the watershed plan will not extend into Loudoun County. The study area is tributary to the Occoquan Water Supply Reservoir.

**Notes**

**LAID USE CLASSIFICATION**

This area has undergone rapid growth over the past 20 years. Western portions of the watershed were downzoned.

**CURRENT ANNOUNCEMENTS**

**Community Advisory Committee Meeting**  
The next Community Advisory Committee Meeting will be held on December 13 starting at 6:30 PM. Location is still to be determined.

**Community Advisory Committee Meeting**  
The next Cub and Bull Run Community Advisory Committee meeting will be held on August 9. NOTE: the meeting will be from 6:30 - 9:30 PM to allow extra time to review and discuss the Draft Plan Review Workshop Public Meetings. The meeting will be in the lecture hall of Chantilly High School - 4201 Stringfellow Road

**Draft Plan Review Workshop Public Meeting**  
Come to the Draft Plan Review Workshop and let your voice be heard concerning the Cub Run and Bull Run Watershed Plan. Come to one of the two scheduled meetings: July 28, 2005 from 7:00 to 9:30 at Bull Run Elementary School 15301 Lee Highway, Centreville

**CURRENT EVENT CALENDAR**

Events for Tuesday, January 10, 2006

Prev	January 2006	Next				
Sun	Mon	Tue	Wed	Thu	Fri	Sat
25	26	27	28	29	30	31
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4

No events for this date

**WATERSHED DOCUMENTS**

Category	Type	Description
Publications and Presentations	PDF	Summary of the September 20, 2005 community advisory committee meeting.
Publications and Presentations	PDF	Comments and responses to the July 2005 Draft Plan Report
Maps	PDF	Presentation from September 20, 2005 CAC meeting
Meeting Summaries	PDF	Summary of July 29, 2005 technical and nontechnical subcommittee telephone conference.
Meeting Summaries	PDF	Summary of the August 9, 2005 Watershed Community Advisory Committee Meeting

[more documents](#)

**STEERING COMMITTEE**

**RELEVANT LINKS**

## The Project Web Site

- Calendar of Events
- Meeting Summaries
- Presentations
- Digital Copy of Draft Watershed Plan
- List of Community Advisory Committee Members

E-mail comments or questions to [watersheds@fairfaxcounty.gov](mailto:watersheds@fairfaxcounty.gov)