

Integrating Green Infrastructure into Land Use Planning



Hampton Roads GI Workshop
September 2006



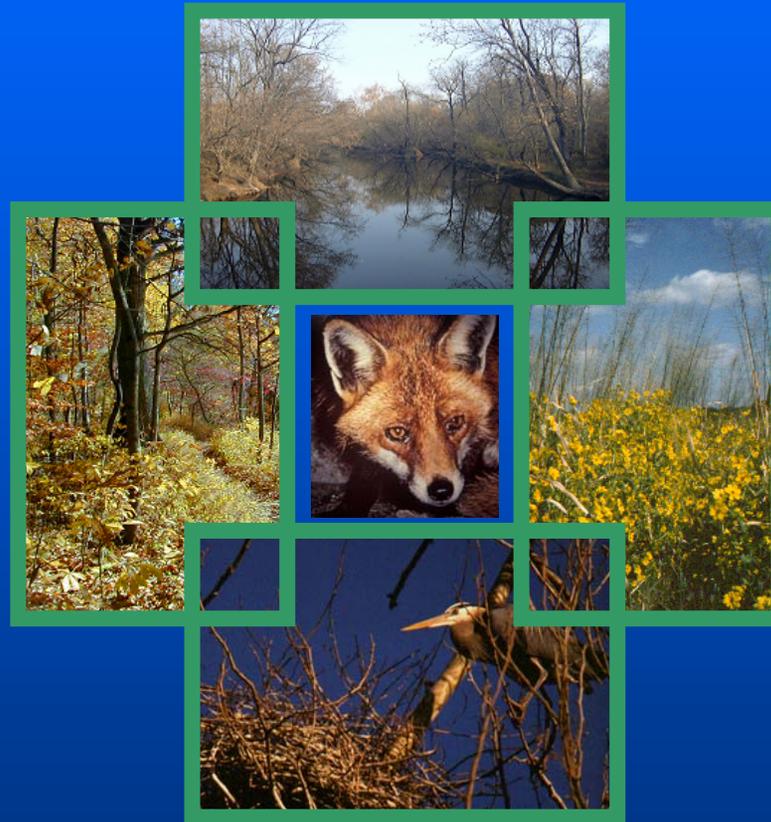
Maryland-National Capital Park and Planning Commission

Today's Presentation

- How did we **get started**?
- What were the key steps for developing a **green infrastructure master plan**?
- How is it being **implemented**?



How did we get started?



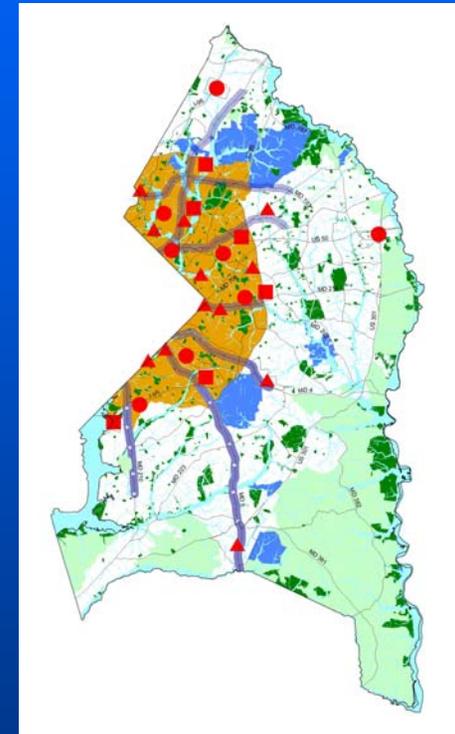
2002 General Plan

Environmental Infrastructure

POLICY: “Protect, preserve, enhance and/or restore designated green infrastructure components by 2025.”

STRATEGIES:

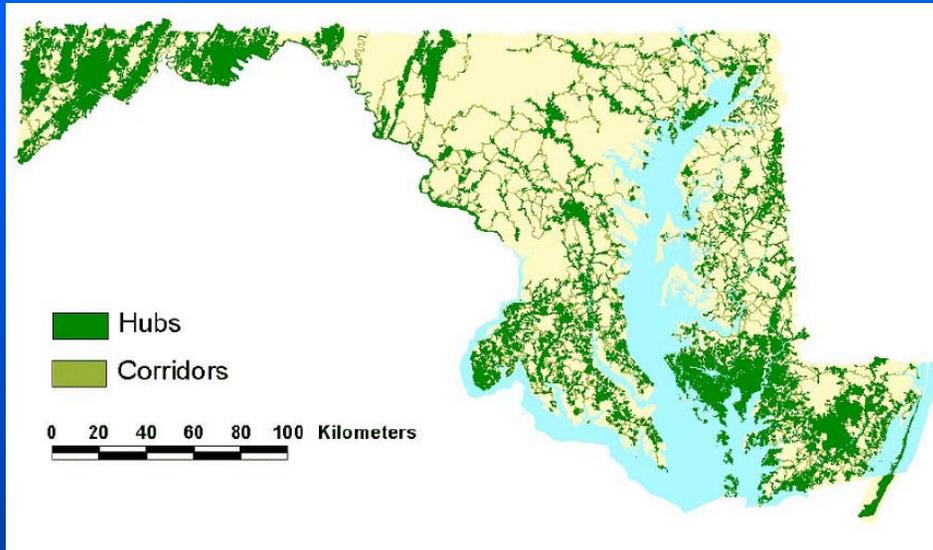
- a. Prepare a **Green Infrastructure Plan** in concert with the desired development pattern of the General Plan.
- b. Revise appropriate legislation.
- c. As new master & sector plans are prepared, identify opportunities for implementation.



**Prince George's
2002 General Plan**



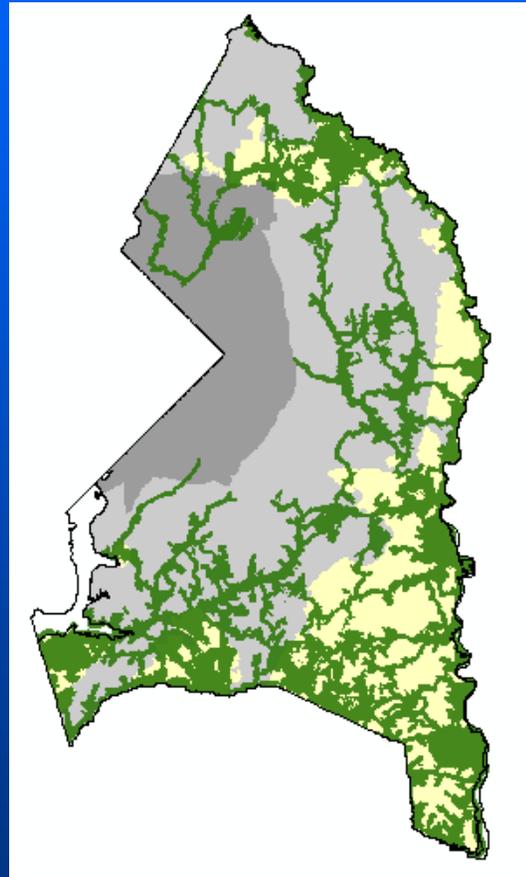
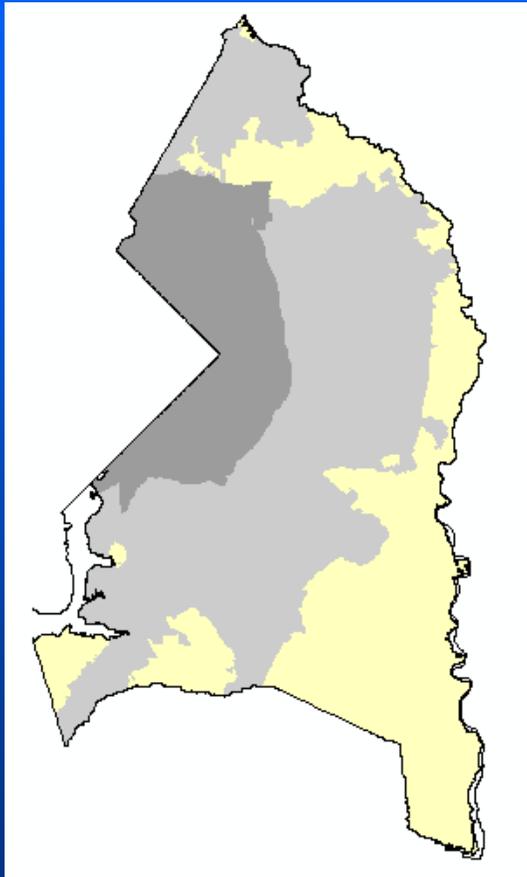
Maryland's Green Infrastructure Assessment



- Identified large contiguous blocks of natural land (hubs) of 250+ acres in size.
- Connected these lands through a system of corridors or linkages at least 1,100 ft. in width.
- Served to rank or prioritize state land protection efforts.



Applying the State's GI Assessment to Prince George's County



State GI Network

 State GI Network

Growth policy tiers

 Developed Tier

 Developing Tier

 Rural Tier



Developing a Countywide Green Infrastructure Master Plan



Define 'Green Infrastructure'



An interconnected network of waterways, wetlands, woodlands, wildlife habitats and other natural areas of countywide significance.



Identify the Benefits

- **High-level support and recognition.**
- **Big picture planning** as opposed to piecemeal protection.
- **Coordinated** plan for preservation, restoration and mitigation.
- **Settled expectations.**
- More efficient use of **staff time.**
- Improved **water quality**, and improved fish and wildlife **habitat.**



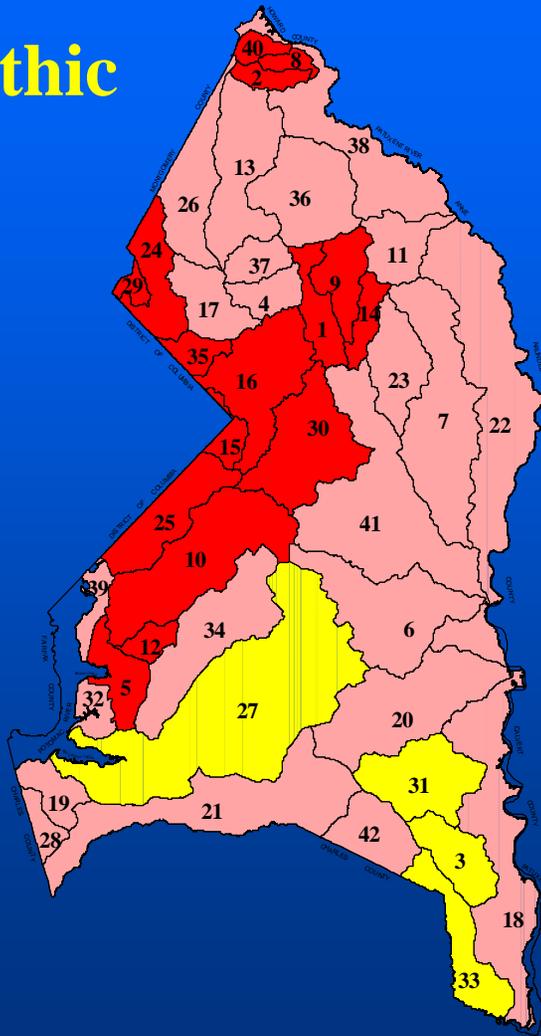
Establish Guiding Principles

- Identify **contiguous network** of environmentally important areas.
- Set forth **strategies** to preserve, protect, enhance, and restore the network.
- Support the **desired development pattern** of the General Plan.
- Recommend effective **implementation** mechanisms.
- Support the County's **Livable Communities Initiative**.
- Ensure meaningful **public participation**.

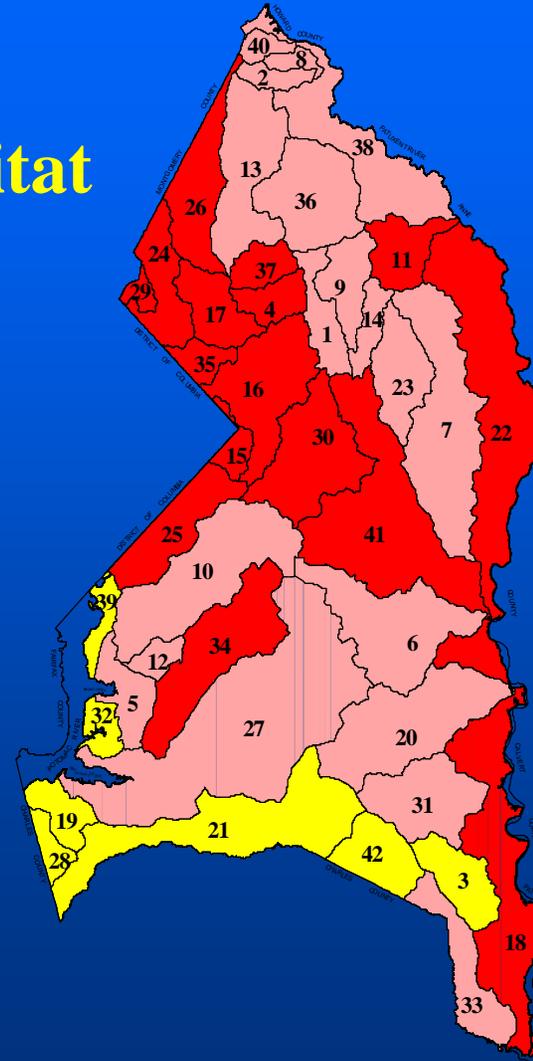


Water Quality of Major Watersheds

Benthic IBI

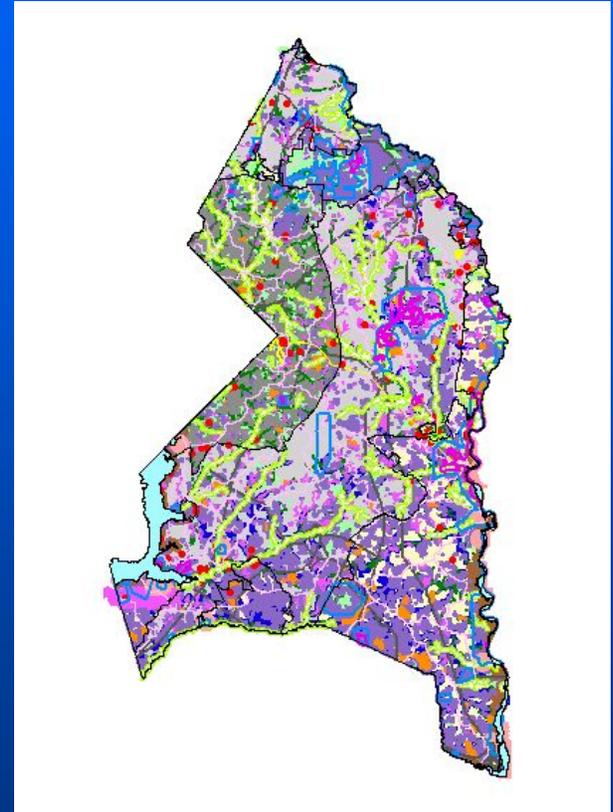


Fish Habitat



Conduct Research

- Location of existing environmental resources
- Water quality
- Air quality
- Wildlife issues
- Development trends
- Land use trends
- State Green Infrastructure
- Other jurisdiction approaches

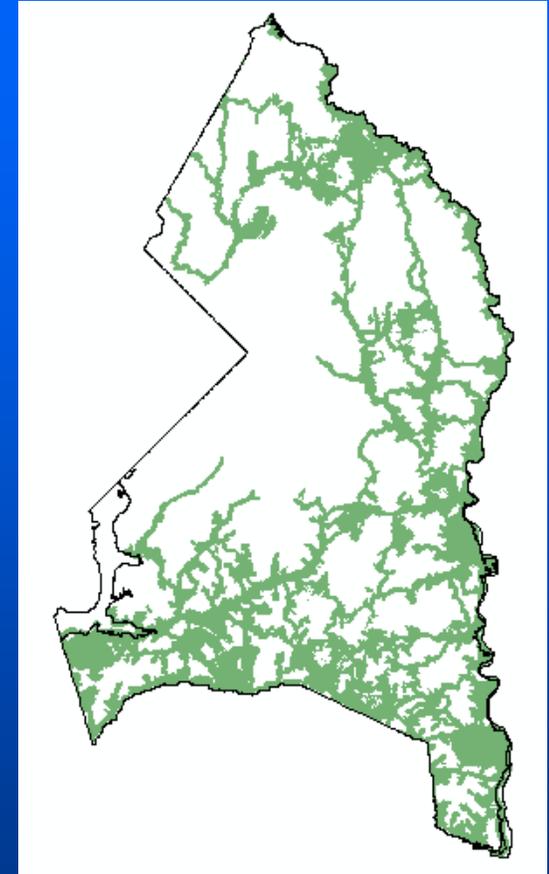


Determine the Size of Green Infrastructure Elements

State GI Assessment Elements:

- Green corridors: 1,100 feet wide
- Green hubs: 250 acres

What sizes should be recommended for the county plan?



“Countywide Significance”

Size of Network

- Minimum 200’ wide in Rural and Developing Tier
- No minimum width in the Developed Tier

Connectivity

- Gap less than 600 feet

Contiguity

- Downstream corridors
- Open bodies of water (e.g., Anacostia River), or
- Designated open space of adjacent jurisdictions



Engage Focus Groups: Mapping Scenarios



Scenario 1
 $\pm 25\%$ of County



Scenario 6
 $\pm 57\%$ of County

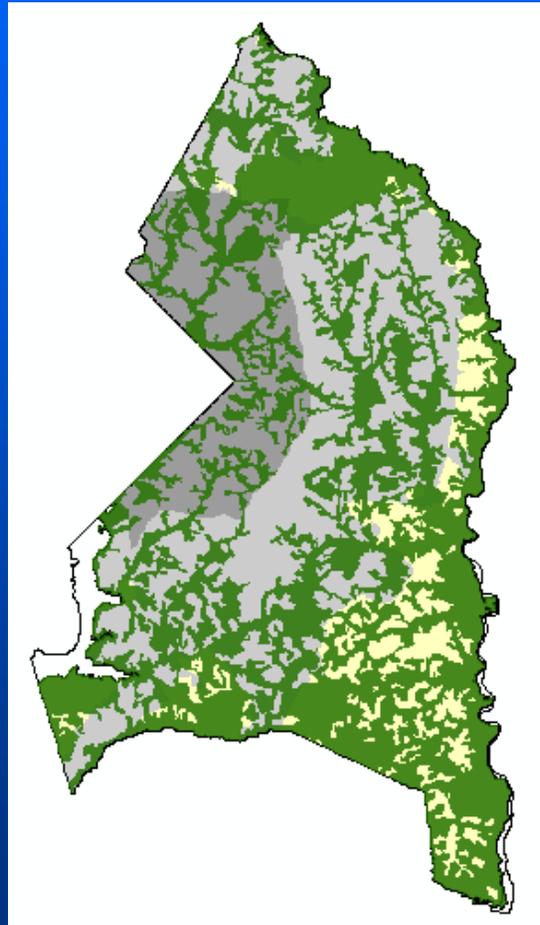


What we heard from the focus group

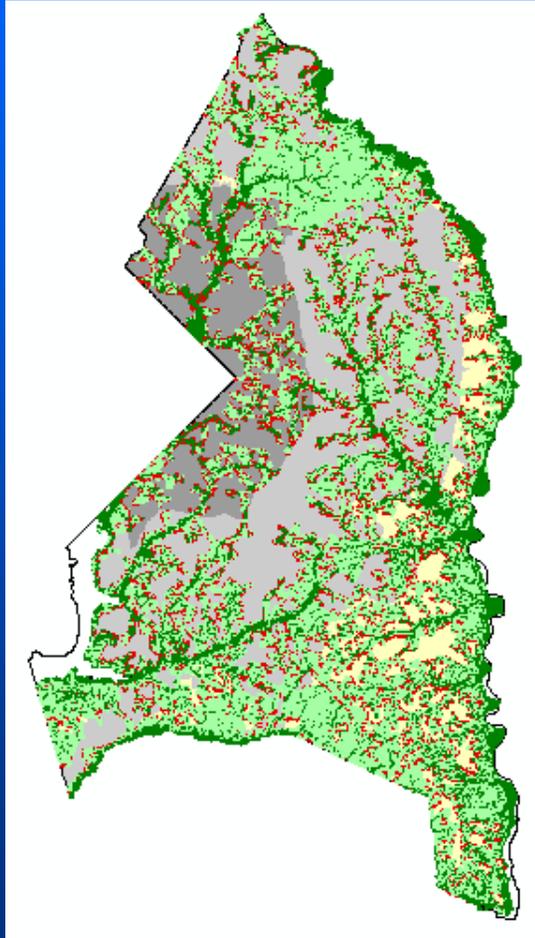
- Objectives should be measurable.
- Include more, not less in network.
- Allow many diverse implementation options.
- Strengthen regulations where environmental conditions warrant and allow relief mechanisms where development is targeted.
- No consensus on how to modify maps for existing and/or planned development.



State's GI Assessment versus the County's final GI Network



Prince George's Countywide Functional Master Plan



- Policy guide for development and zoning decisions.
- Basis for making site-specific development review decisions.
- Guide for targeting county funds for environmental preservation, conservation and restoration activities.



Prince George's Green Infrastructure Master Plan components

One Overarching Goal

- Preserve, enhance, and/or restore an interconnected green infrastructure network...

Eight Measurable Objectives

- Ensure 75% of GI network intact in 2025
- Direct 90% of land acreage purchased towards GI network...

Five Policies

- Preserve, protect & restore the GI network;
- Protect and enhance surface and ground water...

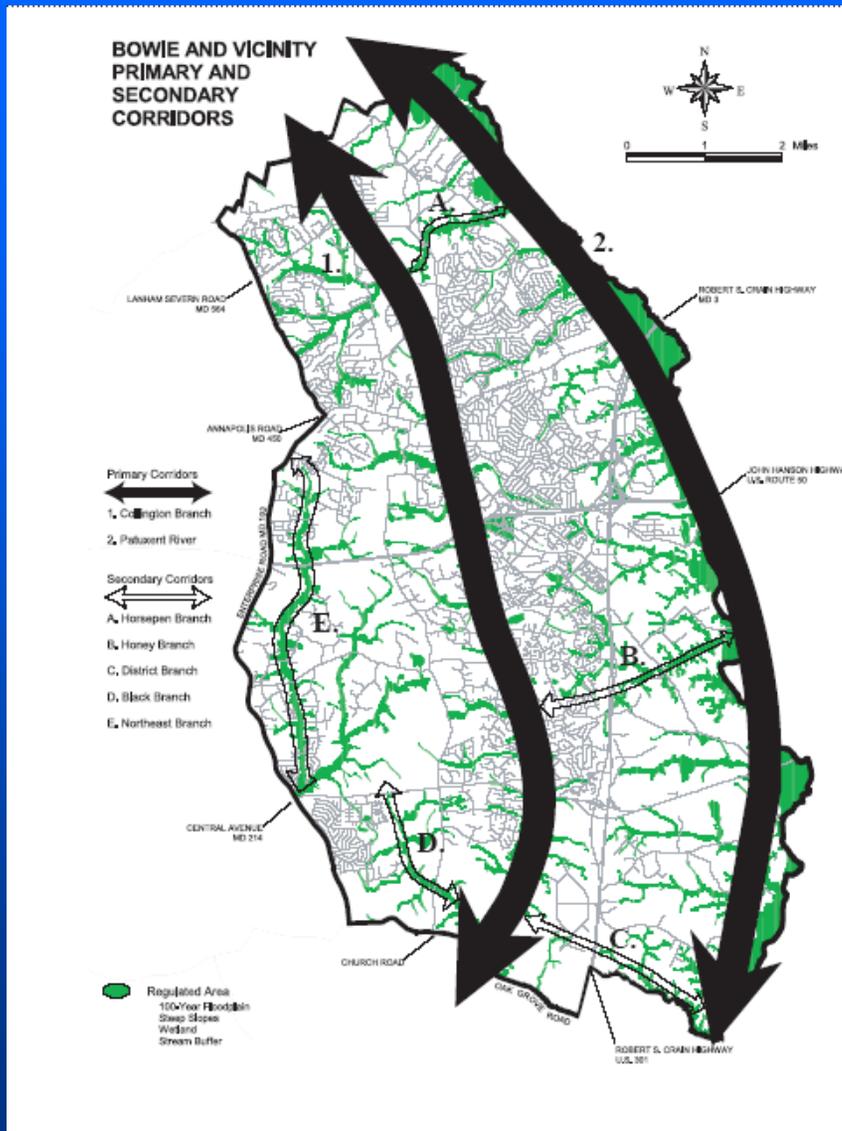
... *and* Multiple Implementation Strategies



How is it implemented?



Implementation through Sector Plans



- Identify any areas of local significance
- Identify primary and secondary green infrastructure corridors
- Identify policies and strategies to preserve, enhance, and/or restore the green infrastructure network



Implementation through the Development Review Process

M-NCPPC GIS - Microsoft Internet Explorer provided by PPD

GIS PRINCE GEORGE'S COUNTY

Zoom In Zoom Out Full Extent Zoom Last Pan Identify Push Pin Select Box Measure Clear Map Print Site Reload

GIS Layers

- Administrative
- Business
- Community
- Dept. Environmental Resources
- Environmental Features

Select All None

Visible	Active	
<input type="checkbox"/>	<input type="radio"/>	FEMA Flood Plain
<input type="checkbox"/>	<input type="radio"/>	Watershed
<input type="checkbox"/>	<input type="radio"/>	Streams
<input type="checkbox"/>	<input type="radio"/>	Two Foot Contours
<input type="checkbox"/>	<input type="radio"/>	Marlboro Clay
<input type="checkbox"/>	<input type="radio"/>	None Present
<input type="checkbox"/>	<input type="radio"/>	Present
<input type="checkbox"/>	<input type="radio"/>	Evaluation Zone
<input type="checkbox"/>	<input type="radio"/>	Slopes
<input type="checkbox"/>	<input type="radio"/>	15% to 24%
<input type="checkbox"/>	<input type="radio"/>	> 25%
<input type="checkbox"/>	<input type="radio"/>	TCP1 Submitted
<input type="checkbox"/>	<input type="radio"/>	TCP2 Submitted
<input type="checkbox"/>	<input type="radio"/>	TCP Submitted Exempt
<input type="checkbox"/>	<input type="radio"/>	Vegetation
<input type="checkbox"/>	<input type="radio"/>	Wetlands
<input type="checkbox"/>	<input type="radio"/>	Historic Sites Env Settings
<input checked="" type="checkbox"/>	<input type="radio"/>	Green Infrastructure Plan
<input type="checkbox"/>	<input type="radio"/>	Regulated Area
<input type="checkbox"/>	<input type="radio"/>	Evaluation Area
<input type="checkbox"/>	<input type="radio"/>	Network Gap
<input type="checkbox"/>	<input type="radio"/>	AAFB Noise Contours
<input type="checkbox"/>	<input type="radio"/>	Less than 69 Decibels
<input type="checkbox"/>	<input type="radio"/>	69 - 73 Decibels
<input type="checkbox"/>	<input type="radio"/>	73 - 77 Decibels
<input type="checkbox"/>	<input type="radio"/>	77 - 81 Decibels
<input type="checkbox"/>	<input type="radio"/>	81 - 86 Decibels

Government
Grids
Imagery

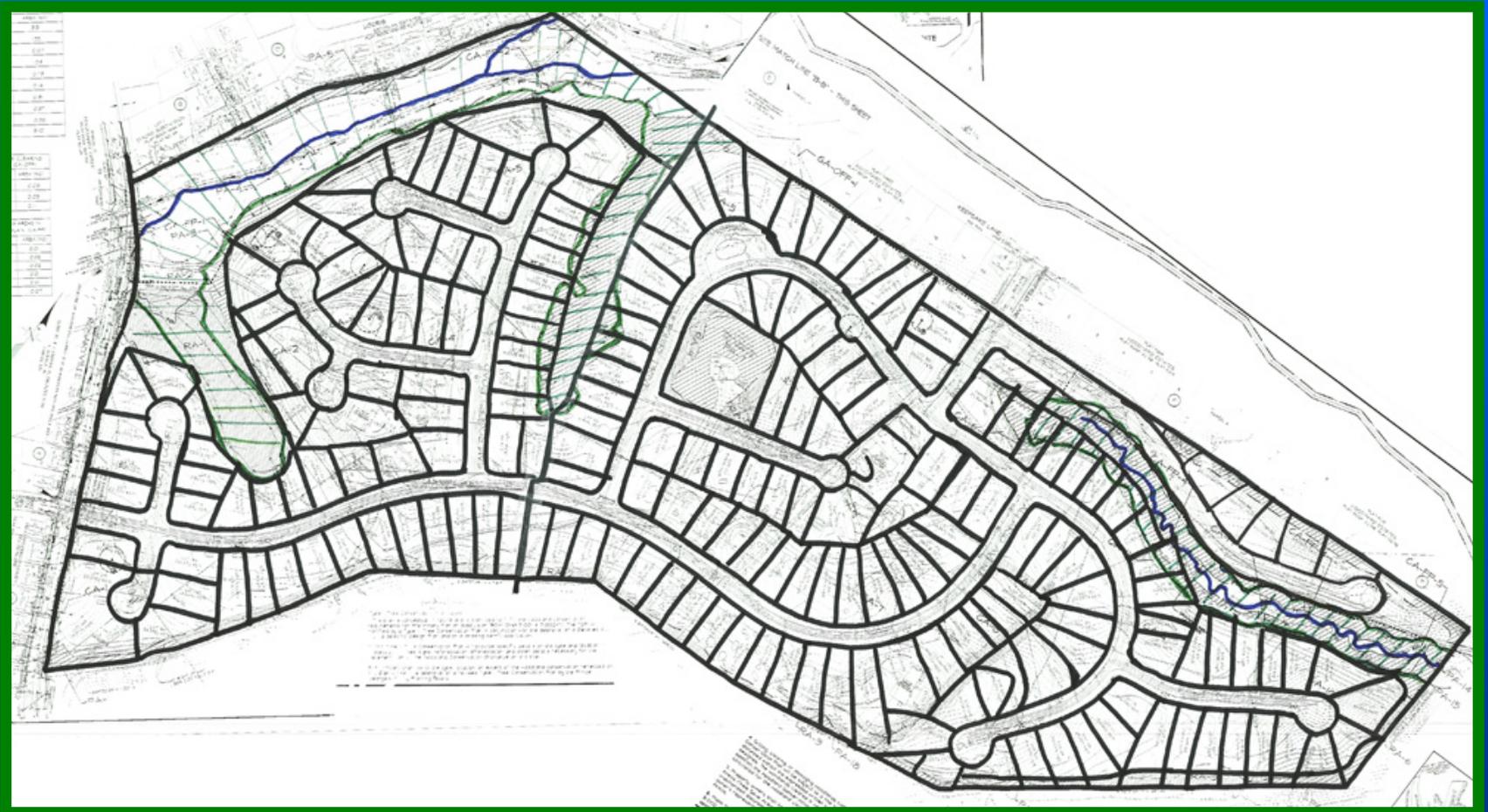
Refresh Map

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Developed by Essex Corporation.

Map Overview: On Current Tool: Pan Active Layer: Property Scale 1: 8,183

start | Inbox - Microsoft Out... | Anacostia WRAS - Me... | Prince George's GI Plan | APA - San Antonio - ... | PPD-Atlas - Microsoft ... | M-NCPPC GIS - Micro... | 4:22 PM

Initial Application

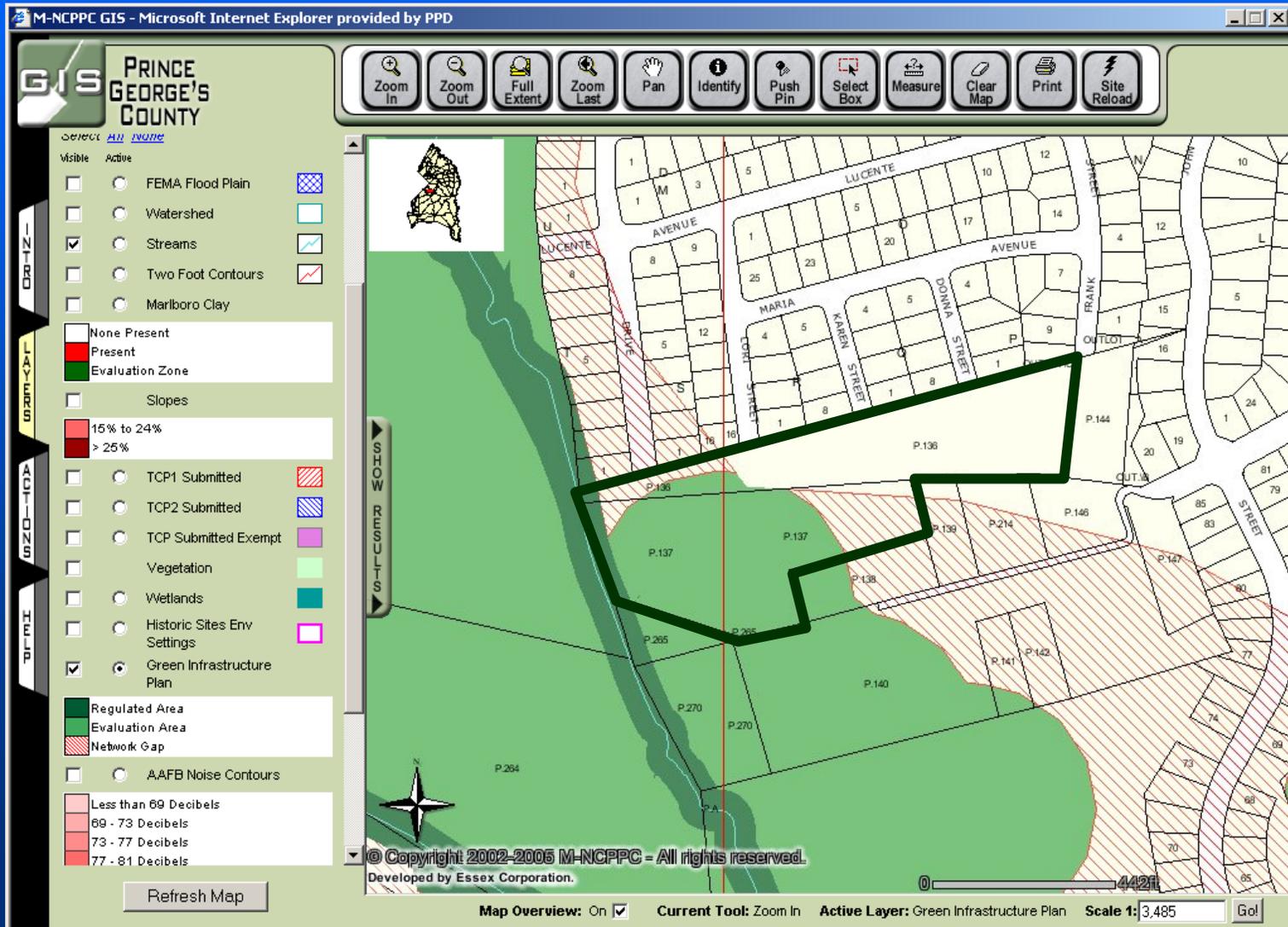


Revised Application



Development Review Process

Example #2



Initial Application

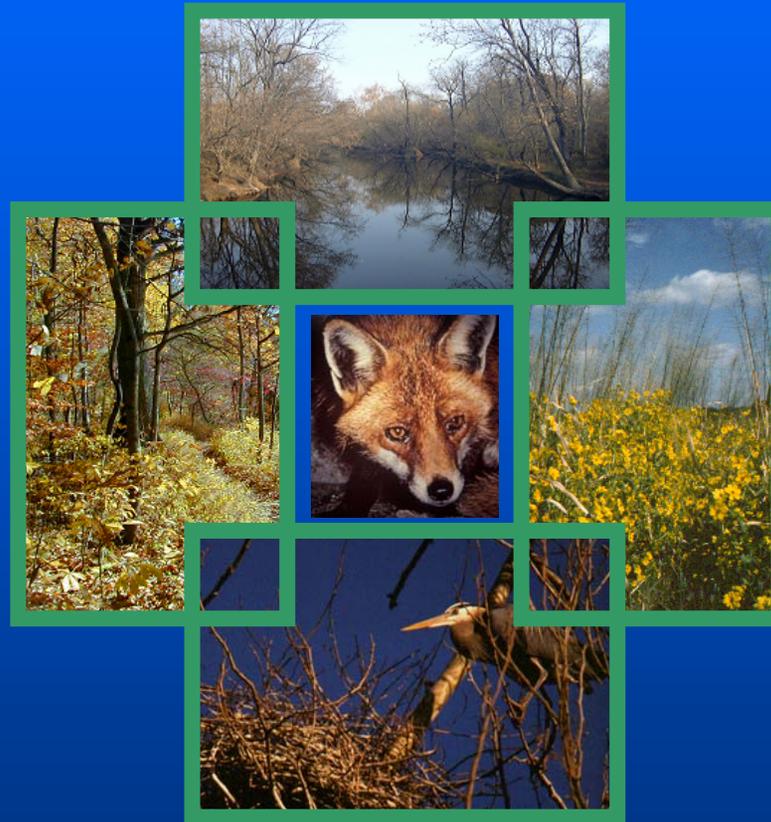


How else is it implemented?

- **Natural Resource Inventory plans are required prior to acceptance of development proposals.**
- **Location of Green Infrastructure Network influences park acquisition.**
- **Revisions to existing legislation.**
 - **Allow the use of Conservation subdivisions designs.**
 - **Increase mandatory stream buffer from 50 to 75 feet in Developing and Rural Tiers.**
 - **Modify woodland conservation ordinance.**
 - **Establish a Purchase of Development Rights program.**



Questions or Comments?



Employment opportunities available. See www.mncppc.org.



Maryland-National Capital Park and Planning Commission