



**ARLINGTON COUNTY  
NATURAL HERITAGE RESOURCE INVENTORY  
AND  
NATURAL RESOURCES MANAGEMENT PLAN**

# ***BACKGROUND...***

## ***PUBLIC SPACES MASTER PLAN (2005)***

***“CREATE A NATURAL RESOURCE INVENTORY AND TO DEVELOP A MANAGEMENT STRATEGY FOR NATURAL RESOURCE PROTECTION”***

- Bring together various plans & practices to protect the County's natural resources.
- Develop a classification system of the various types of natural resources.
- Define lines of authority & responsibilities among various agencies.
- Create an additional GIS Layer to identify significant natural resources.

# NATURAL HERITAGE RESOURCE INVENTORY: *LAYING THE GROUNDWORK...2005-2008*

ARLINGTON'S FIRST COMPREHENSIVE NATURAL RESOURCE INVENTORY...



*Partnership development...*

# ***PROJECT ELEMENTS:***

**WATER RESOURCES**

**GEOLOGY**

**NATIVE FLORA**

**TREE RESOURCES**

**INVASIVE PLANTS**

**URBAN WILDLIFE**

**GIS**

# WATER RESOURCES...



**STREAM MAPPING**



**SPRINGS AND SEEPS**



**WETLANDS**



**CONSTRUCTED WETLANDS**

# GEOLOGICAL FEATURES...



**SCENIC WATERFALLS**



**OUTCROPS**



**HIGH VALUE EXPOSURES**



**HISTORIC QUARRIES**



# NATIVE FLORA...



LOCALLY-RARE PLANTS



NATIVE FLORA



STATE-RARE PLANTS



SPECIMEN PREPARATION



# NATIVE PLANT COMMUNITIES & TREE RESOURCES...



CHAMPION TREES  
SIGNIFICANT TREES  
FOREST TYPES  
PLANT COMMUNITIES



# INVASIVE PLANTS...

500 acres of parkland mapped...



FIVE-LEAVED AKEBIA



GOOSEBERRY



ENGLISH IVY

*“Invasive plants represent the greatest current threat to the natural succession of local native forests in Arlington County”*

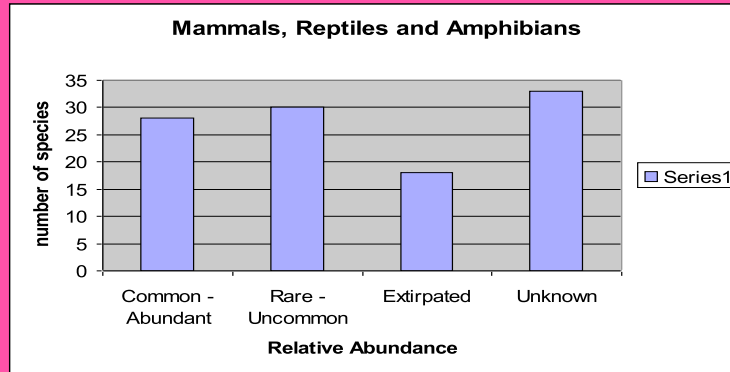


**LEPIDOPTERA**

# URBAN WILDLIFE:



**AVIFAUNA**



**AMPHIBIANS**



**ODONATA**



**REPTILES**



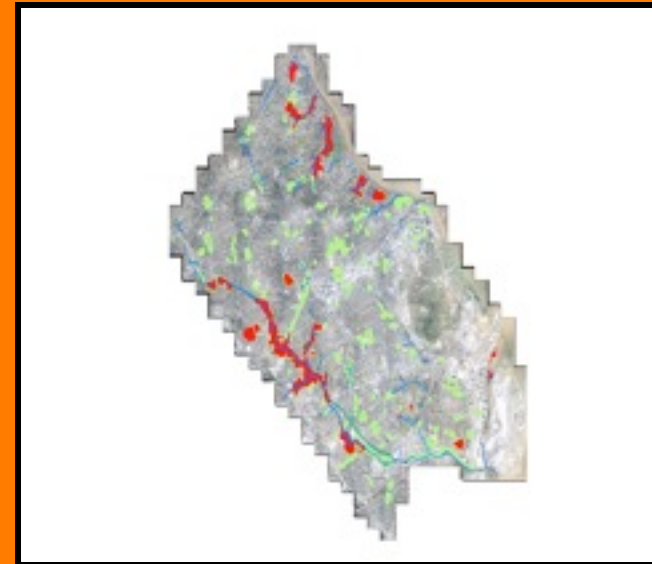
**MAMMALS**

# GEOGRAPHIC INFORMATION SYSTEM (GIS) ...

## Mapping Examples:



Donaldson Run Park



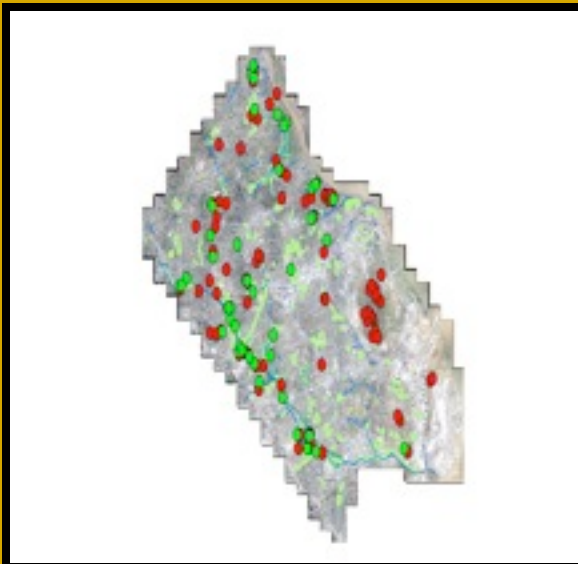
Native Plant Communities



**INVASIVE PLANT DISTRIBUTION**



**WILDLIFE DISTRIBUTION**



**CHAMPION/SIGNIFICANT TREES**

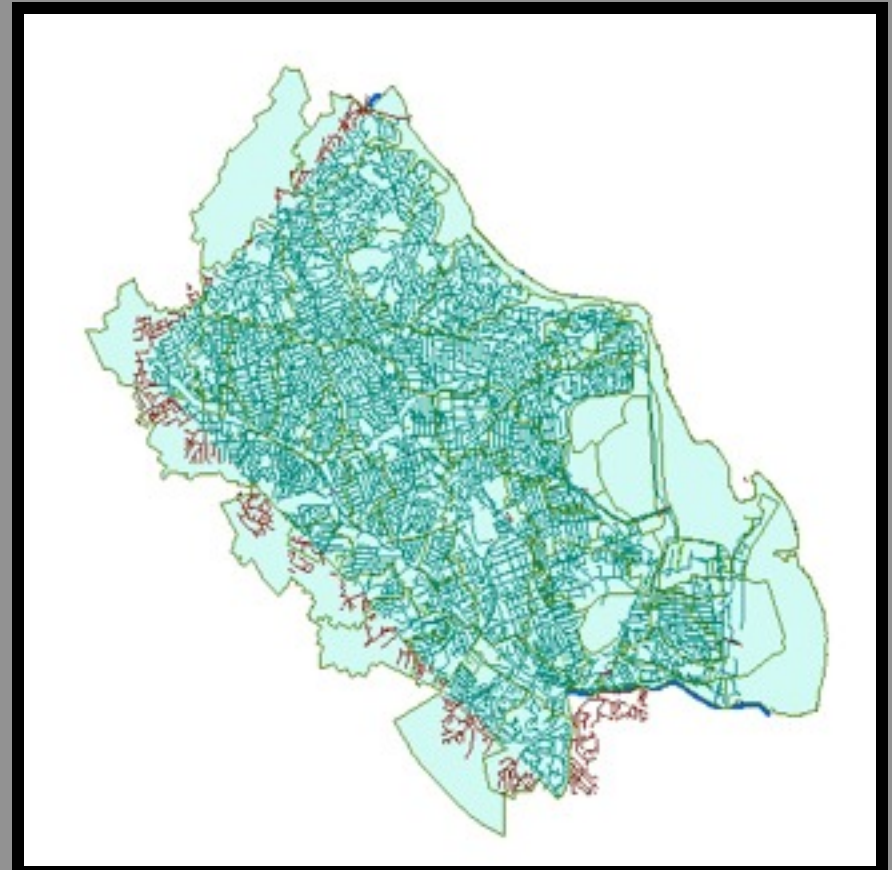
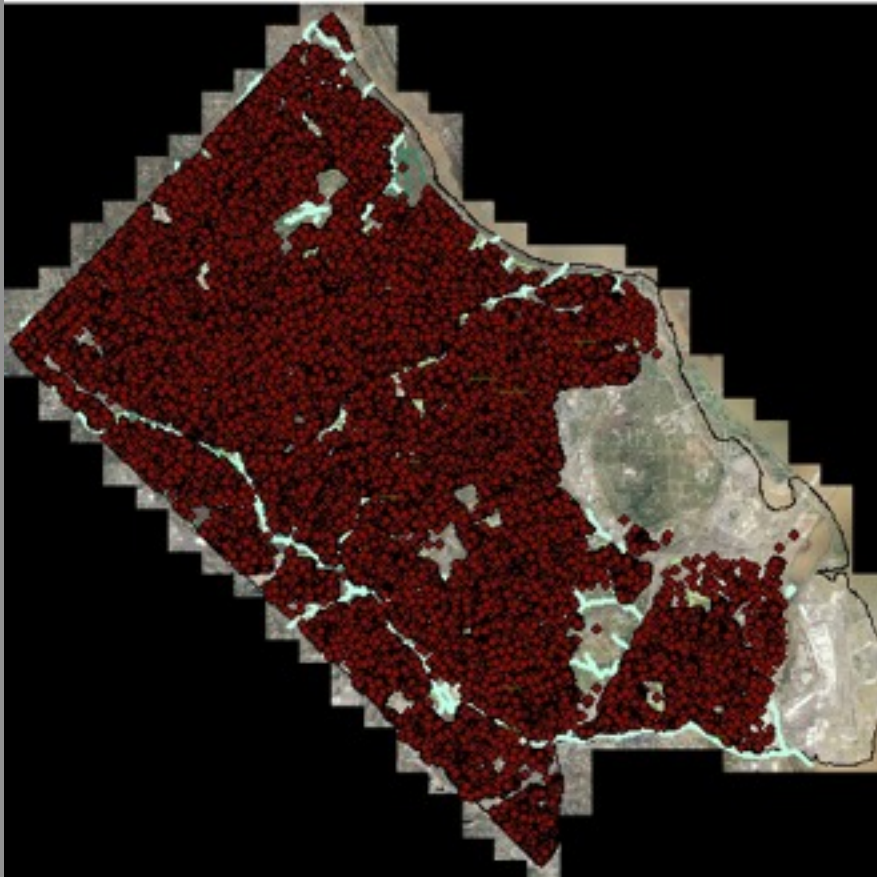


**SIGNIFICANT TREES OF C.F. SMITH PARK**

# PAST, PRESENT AND...

WILDERNESS → RURAL → SUBURBAN → URBAN  
1760                      1920                      1950                      1970

DEVELOPMENT HISTORY



# ...FUTURE?

## *AT THE CROSSROADS...*

26 SQ. MILES

POP. 206,800 (2008)

40% IMPERVIOUS

50% LOSS OF SURFACE STREAMS

360 MILE STORM WATER SYSTEM

GENERAL OPEN SPACE – 18%

REMAINING NATURAL LANDS – 4.4%

HIGH DEGREE OF SOIL DISTURBANCE

WIDESPREAD INVASIVE PLANTS

30% OF NATIVE PLANTS LOCALLY RARE (A1/2)

49% OF MAMMALS EXTIRPATED OR UNDOCUMENTED

75% SNAKES / SALAMANDERS EXTIRPATED,  
UNDOCUMENTED OR RARE

**ARLINGTON COUNTY**  
**2010**

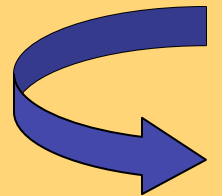
# ***What do we know and where do we go from here?***

***historical records provide the view of the past....  
a rich and diverse natural environment...***

***a review of the patterns of development and urban  
growth document a long period of environmental impact....***

***data collected through the Natural Heritage Resource Inventory have  
identified those remaining high value, including State and National  
Champion Trees, state-rare plants and globally-rare plant communities...***

***current plans, work processes and methodologies were analyzed...***

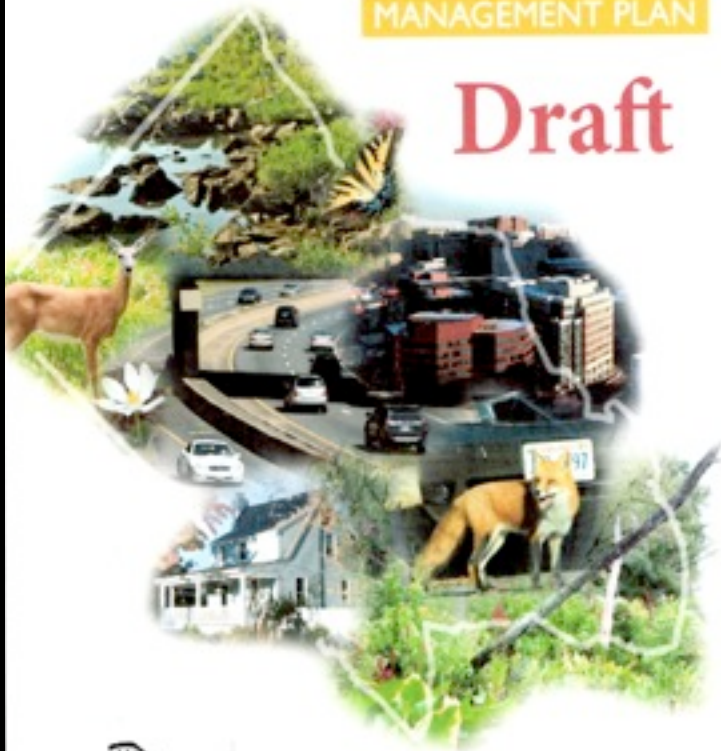


MAY 2010

# NATURAL RESOURCES

MANAGEMENT PLAN

## Draft



  
ARLINGTON  
VIRGINIA

DEPARTMENT OF PARKS, RECREATION  
AND CULTURAL RESOURCES

## PURPOSE AND SCOPE OF PLAN:

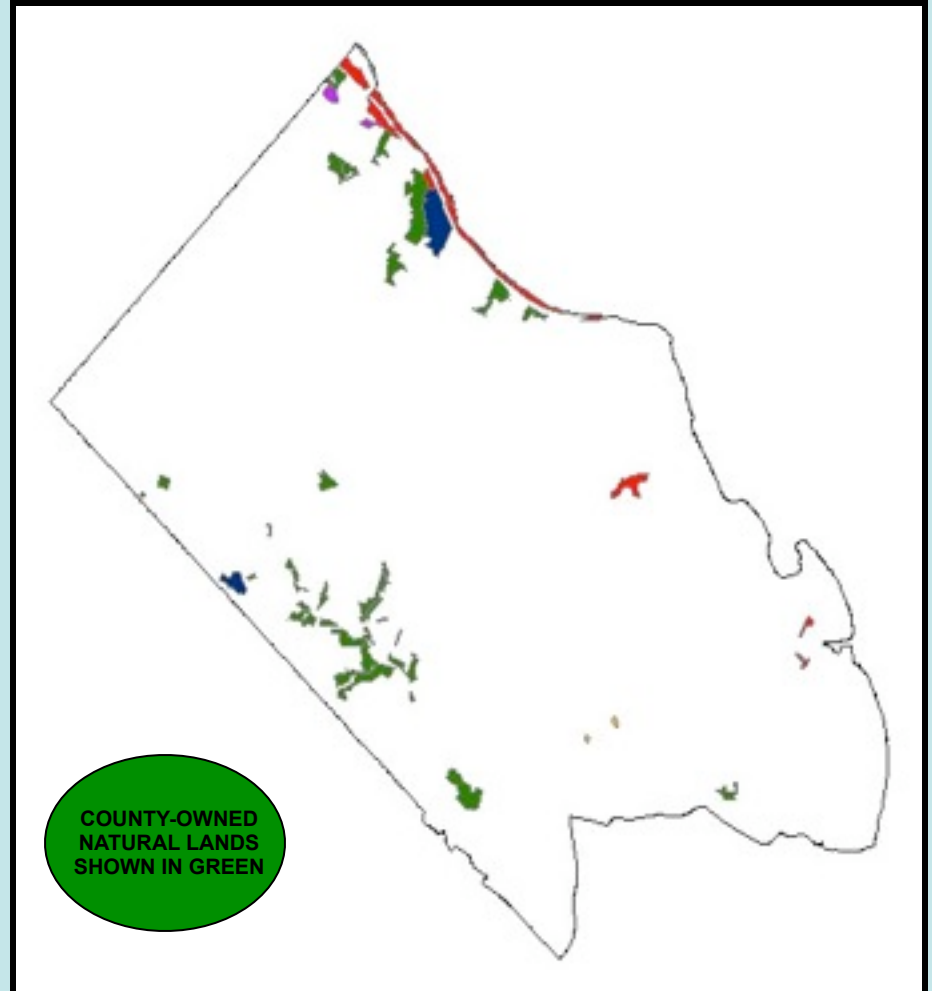
- CONTAINS 19 PRIMARY RECOMMENDATIONS.
- COLLECTIVELY, THESE RECOMMENDATIONS PROVIDE A LAYERED STRATEGY OF PROTECTIVE MEASURES.
- FOCUSES ON LAND AND RESOURCES OWNED AND MANAGED BY ARLINGTON COUNTY.
- PROMOTES A NEW WAY OF THINKING AND SUGGESTS BEST MANAGEMENT PRACTICES.
- PURPOSELY NARROW IN SCOPE, PROVIDING A LIMITED NUMBER OF RECOMMENDATIONS THAT CAN BE IMPLEMENTED IN A REASONABLE PERIOD OF TIME, AFFORDS LITTLE FISCAL IMPACT, AND WILL COLLECTIVELY HAVE A MEASURABLE AFFECT ON NATURAL LANDS PRESERVATION AND NATURAL RESOURCE PROTECTION.

# RECOMMENDATION #1

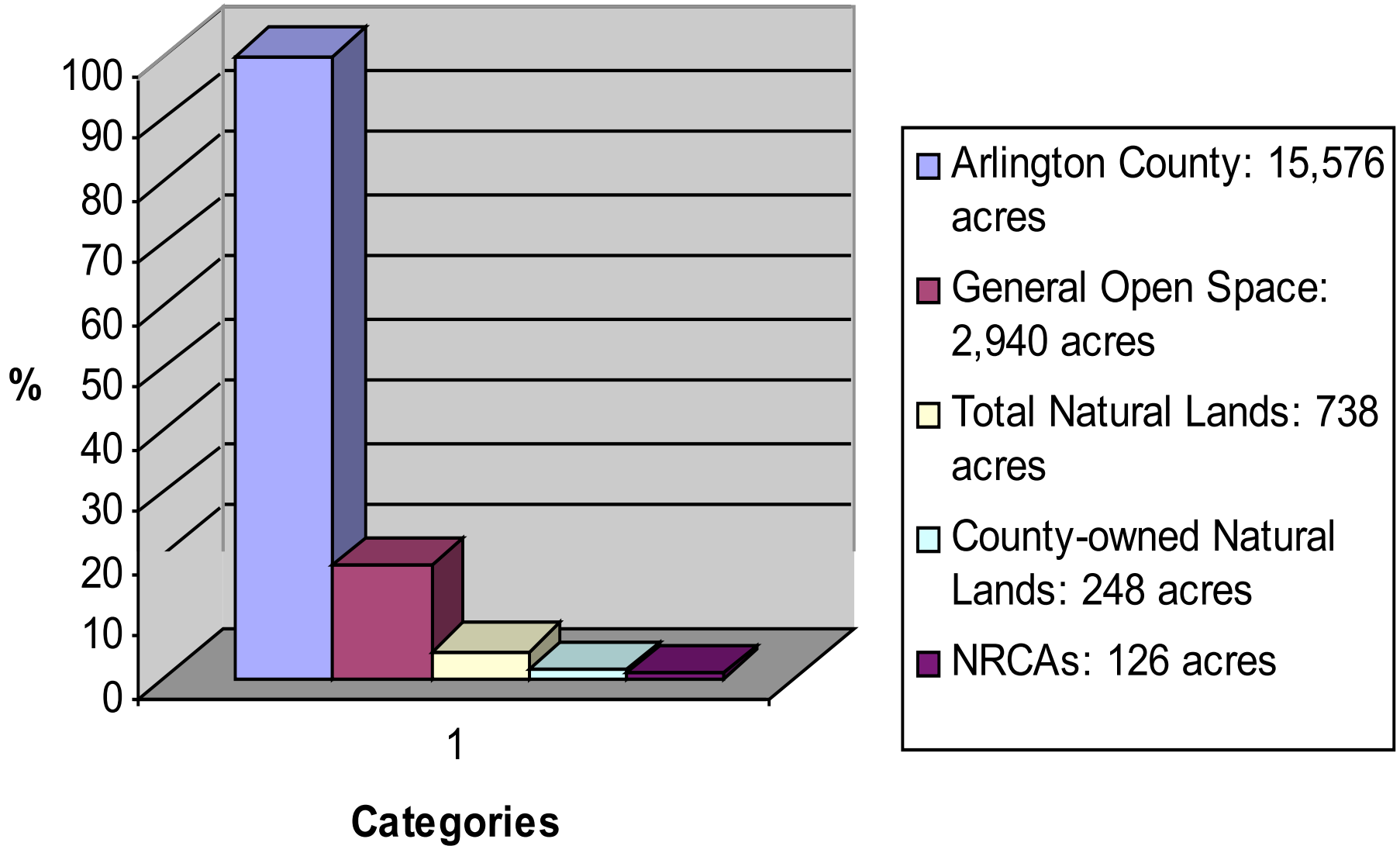
**Adopt a general policy of “Zero-loss” of County-owned natural lands.**

## KEY POINTS:

- Only 4.4% (738 acres) of Arlington remains as natural lands.
- County-owned natural lands are reduced to a total of 248 acres.
- Mature forests cannot be replaced within a human lifespan.
- Pressure to develop our parks for recreational needs in the future will place remaining natural lands at increased risk.
- Will provide positive guidance from the County Board to all County agencies.



# Remaining Natural Lands



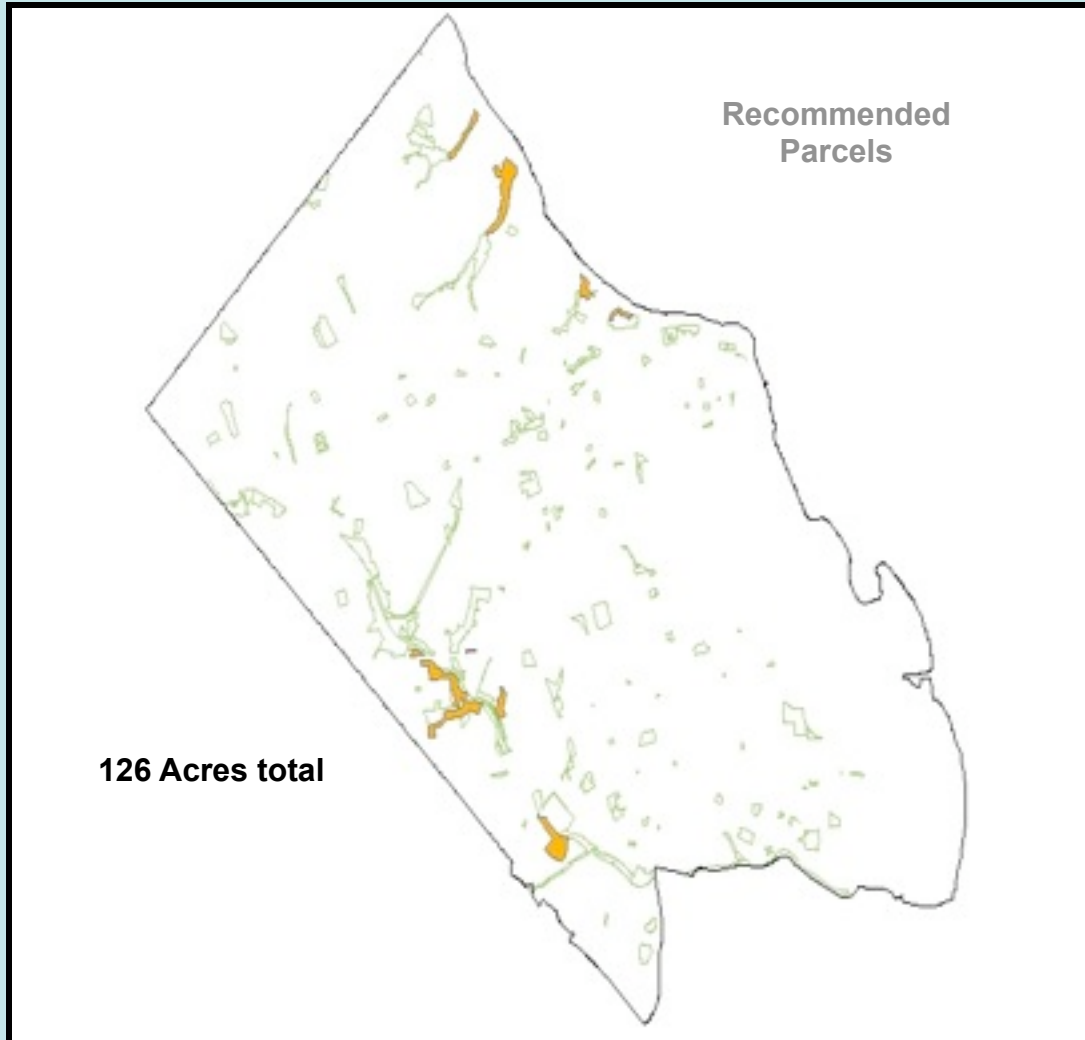
## **RECOMMENDATION #2**

**Establish a new administrative category of County-owned open space, known as Natural Resource Conservation Areas (NRCAs).**

### **KEY POINTS:**

- **Provides protection for the most ecologically sensitive natural lands.**
- **Allows parcels to be managed on an ecosystem-level basis.**
- **Management objectives: preservation and conservation of existing resources.**
- **Passive use allowed. Encroachment, active recreation and development restricted.**
- **Parcels represent a total of 126 acres of County-owned and managed open space.**

# NATURAL RESOURCE CONSERVATION AREAS



**Gulf Branch Park  
Donaldson Run Park  
Windy Run Park  
Fort C.F. Smith Park  
Long Branch /  
Glencarlyn Park  
Barcroft Park  
Arlington Forest Park**

**SOUTH BARCROFT PARK**



## **RECOMMENDATION #3**

**Develop a new GIS-based environmental review process to protect significant individual natural resources on Arlington County-owned open space from ongoing maintenance activities, redevelopment or new construction on County-owned properties or private properties within 100' of a designated natural resource feature...**

**Explore expansion of current County review process to help ensure that land-disturbing activities on private property would not adversely impact documented natural resources on property owned or managed by....Northern Virginia Regional Park Authority, Arlington Public Schools, Northern Virginia Conservation Trust, or any other land trust.**



## **KEY POINTS:**

- **Current regulations and policies do not provide adequate protection for known local significant natural resources. Presently, protection is voluntary.**
- **Development of new “environmental review” GIS data layer of documented natural resource features would provide protections.**
- **A new abbreviated review process would be required for all projects on County property or private property within 100’ of a known significant resource on County-owned land.**
- **Advance knowledge of natural resource locations will improve ability to master plan parks, aid in long-range planning and park development, and provide a known baseline for future environmental assessments.**

**Short's Sedge *Carex shortiana* (S3)**  
**Bluemont Park**



***PROTECTON FOR  
RARE PLANTS***





## ***PROTECTION OF GEOLOGICAL RESOURCES***

**BON AIR PARK**

**HISTORIC ROCK  
QUARRY**



# PROTECTION OF SIGNIFICANT TREE RESOURCES



**LEE ART CENTER**

**SCARLET OAK (S4)**



**THANK YOU...**

**We will be happy to respond to any  
Questions about the Natural  
Resource Management Plan,  
or Recommendations # 4-19.**

# ACKNOWLEDGMENTS

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Anthony Bulmer, Naturalist (small mammals)

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Alonso Abugattas, Naturalist Lepidoptera surveys

David Farner, PRCR Avifauna research

Meghan Tice – Data Management

John White – herpetology and photography

Natural Heritage Resource Inventory volunteers

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