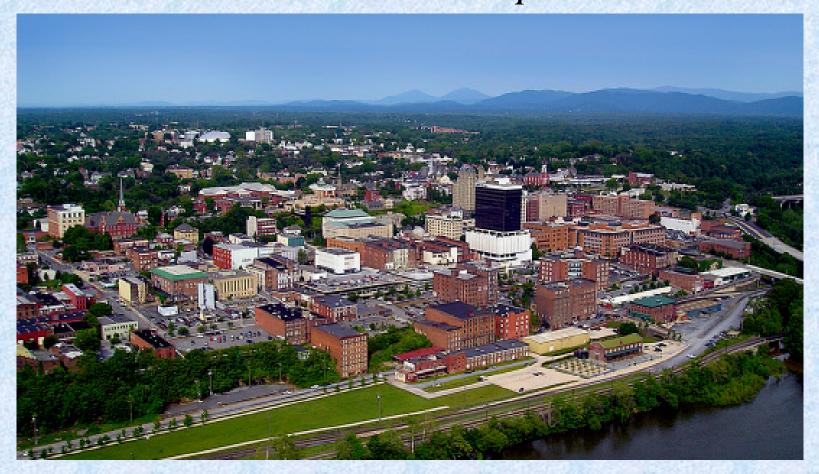
Partnering with Local Government to Promote Sustainable Development



Dave Perault, Lynchburg College Rick Barnes, Randolph College Partnering with Local Government to Promote Sustainable Development

1 – Background
 2 – Problem
 3 – Developing the Model
 4 – Results
 5 – Applications

Lynchburg . . .



Home of Jack Daniel's Distillery

mmillill

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LIBERTY UNIVERSITY.





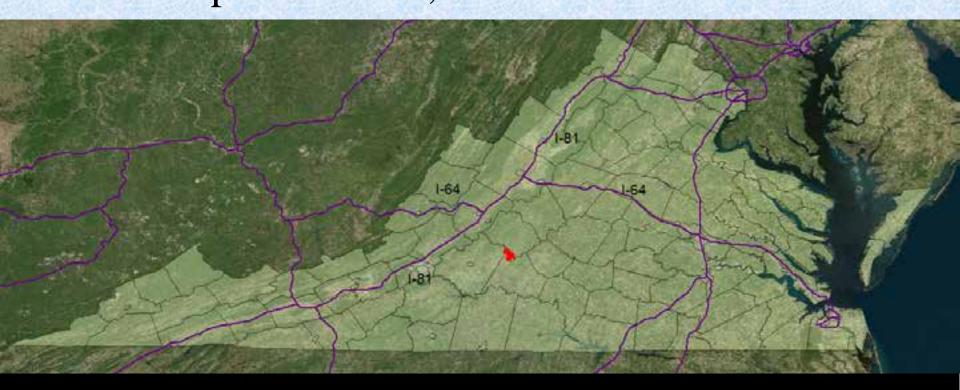








Background City of Lynchburg, Virginia 2122 mi² (5500 km²) 1990 Population: 66,049 2010 Population: 75,568



Background City of Lynchburg, Virginia 2122 mi² (5500 km²) 1990 Population: 66,049 2010 Population: 75,568 **Several Revitalization Projects** - attracting both businesses and residents



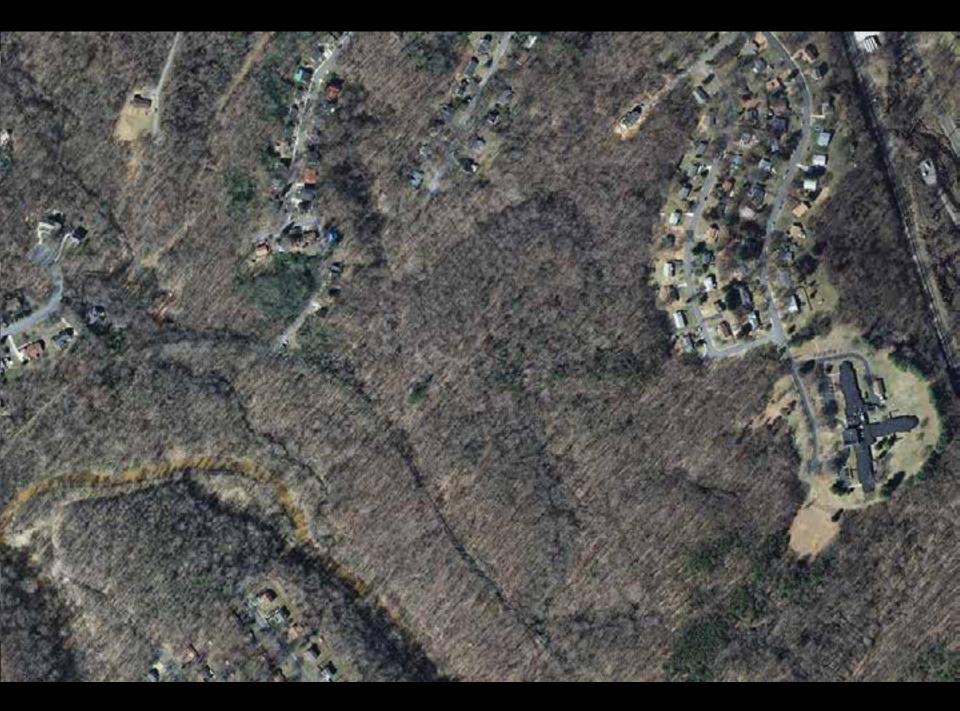




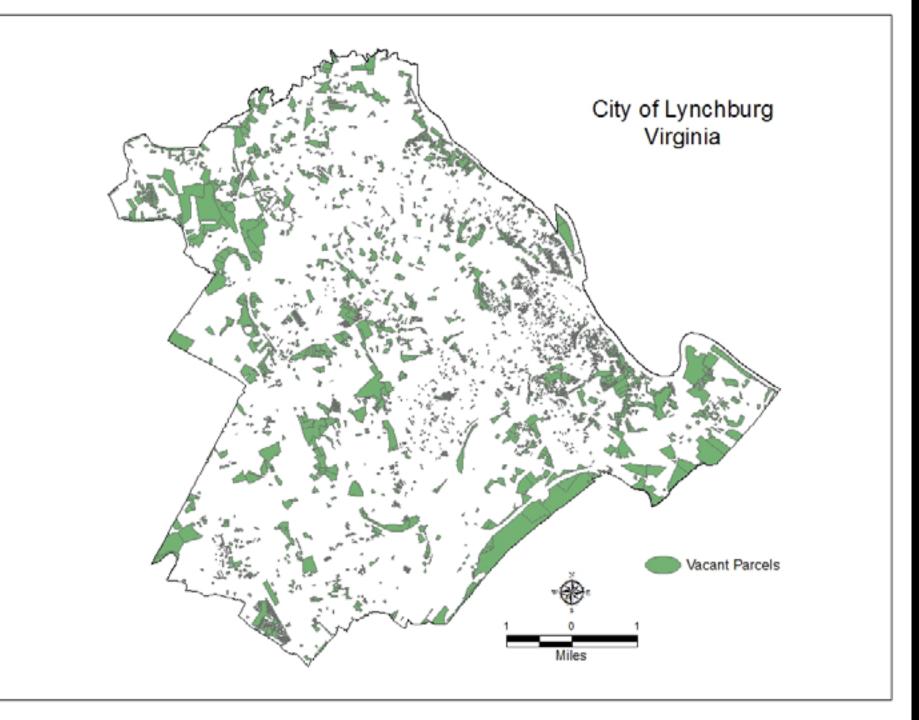
Background City of Lynchburg, Virginia 2122 mi² (5500 km²) 1990 Population: 66,049 2010 Population: 75,568 **Several Revitalization Projects** - attracting both businesses and residents - a growing population within a finite area Partnering with Local Government to Promote Sustainable Development

1 – Background
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A growing population within a finite area Push to develop empty or "vacant" parcels - any piece of property without a structure



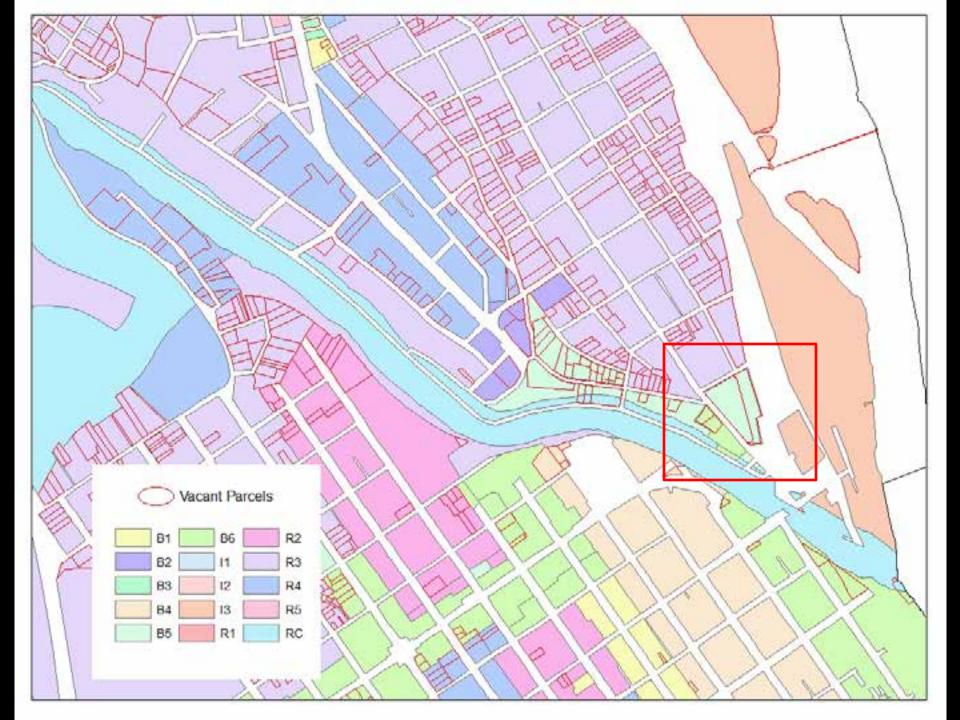
A growing population within a finite area Push to develop empty or "vacant" parcels - any piece of property without a structure - ~ 17% of City



A growing population within a finite area Push to develop empty or "vacant" parcels

- any piece of property without a structure
- ~ 17% of City

- Zoning irrelevant





A growing population within a finite area Push to develop empty or "vacant" parcels

- any piece of property without a structure
- ~ 17% of City
- Zoning irrelevant

But . . .

- many of larger, more desirable vacant parcels not zoned for high-end residential or business
- developers requesting these parcels be rezoned

Created a need for a tool that can help planners weigh conservation values of a vacant parcel when considering rezoning requests.



Created a need for a tool that can help planners weigh conservation values of a vacant parcel when considering rezoning requests. City recognizes this need: **Objective 4.B.9 of the Comprehensive Plan:** Utilize GIS and other tools, ..., to guide prioritization for conservation of current city open spaces and assessing impact of new development on surrounding natural systems.

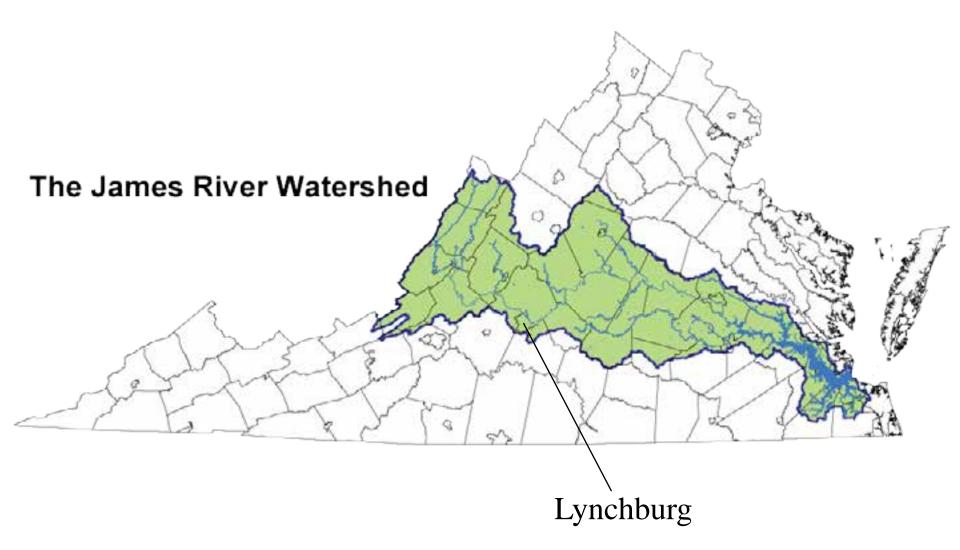
Partnering with Local Government to Promote Sustainable Development

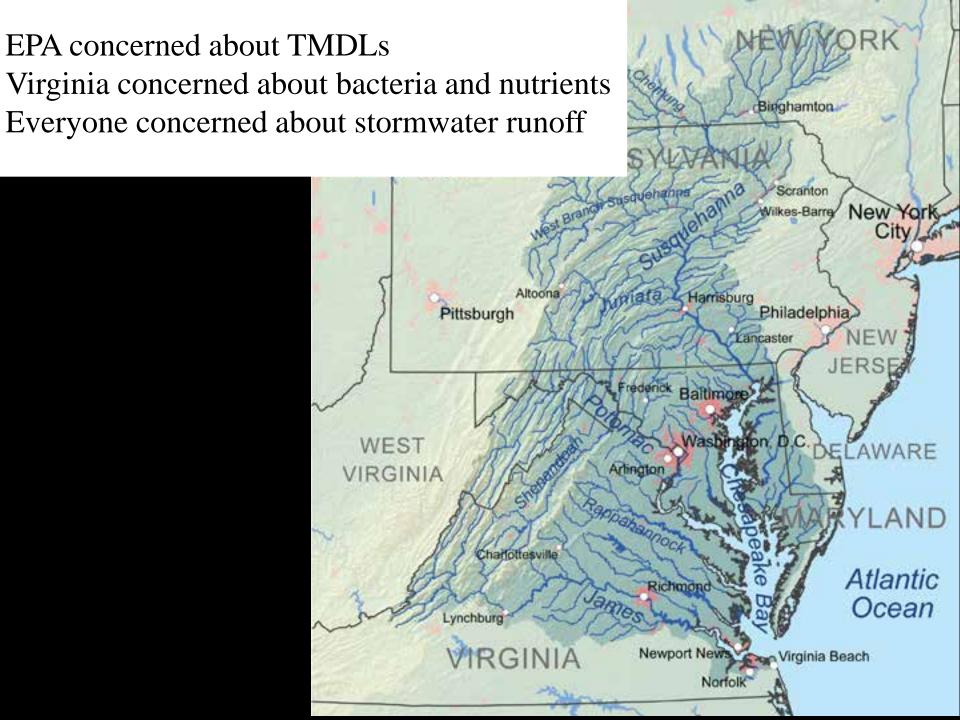
1 – Background
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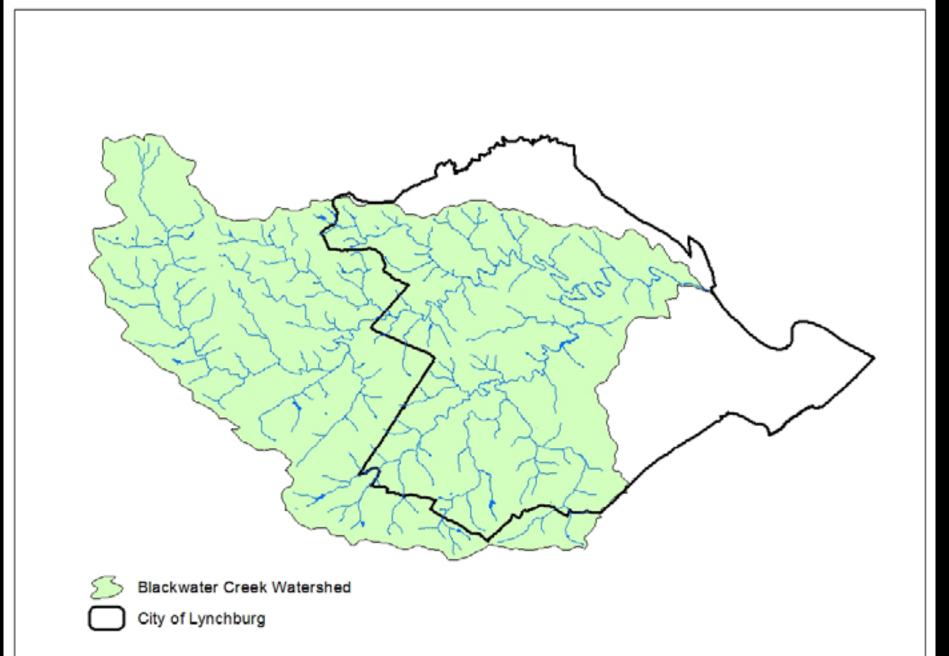
Developing the "Model" Assess conservation value of vacant parcels

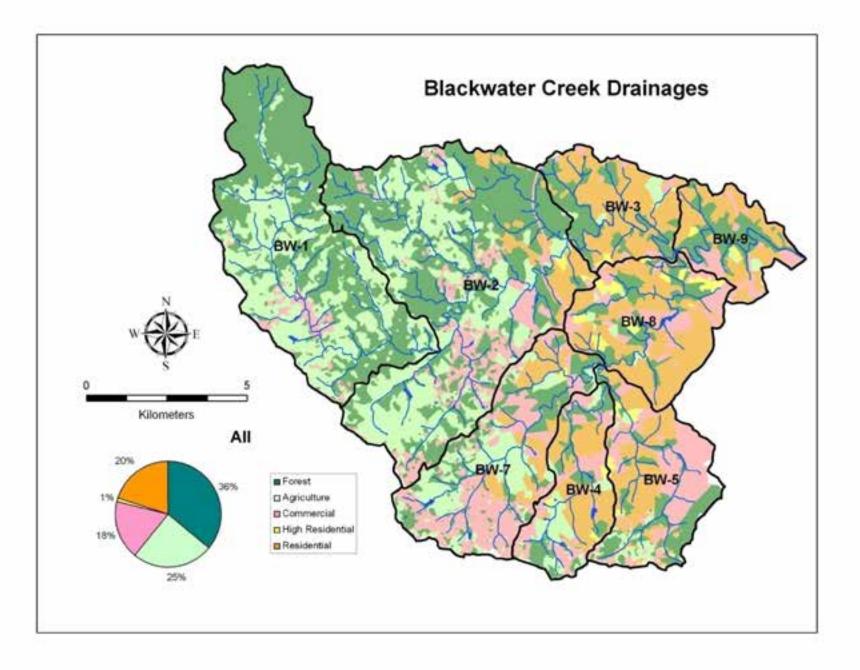
Choose Conservation Variables

- Water
- Wetland
- Floodplain
- Slope
- Forest
- Greenway
- Park
- Resource Conservation













Choose Conservation Variables

- Water
- Wetland
- Floodplain
- Slope
- Forest
- Greenway
- Park
- Resource Conservation

Combine with Vacant Parcels

$\longrightarrow GIS Criteria$ $\longrightarrow Threshold Values$

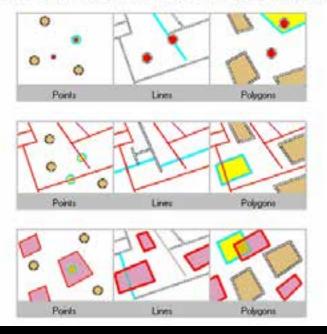
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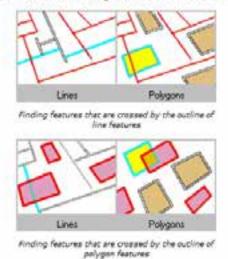
Intersect

Intersect returns any feature that either fully or partially overlaps the source feature(s). Here are some examples:

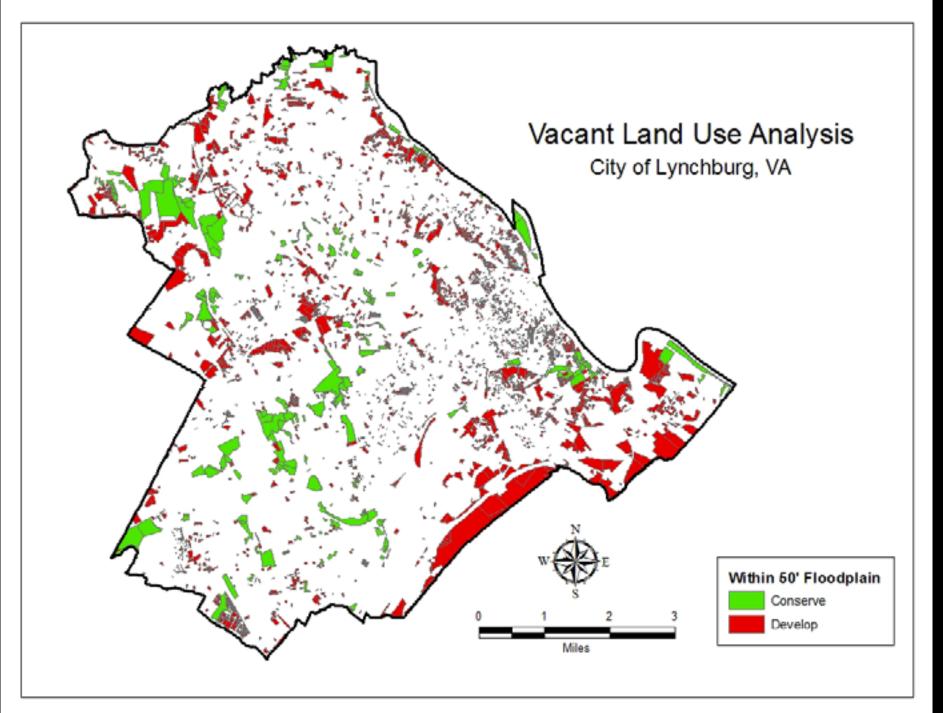


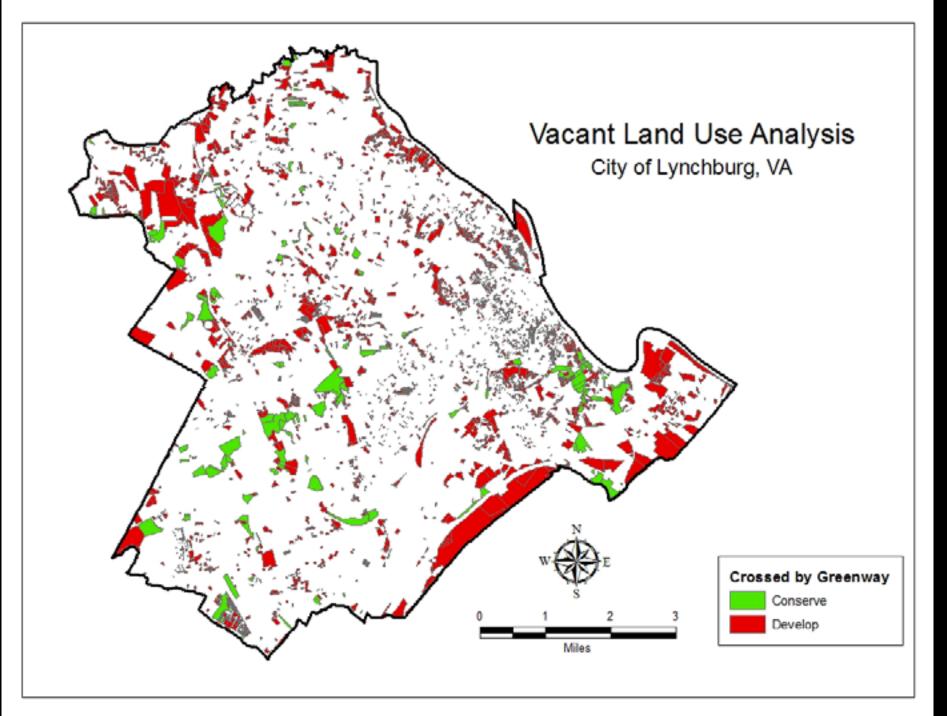
Are crossed by the outline of

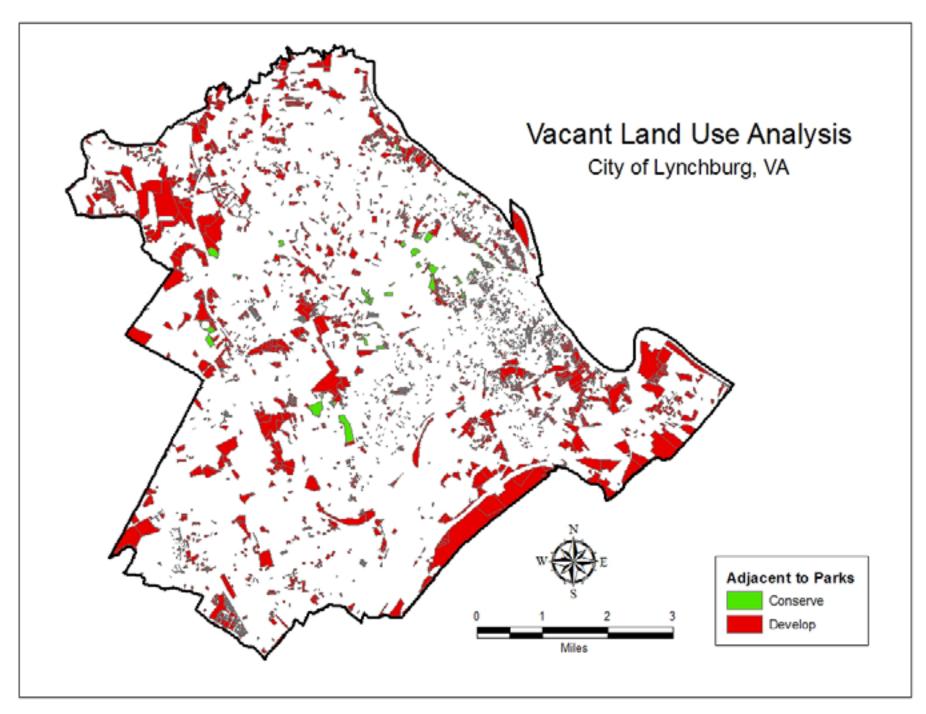
For this operator, the boundaries of the source and target feature must have at least one edge, vertex, or endpoint in common but must not share a line segment. The source and target features must be either lines or polygons.



Category of Data	Source	GIS Criterion	Conserve if	Develop if
Wetlands	City	within a distance of	< 100'	>100"
Floodplains	City	within a distance of	< 50'	> 50'
Hydro	City	within a distance of	< 100'	>100"
Steep Slopes	City	contains	> 2.5%	< 2.5%
	City, Green			does not
Woodlands/Treeline	Infrastructure Greenways	intersects crossed b y the	intersects	intersect
Greenways	Plan	outline of	crossed by	not crossed by
Parks	City	within a distance of	0'	> 0"
FLUM Resource				does not
Conservation	City	contains	contains	contain







Choose Conservation Variables

- Water
- Wetland
- Floodplain
- Slope
- Forest
- Greenway
- Park
- Resource Conservation

Combine with Vacant Parcels

Sum

Variables

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→ GIS Criteria → Threshold Values

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Emphasize Variables as Desired

Sum Variables

Choose Conservation Variables

- Water
- Wetland
- Floodplain
- Slope
- Forest
- Greenway
- Park
- Resource Conservation

Combine with Vacant Parcels

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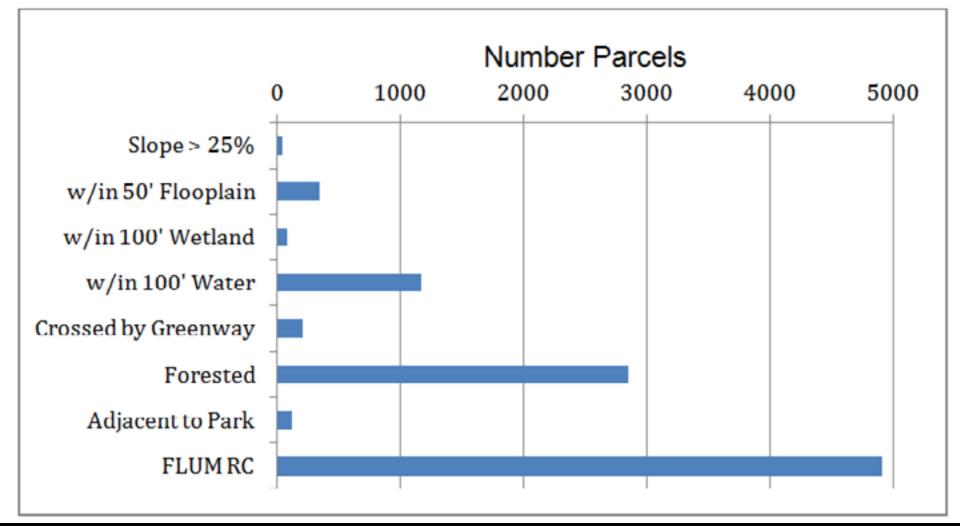
→ GIS Criteria → Threshold Values

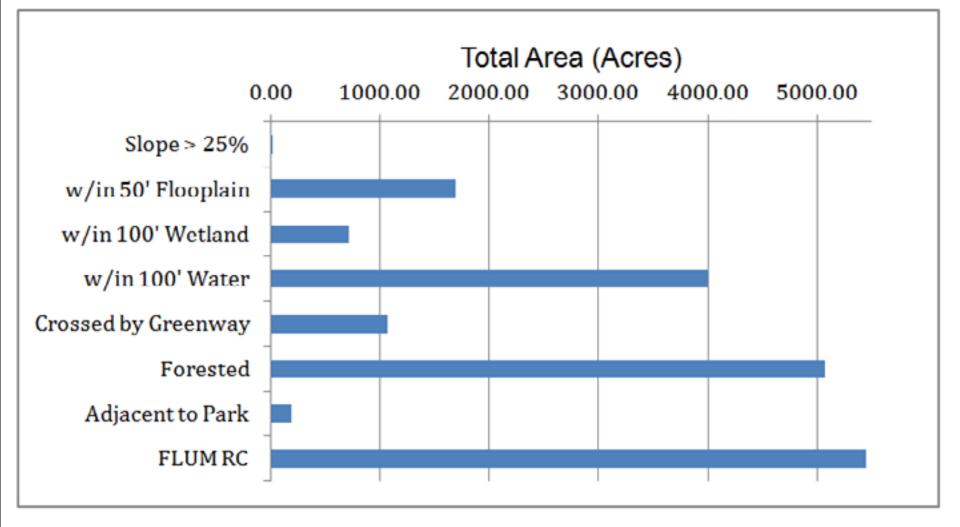
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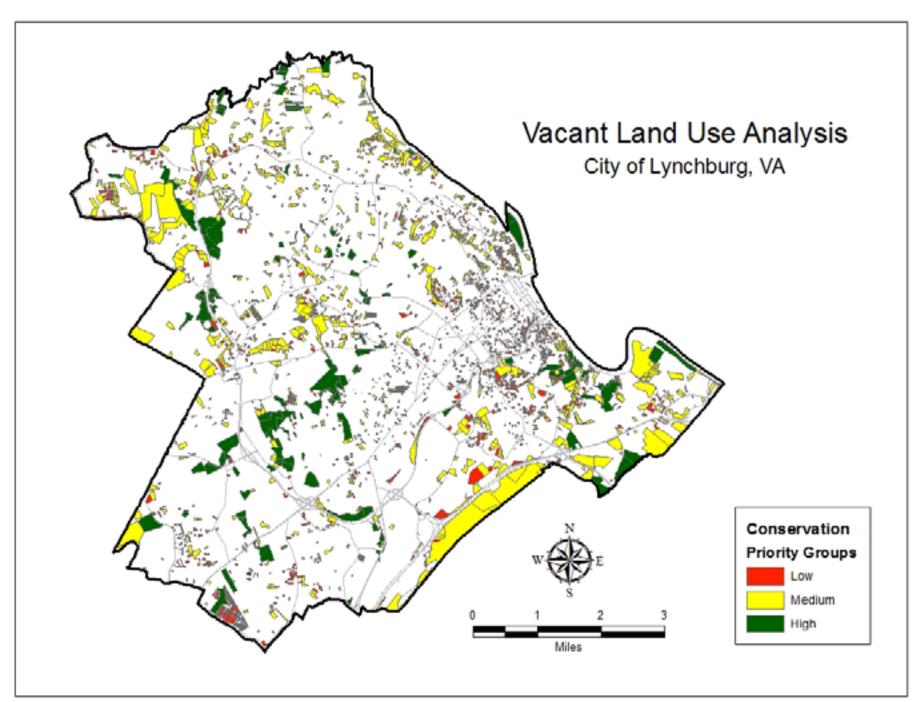
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Partnering with Local Government to Promote Sustainable Development

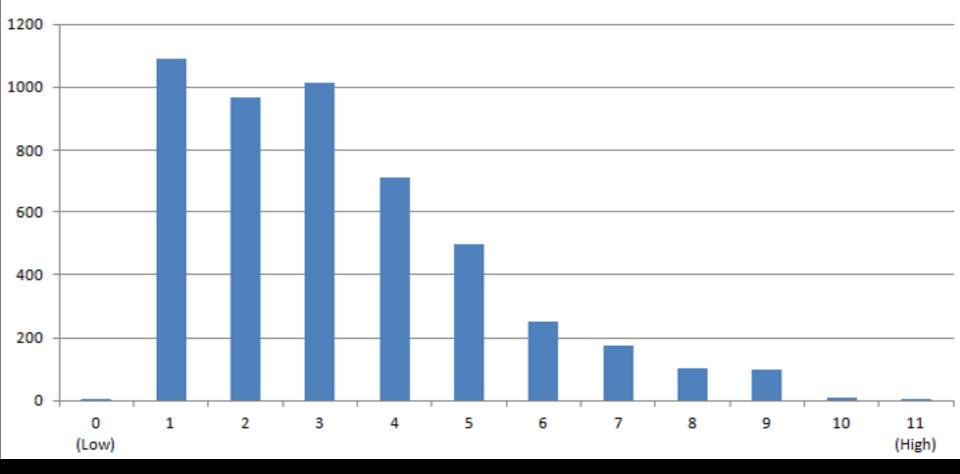
1 – Background
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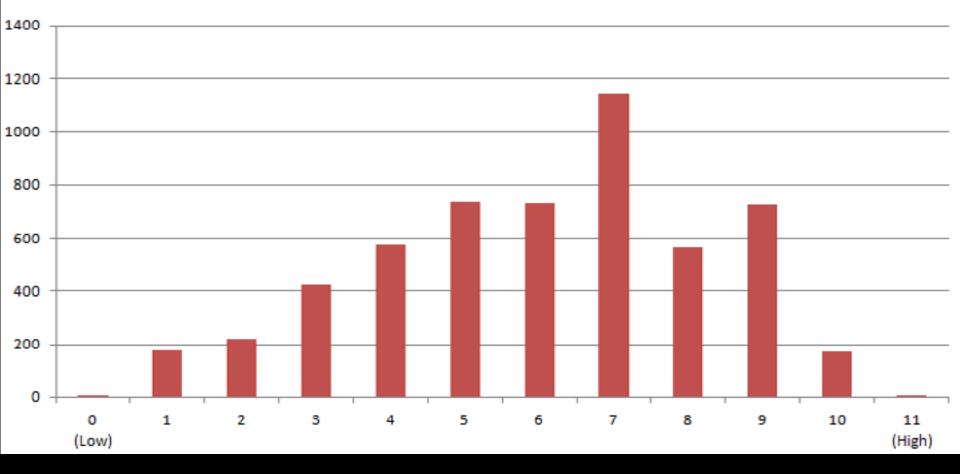


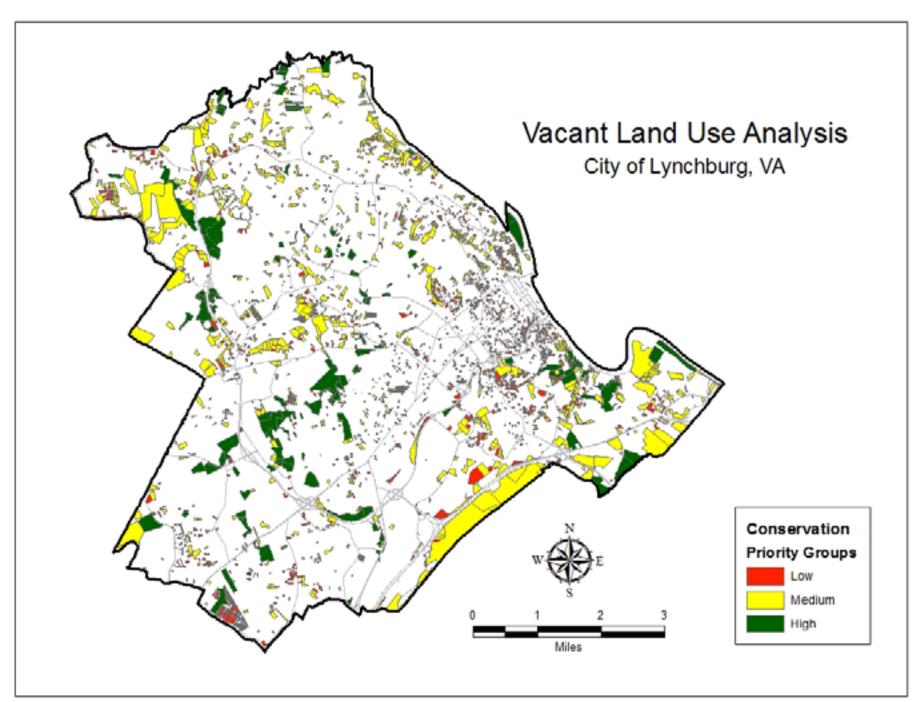


Count



Acres





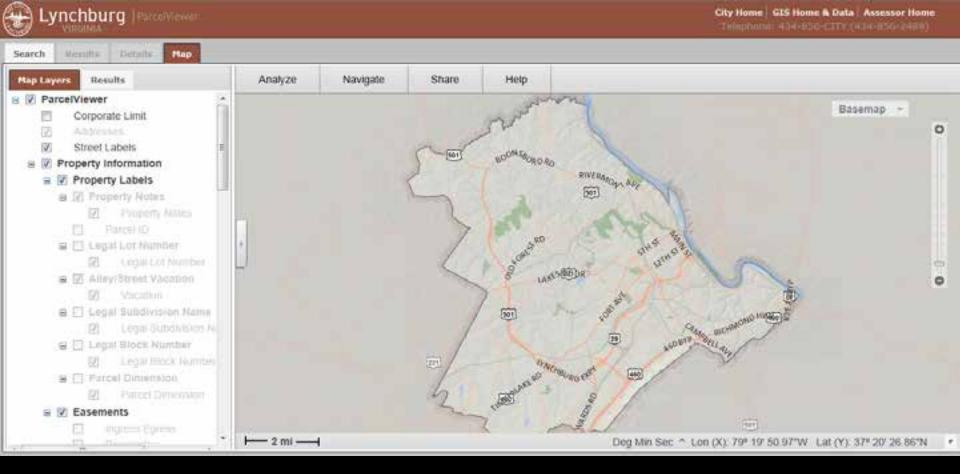
Partnering with Local Government to Promote Sustainable Development

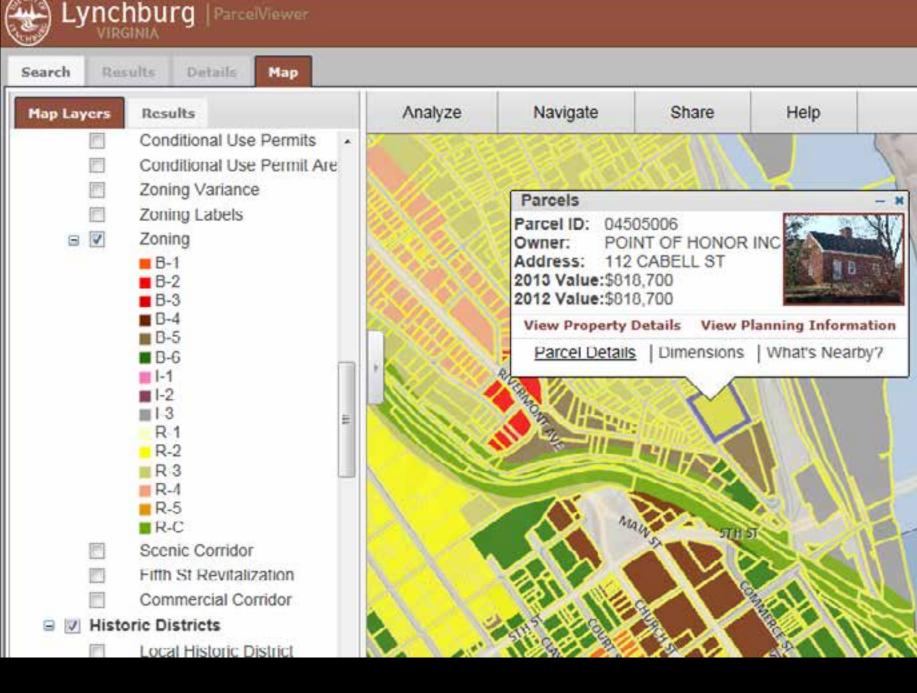
1 – Background
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Applications

A. Make available to City Planning Commission

- help evaluate rezoning requests
- B. Make available to general public





Applications

- A. Make available to City Planning Commission
 - help evaluate rezoning requests
- B. Make available to general public
 - useful for reducing applications
 - i. Avoid requests for high conservation parcels
 - ii. Increase value of low conservation parcels
- C. Classroom use

Lab 6 City of Lynchburg Vacant Parcels Analysis

In this chapter, you will conduct an extensive analysis of vacant parcels across the City of Lynchburg in order to assess conservation value. You will also perform a weighted overlay to emphasis factors of special interest.

Project Overview

This project applies principles of conservation development to th in the City of Lynchburg. It is based on Objective 4.B.9 of the C (2002):

Utilize GIS and other tools, such as the Virginia Conserv to guide prioritization for conservation of current city op of new development on surrounding natural systems.

To help accomplish this, the City has asked you to develop a met parcels in Lynchburg based on multiple environmental criteria. planners as well as the general public to help make informed ded development.

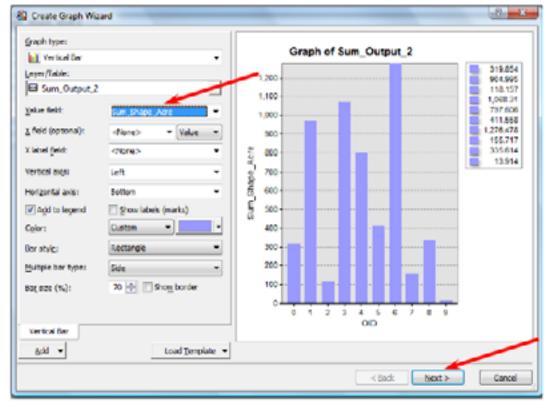
More specifically, you will rank the conservation value of vacan environmental parameters. These include:

- 1) proximity to water
- 2) proximity to wetlands

To calculate the number of vacant parcels and the acreage for each new value, right-click the Value_W field header, and select Summarize. As before, expand the Shape_Acre field and place a check next to Sum. Ensure the output table is set to the lab 6 directory on your p.\drive and accept the default output table name. Click OK and then Yes to add the table to your map.

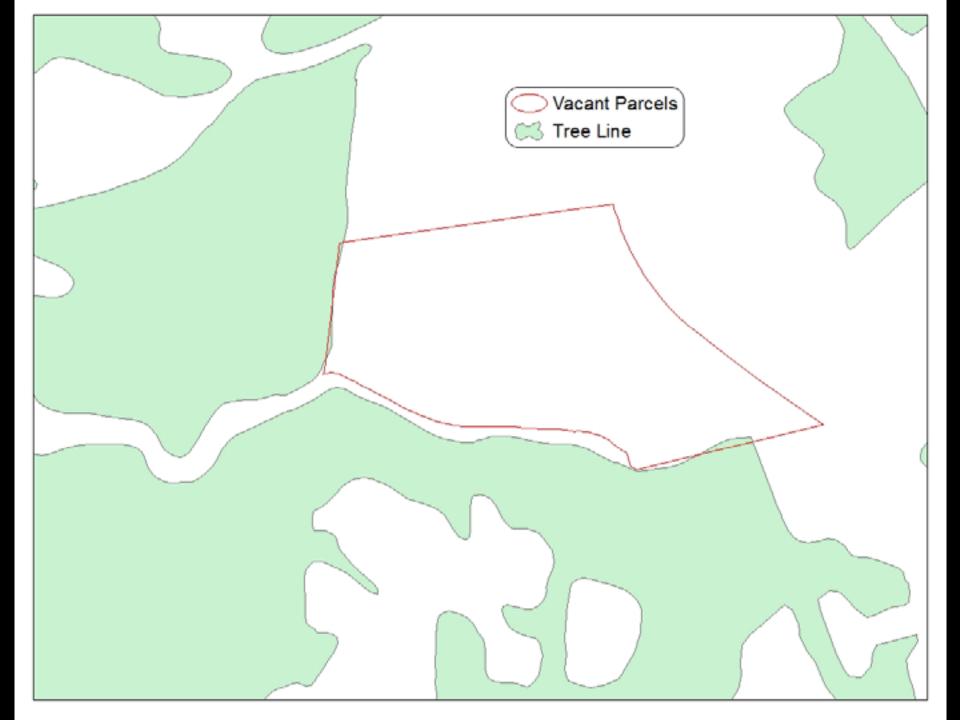
Close the VacantParcels attribute table. Right-click $Sim_Output_2 \rightarrow Open$ to see the total number of vacant parcels for each conservation value, and their total acreage. How many values are now available, and what is their range? Answer: 10, 0-9

To graph these data, click the **Table Options button** □ → **Create Graph** Change the Value Field to Sum_Shape_Acre; click Next, then Finish

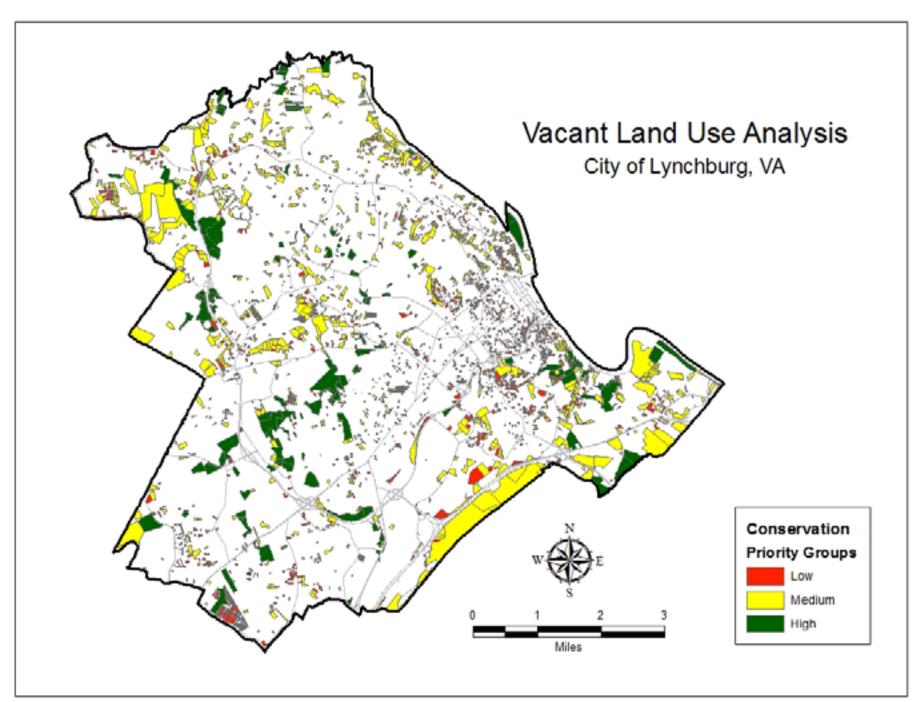




Applications Limitations/Problems 1. Challenge to keep current *i*. Update data layers *ii.* Redo analyses (students?) iii. Provide to City GIS/Online Viewer 2. Parcels assessed as whole entities



Applications Limitations/Problems 1. Challenge to keep current *i*. Update data layers *ii.* Redo analyses (students?) iii. Provide to City GIS/Online Viewer 2. Parcels assessed as whole entities 3. Use by developers?



Applications Limitations/Problems 1. Challenge to keep current *i*. Update data layers *ii.* Redo analyses (students?) iii. Provide to City GIS/Online Viewer 2. Parcels assessed as whole entities 3. Use by developers?

Another tool in the full arsenal.

Applications Future Work Apply similar analysis to brownfields as opposed to vacant parcels.



Applications Future Work Apply similar analysis to brownfields as opposed to vacant parcels.

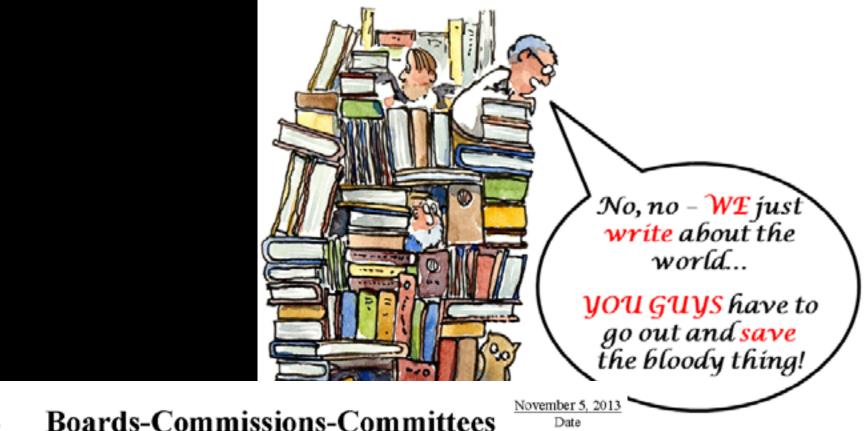
- move towards redevelopment, not new development
- consider financial and logistical criteria





Applications *Coda* Collaborations between academia and government agencies are often productive for both: - researchers can gain access to otherwise

- inaccessible data
- governments can save time and money by having analyses conducted by others





Boards-Commissions-Committees Application Form

Completing this form is one way to indicate your interest in being considered for appointment to some of the Boards, Commissions and Committees appointed by the City Council. Only City residents may make application to serve on a Board or Commission with the exception of the following: Airport Commission, Lynchburg Business Development Centre Board and Regional Tourism Board. All appointments remain at the discretion of the City Council. Please complete and mail this form to: City of Lynchburg, Attn: Valeria P. Chambers, MMC, Clerk of Council, 900 Church Street, Lynchburg, VA 24504 or e-mail to <u>valeria chambers@tynchburgva.gov</u> or fax to (434) 847-1536.

Mr. <u>X</u> Mrs.	Name:	David R. Perault	
Ms.			

List a maximum of three (3) Boards, Commissions or Committees on which you are interested in serving.





