

City of Annapolis

Land Use Development Potential

URSP 688M | Partnership for Action Learning in Sustainability

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Agenda

- Mission
- Definitions and Context
- Variables
- Primary Research Questions
- Method
- Zoning
- Underdeveloped Parcels with Improvement values less than \$10,000
- Environmental Constraints
- Building Coverage Analysis
- Summary of Findings
- Future Direction
- Policy Recommendations

Mission

The City

Identify challenges, understand underdeveloped areas around the city, analyse two focus areas - Forest Dr. and Eastport-, identify development opportunities

Our Challenge

Identify and Analyze underdeveloped areas, create a measurement standard to classify underdevelopment conditions.

Our Goal

Assist the City of Annapolis to pinpoint underdeveloped areas in order to evaluate these areas for further development.

Definitions and Context

- Improvement Value
- Underdeveloped
 - 1009 parcels
 - 944.95 acres
- Zoning
- Critical Areas
- Underdeveloped

Variables

Sources

- Maryland's Department of Assessments and Taxation: City of Annapolis property data - 2007 and 2012
- City of Annapolis: Shapefiles for parcels, roads, Zoning, city boundary
- Maryland iMAP: Critical area and Protected Land

Data Analysis

- Improvement Values <\$10,000;
- Land Use Categorization according to the related groups;
- Environmental constraints for development

Primary Research Question

- What are the underdeveloped and developable parcels in the City of Annapolis ?
- How do these parcels correlate to Zoning and Environmental Constraints?

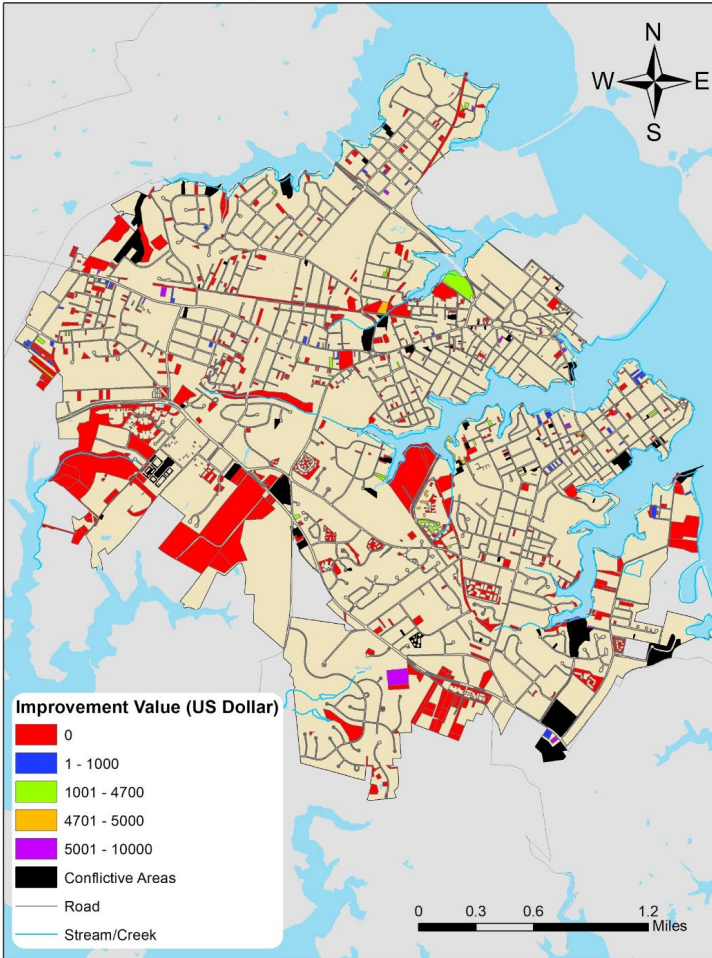


Methods

With ArcMap we:

- Joined related city data to obtain Improvement Value (IMPVL) under \$10,000
- Identified land usage patterns using zoning codes obtained from the data
- Analyzed protected lands and critical environmental areas in relation to the underdeveloped parcels.
- Created a web application through ArcGIS Online to show our key findings

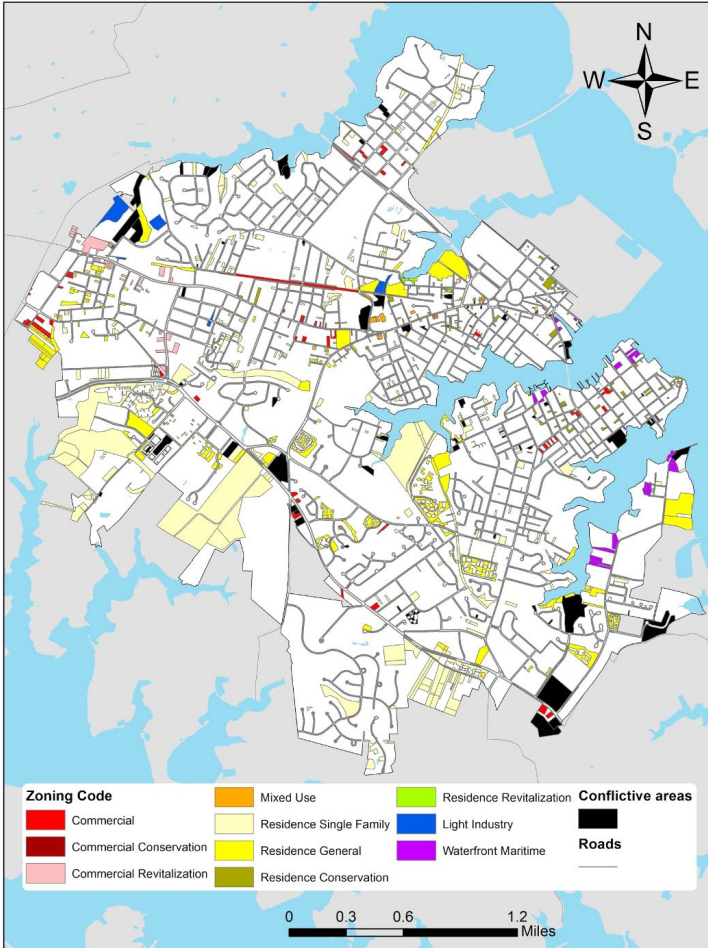
**Underdeveloped Parcels
(Improvement Values Less than \$10,000)
City of Annapolis, Maryland**



Underdeveloped Parcels with Improvement Values Less Than \$10,000

Underdeveloped Areas				
Improvement Value (USD)	Frequency	Percentage of total	Area SQFT	Percentage of total
0	697	69.08	34001234.61	82.61
1-1000	58	5.75	572597.03	1.39
1001-4700	50	4.96	781124.95	1.90
4701-5000	93	9.22	498151.15	1.21
5001-10000	29	2.87	517948.17	1.26
Conflictive	82	8.13	4789026.53	11.64
Total	1009	100	41160082.46	100

Underdeveloped Areas - Zoning
City of Annapolis, Maryland



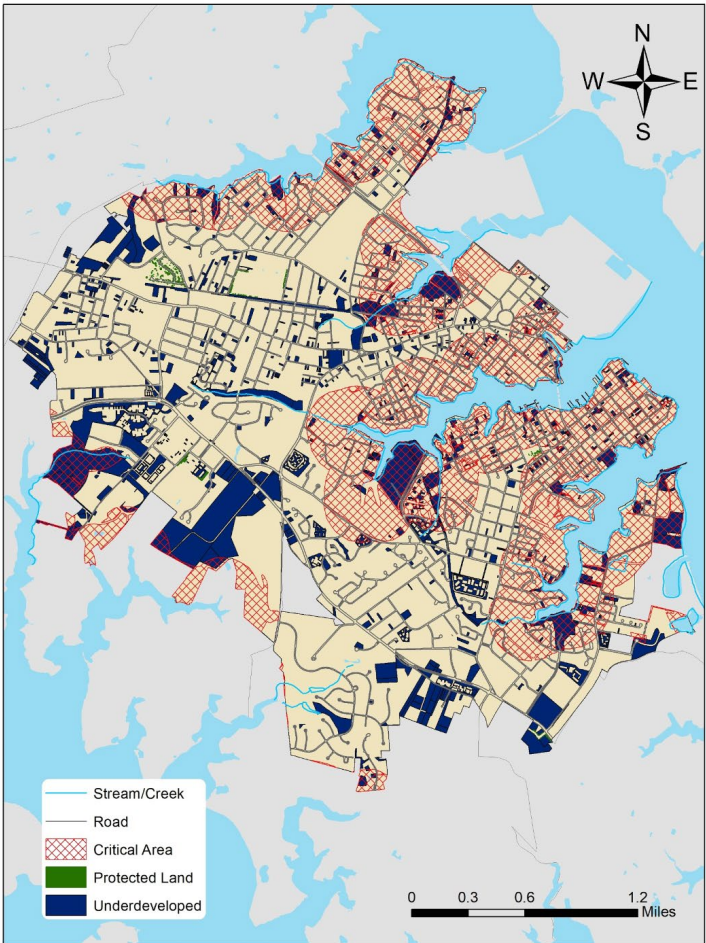
Zoning With Underdeveloped Areas

Type	Included Zoning Code	Parcel Count	Parcel SQ FT	LU %
Commercial	B1,B2,B3,B3-DC,P,PM,PM2	78	988878	7.78%
Commercial_Conservation	C2,C2P	10	21518	0.17%
Commercial_Revitalization	BCE,BR	44	398962	3.14%
Mixed Use	MX	43	266044	2.09%
Residence_Single Family	R1,R1A,R1B,R2	388	5707933	44.89%
Residence_General	R3,R4	293	3681423	28.95%
Residence_Conservation	C1,C1A,R2-NC,R3-NC,R3-NC2	74	594415	4.68%
Residence_Revitalization	R3-R,R4-R	17	126030	0.99%
Light Industry	I1	14	154343	1.21%
Waterfront Maritime	WMC,WME,WMI,WMM	48	775095	6.10%

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Development Constraints and Environmental Critical Areas City of Annapolis, Maryland



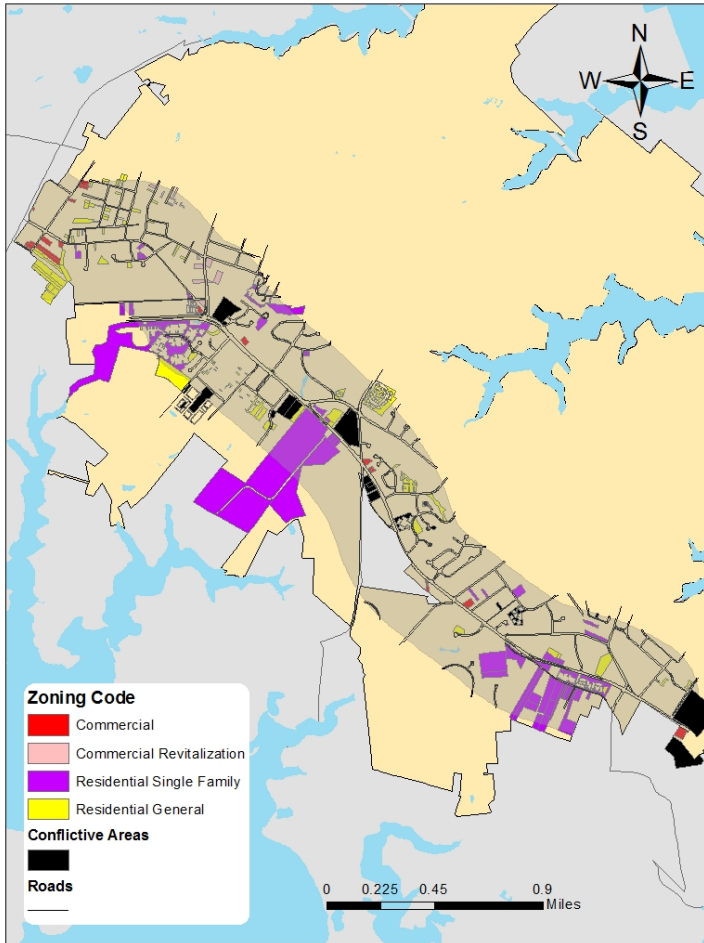
Environmental Constraints

City of Annapolis

Underdeveloped: Environmental Constraints

	Parcel Count	Area SQ FT	Percent of Area
Critical Area	456	21,832,812	53.04
Protected Land	5	493462	1.20
Total Underdeveloped	1,009	41,160,082	

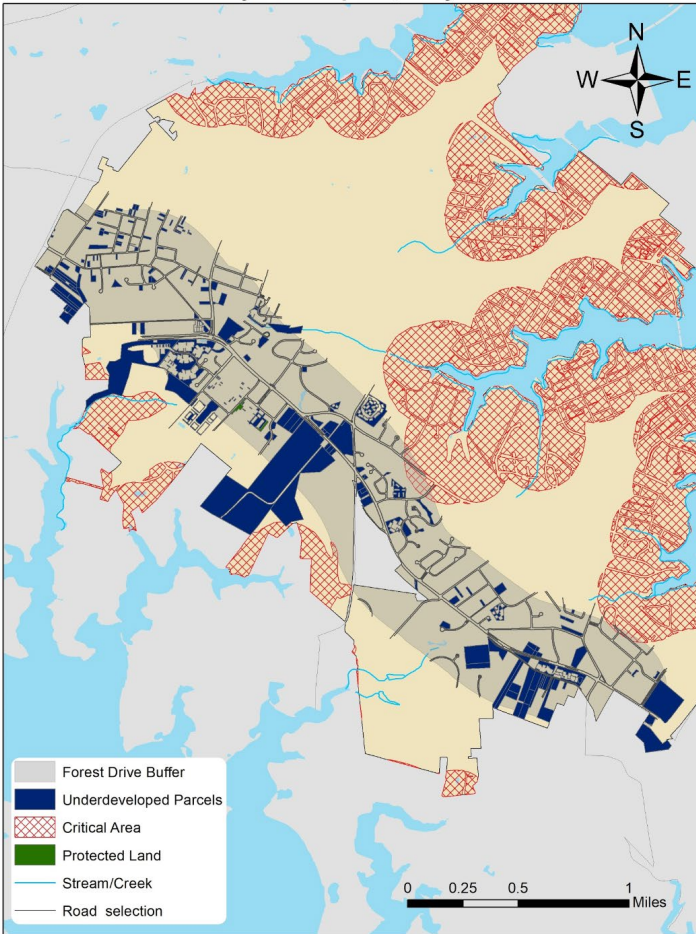
**Forest Drive Zoning Code and Underdeveloped Parcels
City of Annapolis, Maryland**



Forest Drive with Zoning Districts

Type	Included Zoning Code	Parcel Count	Parcel SQ FT	LU %
Commercial	B2,P,PM,PM2	27	467268	12.13%
Commercial_Revitalization	BCE	16	167981	4.36%
Residence_Single Family	R1,R1A,R1B,R2	75	1449594	37.62%
Residence_General	R3,R4	123	1768647	45.90%

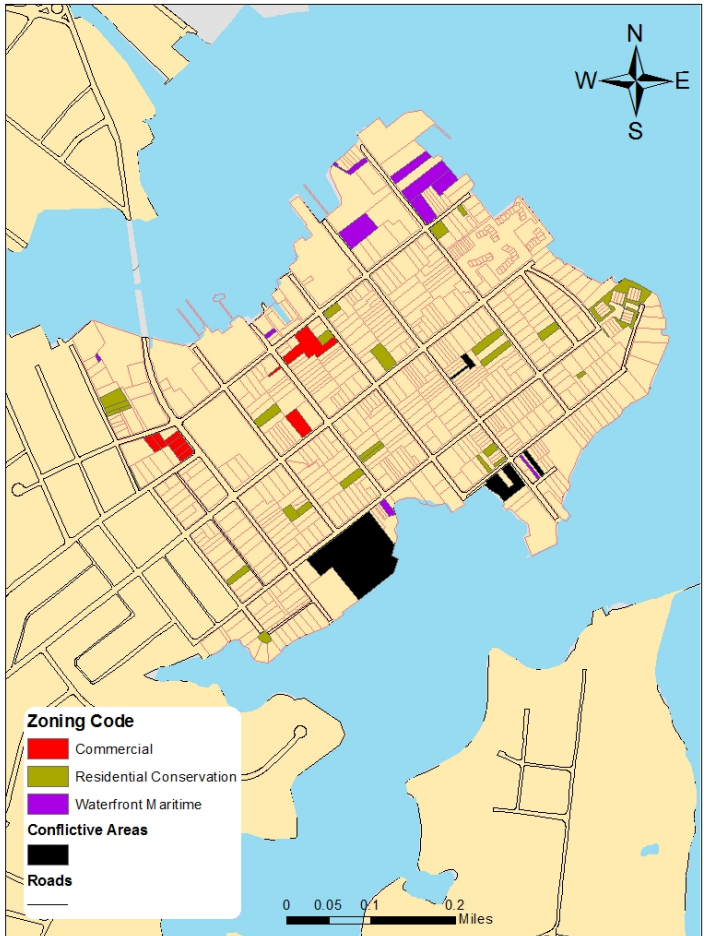
**Forest Drive Environmental Constraints
and Underdeveloped Parcels
City of Annapolis, Maryland**



Forest Drive Environmental Constraints

Forest Drive			
Underdeveloped: Environmental Constraints			
	Parcel Count	Area SQ FT	Percent of Area
Critical Area	6	8,252,840	52.18
Protected Land	3	404,015	2.55
Total Underdeveloped	241	15,816,542	

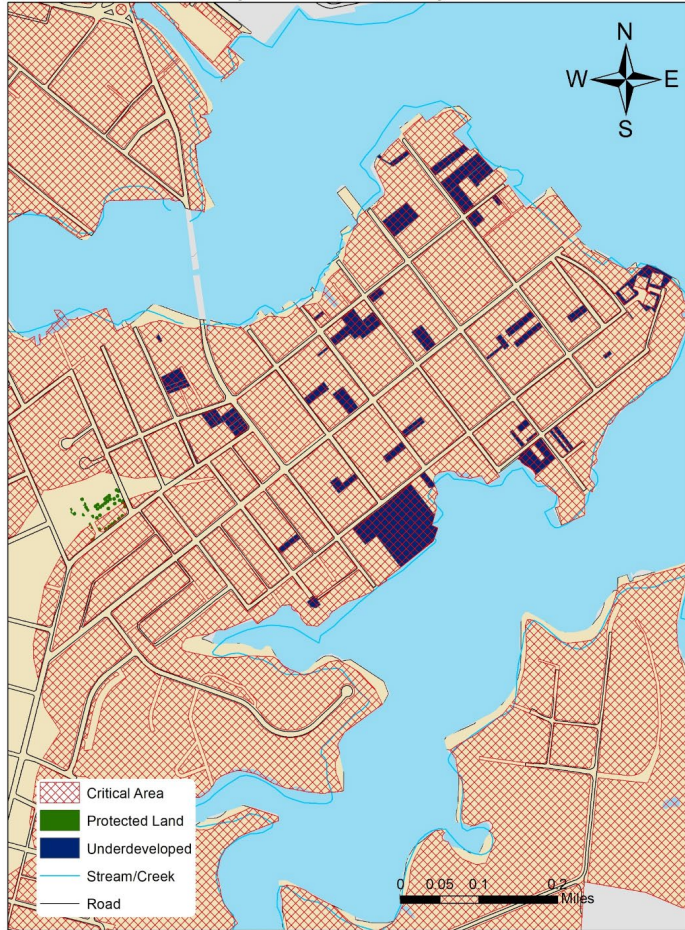
East Port Zoning Code and Underdeveloped Parcels
City of Annapolis, Maryland



Eastport with Zoning Districts

Type	Included Zoning Code	Parcel Count	Parcel SQ FT	LU %
Commercial	B2	9	77059	16.19%
Residence_Conservation	R2-NC	30	198175	41.65%
Waterfront Maritime	WME,WMM	15	200598	42.16%

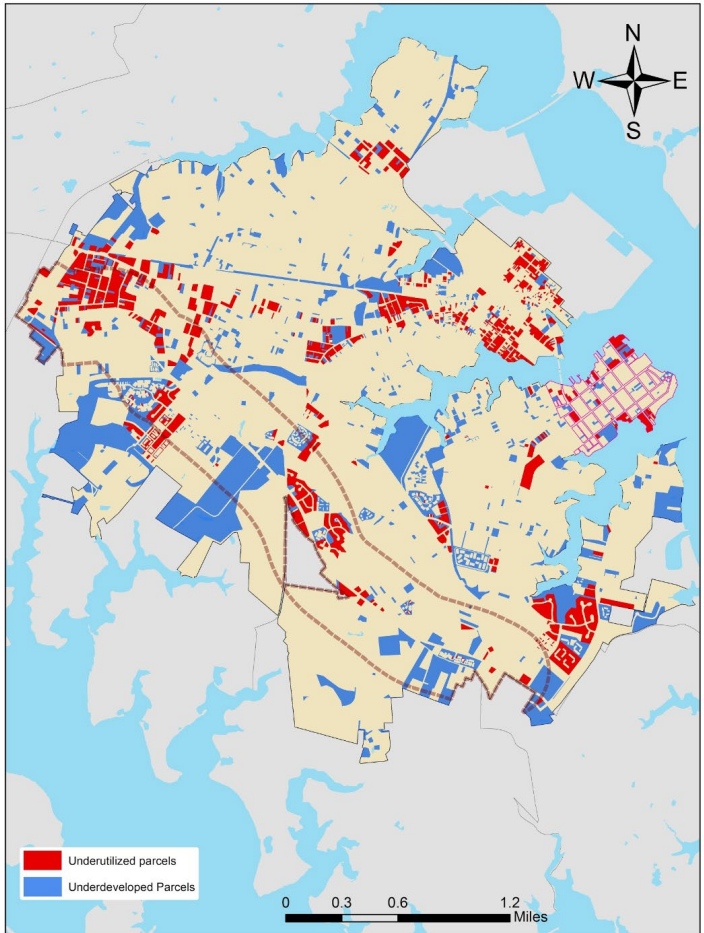
**Eastport Environmental Constraints
and Underdeveloped Parcels
City of Annapolis, Maryland**



Eastport Environmental Constraints

Eastport			
Underdeveloped: Environmental Constraints			
	Parcel Count	Area SQ FT	Percent of Area
Critical Area	50	559,973	87.80
Protected Land	0	0	0
Total Underdeveloped	54	637,805	

Underdeveloped Areas and Underutilized Areas
City of Annapolis, Maryland



**Underutilized parcels:
parcels with improvement value >
\$10,000**

**Building Coverage < 0.7, excluding R1,
R1A, R1B, R2, and R2-NC**

Underutilized areas	
N° of parcels	1844
Area (sqft)	23312932.1
Percentage of total area	12%

Conclusion & Discussion

→ Summary of results:

- ◆ There are 1009 (22% of total area) parcels with Improvement Values Less than \$10,000
- ◆ More than 70% of these designated lands are zoned for residential uses.
- ◆ 456 of these areas are designated as critical areas and 5 of these areas are marked as protected areas.
- ◆ Forest Drive focus area has more parcels with low improvement values and concentration of underutilized areas

→ Limitations:

- ◆ Missing Data
- ◆ Data with two points on the same parcel creating a conflict

Recommendation

→ Future directions:

- ◆ Create an opportunity map to see what areas could be ideal for development
- ◆ Include other considerations such as social and economic context in the analysis
- ◆ Run a network analysis to see accessibility
- ◆ Redefine parcels with more than one point (conflictive areas)
- ◆ Community integration through charettes

Policy Recommendation

- ◆ Focus development on areas that will not be affected by environmental constraints.
 - i.e. Forest Drive instead of Eastport
- ◆ Balance residential land use types to avoid underdeveloped areas' concentration into single use.
 - i.e. different residential uses; single family, multifamily and mixed use.
- ◆ Look at parcels that have a high opportunity for development and a low improvement value

Next Up: ArcGIS Online- Map of Underdeveloped Parcels in the City of Annapolis

