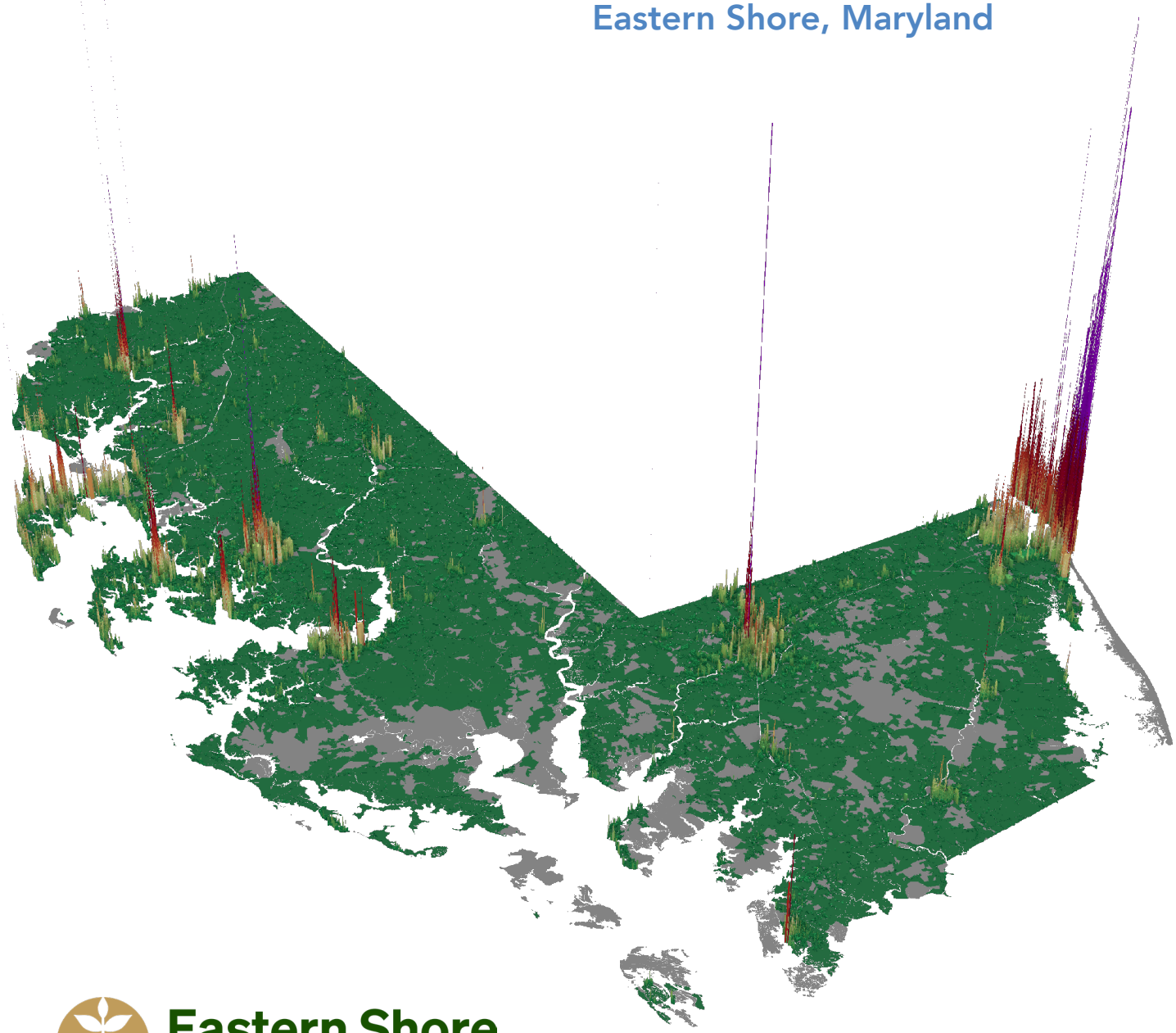
Economics of Community Development

Eastern Shore, Maryland



Eastern Shore
LAND CONSERVANCY

URBAN3 2024

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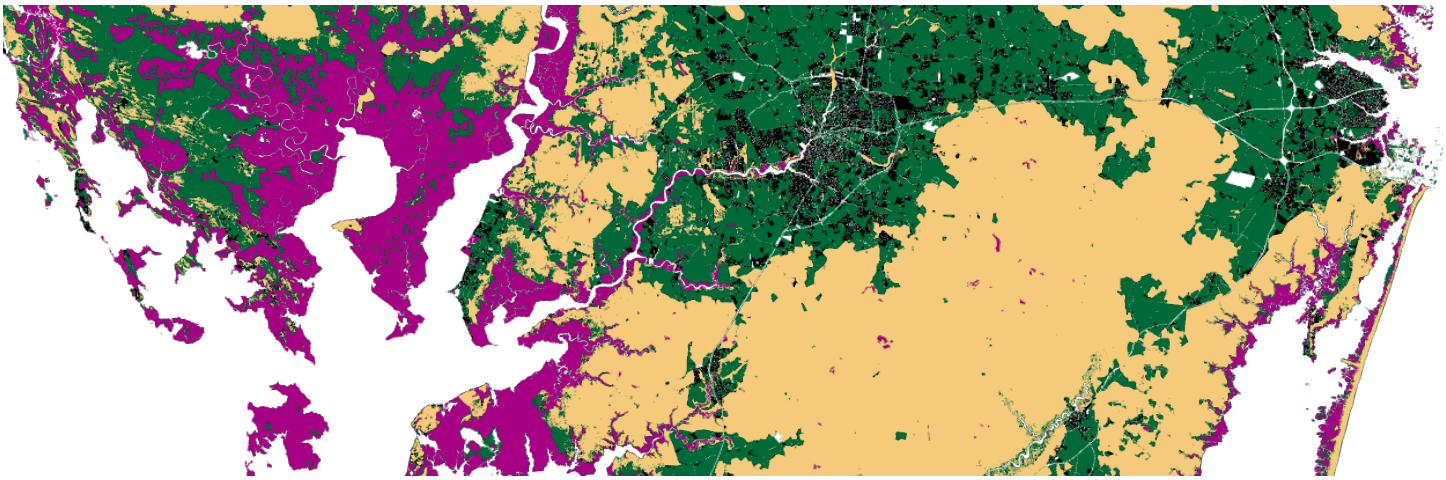


Glossary

Land Uses

Regulating the use of land to achieve urban and regional planning goals; land uses include commercial, residential, industrial, agricultural, open space, recreational, etc.

Parcel

Area of land that is owned (i.e. lot, plot).

Sea Level Rise (SLR)

An increase in the total volume of ocean water, which is a result of melting glaciers and polar ice sheets, as well as the natural expansion of water as it warms -- both consequences of climate change.[1]

Single Family Attached Housing

Single family housing type where the parcel and the dwelling structure touch the proeprty line and exterior wall of another dwelling.

Single Family Detached Housing

Single family housing type where the parcel and the dwelling structure(s) are owned by one owner, and not physically touching another parcel or structure.

Storm Surge

The abnormal rise in seawater level during a storm, measured as the height of the water above the normal predicted astronomical tide.[2]

Target Ecological Areas

Lands of high ecological value that have been identified as conservation priorities by the Maryland Department of Natural Resources.[3]

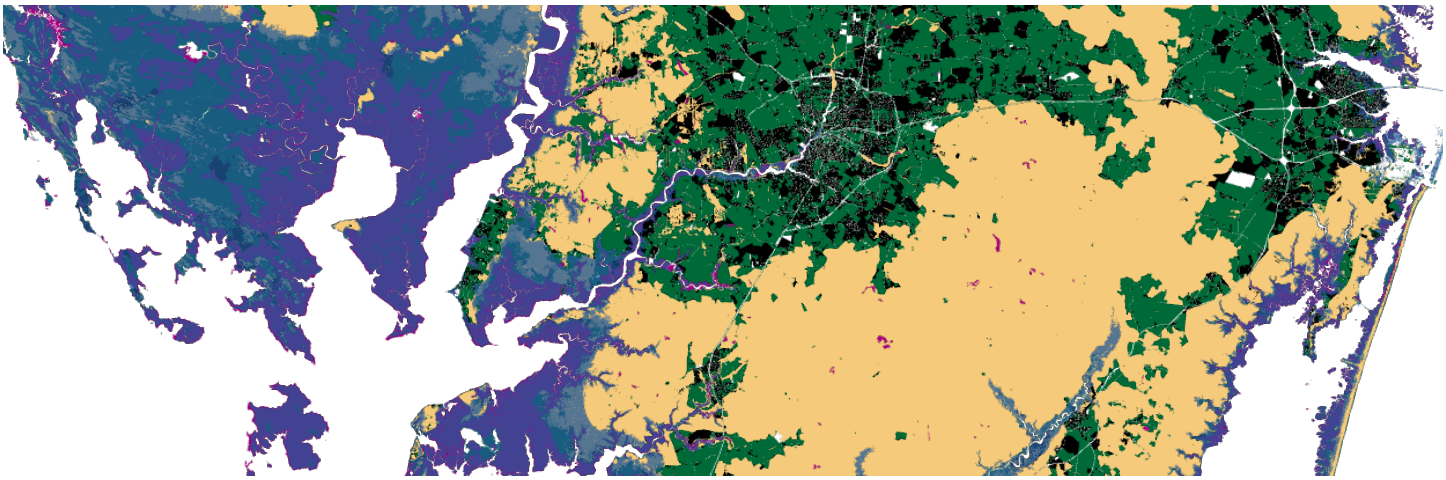
Value Per Acre (VPA)

A metric used to evaluate the effectiveness of land use policy; property value divided by acres utilized.

Wetland

Land transitional between terrestrial and aquatic systems.

1 *nrdc.org*
2 *oceanservice.noaa.gov*
3 *Maryland Department of Planning*



History of Urban3 & the Rebirth of Asheville

Before Urban3 helped communities understand the true value of good design, there was Julian Price (Figure 1).

Figure 1. Julian Price

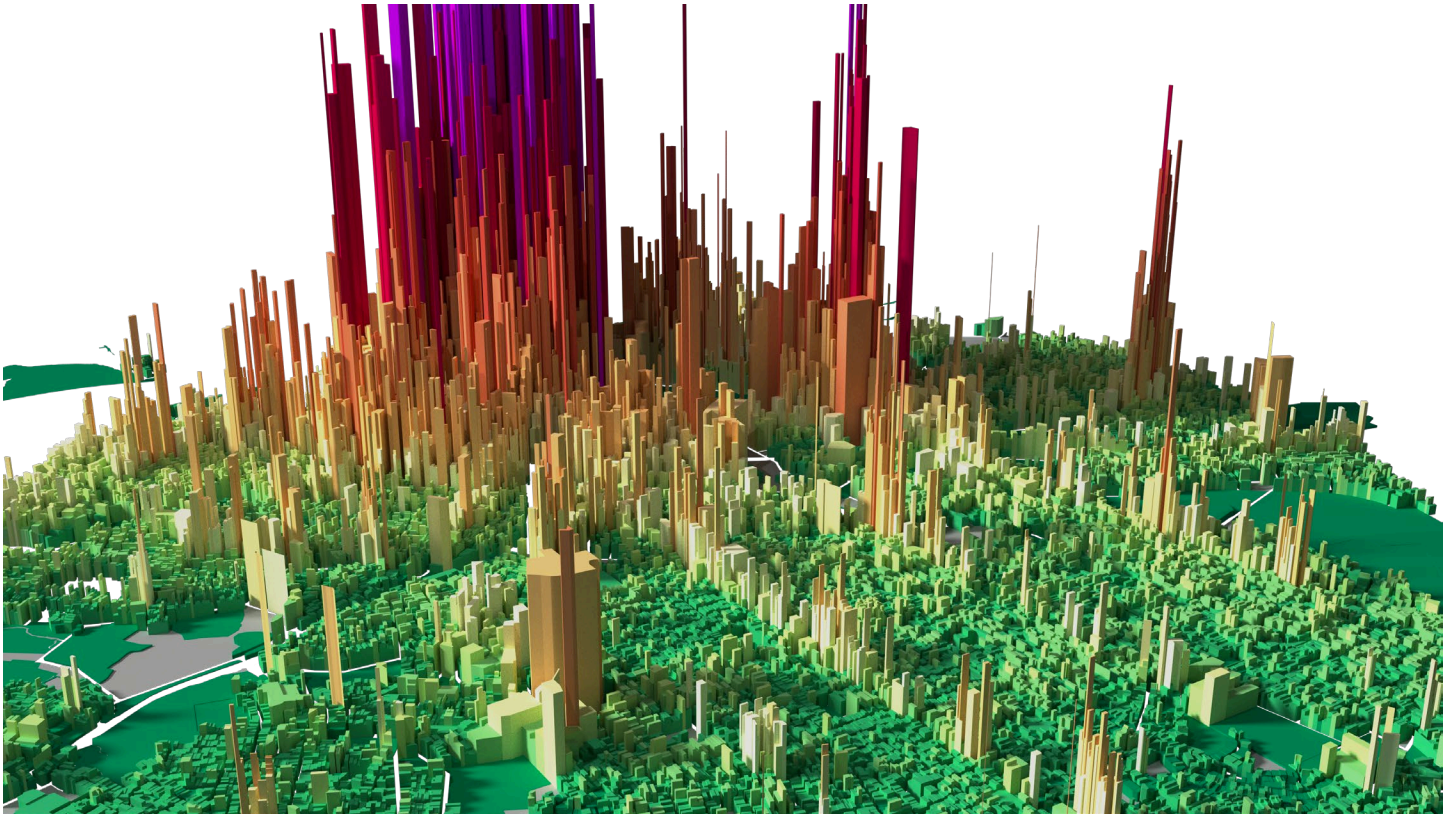
Julian moved to Asheville and saw the dilapidated state of the downtown against the backdrop of the stunning Blue Ridge Mountains and began to dream. In the early 1990s, Downtown Asheville, like many downtowns, faced an uncertain future after years of neglect and disinvestment. Its vacant storefronts and empty streets repelled visitors and locals alike, despite the beautiful scenery. The city had lost its soul.

Julian had inherited a family fortune and decided to invest his money into the people and places that, with a little help, could reinvigorate downtown. Despite cries of "that's impossible" and "that'll never work here," Julian created the development company Public Interest Projects in 1990 and tapped Pat Whalen to take the lead. Mr. Whalen focused 75% of the $15 million portfolio on fixing buildings, and the remaining 25% was invested in entrepreneurs as a revolving fund. The investments focused on catalytic projects with a focus on making downtown more liveable as a neighborhood. Julian wasn't afraid to get down in the weeds—he picked up trash and fixed park benches, but he also had a crystal clear, big-picture vision. He knew that investing in restaurants, local media outlets, mixed-use buildings, and a self-help credit union would gradually create a self-sustaining ecosystem that would attract downtown residents, invite tourists, and help small businesses thrive. Together, these ingredients brought Downtown Asheville back to life (Figure 2).

Urban3 was created at Public Interest Projects to share the lessons of community revitalization and explain the importance of municipal economics to communities across the country.

Figure 2. A building in downtown Asheville before (left) and after (right) revitalization
Source: urbanthree.com

About the Author



URBAN3

We are a consulting firm specializing in land value economics, property tax analysis, and community design. Our approach bridges the gap between economic analysis, public policy, and urban design. Our work will empower your community with the ability to promote development patterns that both secure its fiscal condition and create a strong sense of place.

We provide communities with an in-depth understanding of their financial health and built environment by measuring data and visualizing the results.

Introduction

Nestled between the Chesapeake Bay and the Atlantic Ocean, Maryland's Eastern Shore is deeply entwined with its relationship with its surrounding water and farmland. The region is scattered by communities of all sizes (Figure 3), ranging from small villages to large urban centers such as Salisbury and Ocean City. Up until the first half of the 20th century, the peninsula was largely isolated and rural. But in 1952, the Chesapeake Bay Bridge was constructed and transformed the dynamic of the region. The bridge linked the small eastern communities to Maryland's more urban interior, and incited rapid development over the following decades.

Urban3 was tasked by the Eastern Shore Land Conservancy to conduct a Regional Economic Analysis of the Eastern Shore in Maryland. This analysis examined how land use choices influence the fiscal health of communities across eight counties (Figure 4): Caroline, Dorchester, Kent, Somerset, Talbot, Queen Anne's, Wicomico, and Worcester. The aim of this project is to assist local communities in identifying areas to prioritize growth and look towards the future.

"The aim of this project is to assist local communities in identifying areas to prioritize growth and look towards the future."

Figure 3. Historic image of downtown Easton, circa 1907
Source: eBay

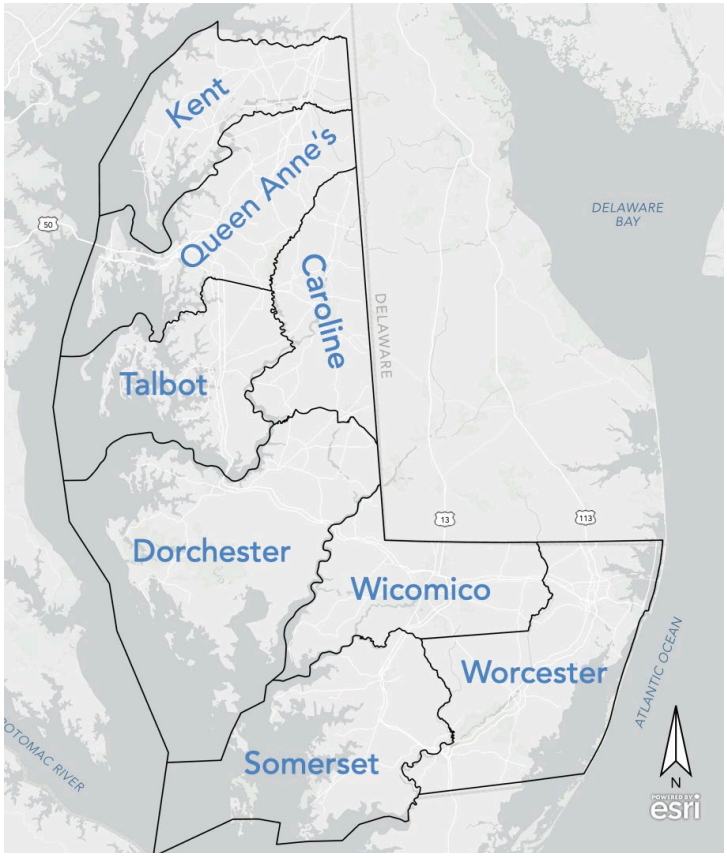


Figure 4. The 8 county study area of Eastern Shore
Source: Maryland Department of Planning (2024)

Understanding Local Finance

Fiscal Analysis

To understand the fiscal health of a community, we must first understand the underlying tax structure of the area to uncover the relationship between land use decisions and revenue production. When public revenues vary geographically, we can draw comparisons to other spatially relevant facts, such as patterns of development, demographics, and public investment. Put

simply, land use directly affects a parcel's tax productivity. As such, analyzing both the source of government revenues and the patterns from which they originate is critical to planning a strong financial future.

Taxable Value

Urban3's work focuses on mapping and visualizing tax data and utilizing the "per acre" metric as a unit of productivity. Cities are finite areas of land, and how that land is used has a direct effect on municipal coffers. The "per acre" metric normalizes tax values into a direct "apples-to-apples" comparison utilizing land consumed as a unit of productivity. Put another way, different cars have differently sized gas tanks, so, when looking at the efficiency of a vehicle, the gallon is used as the standard measure, not the tank. Therefore, "miles per gallon" is common practice to gauge efficiency, not "miles per tank." We apply the same principle to measure the financial productivity of various development types across a community.

Total Value vs. Value Per Acre

The images in Figure 5 illustrate the difference between Total Taxable Value and Value Per Acre of parcels in Talbot County, respectively. The first image reflects how we typically view and understand tax production. While parcels with the largest footprints often produce the highest dollar amount in revenue, they also carry the highest costs in regards to public utilities (i.e., streets, sewer, water). Thus, examining a development's total tax production overlooks the amount of land and other public resources that are consumed in order to produce revenue.

"The 'per acre' metric normalizes tax values into a direct 'apples-to-apples' comparison utilizing land consumed as a unit of productivity."

Utilizing the "per acre" metric shifts values to reveal properties that yield high property tax rates relative to their size. In the two-dimensional representation in the bottom image of Figure 5, value potency shifts inward to the urban developments such as St. Michaels and Easton, in contrast to the dark green agricultural parcels that are prominent throughout the region.

When viewing the Value per Acre models in three dimensions (Figure 6 and Figure 7), we can start identifying themes across various land use decisions. In Figure 7, the eye is immediately directed to the tall purple spikes in Salisbury and along Ocean City's prosperous coastline. Looking past these larger urban centers, we can also see a patchwork of smaller communities that pop up across the peninsula. Though small, these towns contain modest but potent two- and three-story mixed use and commercial properties that provide significant revenue for local governments.

"Though small, these towns contain modest but potent two- and three-story mixed use and commercial properties that provide significant revenue for local governments."

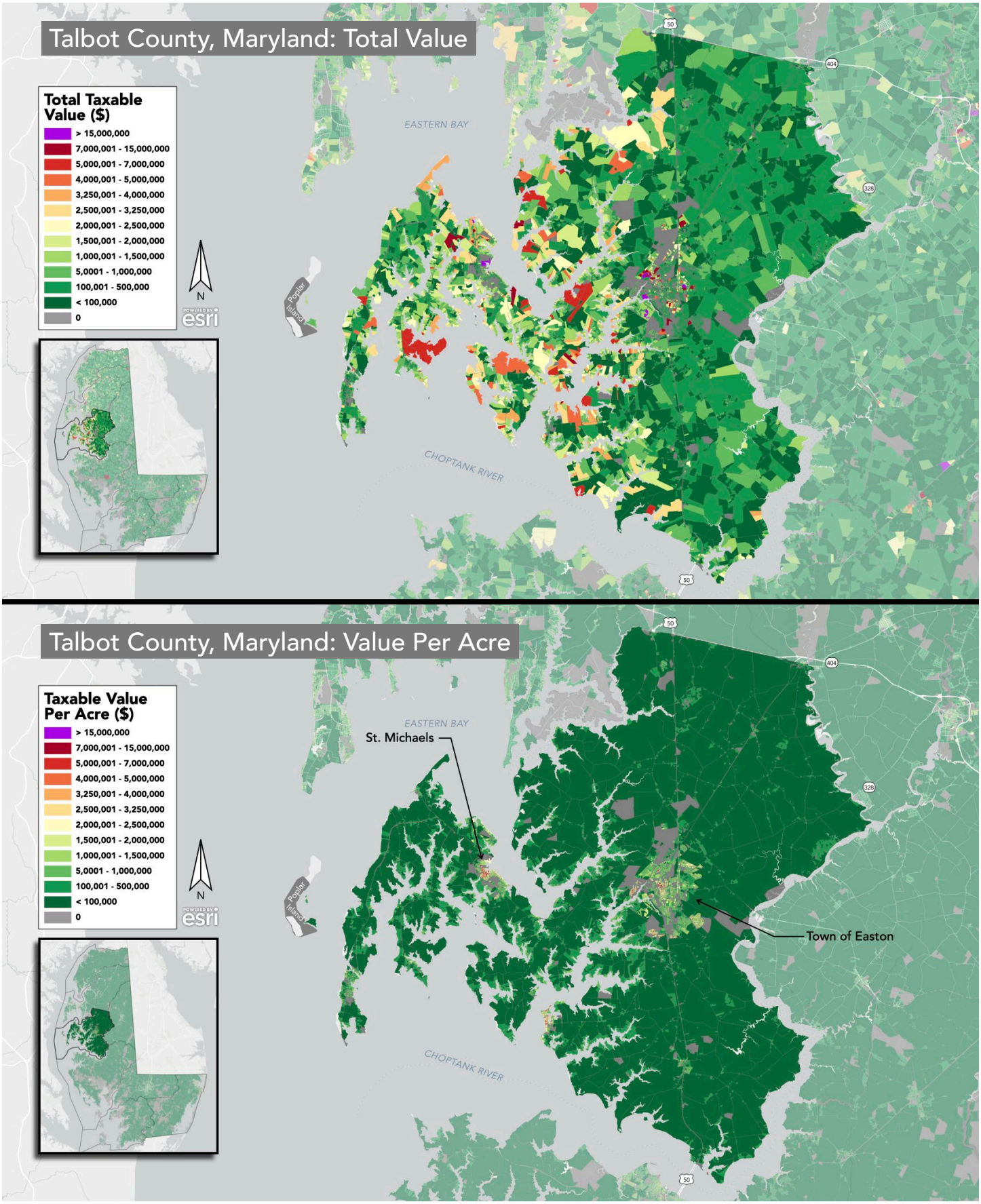


Figure 5. The total value of parcels in Talbot County (top) and the Value Per Acre (VPA) of parcels in Talbot County (bottom)
Source: Maryland Department of Planning (2024)

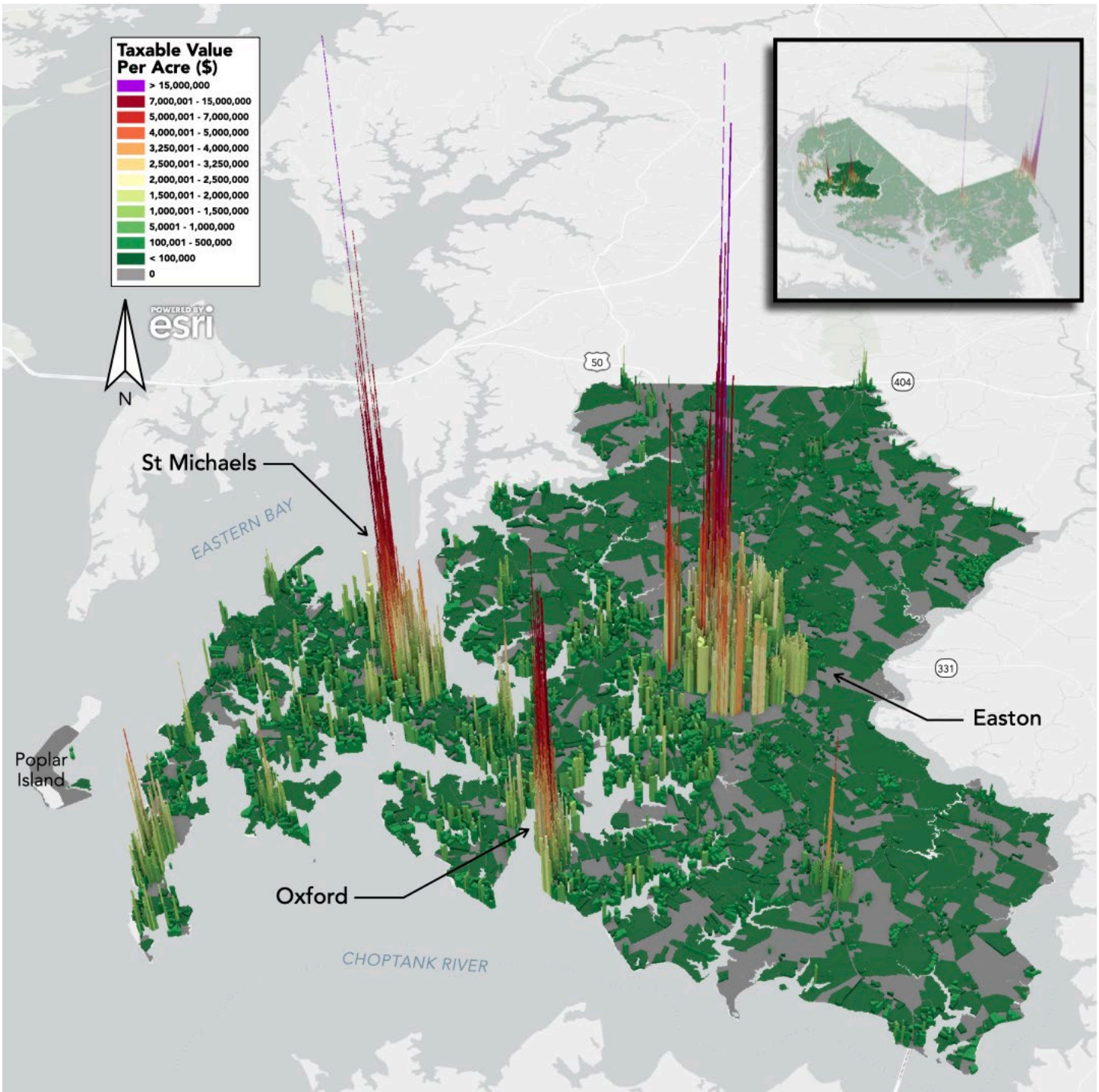


Figure 6. Three-dimensional Value Per Acre (VPA) of Talbot County
Source: Maryland Department of Planning (2024)

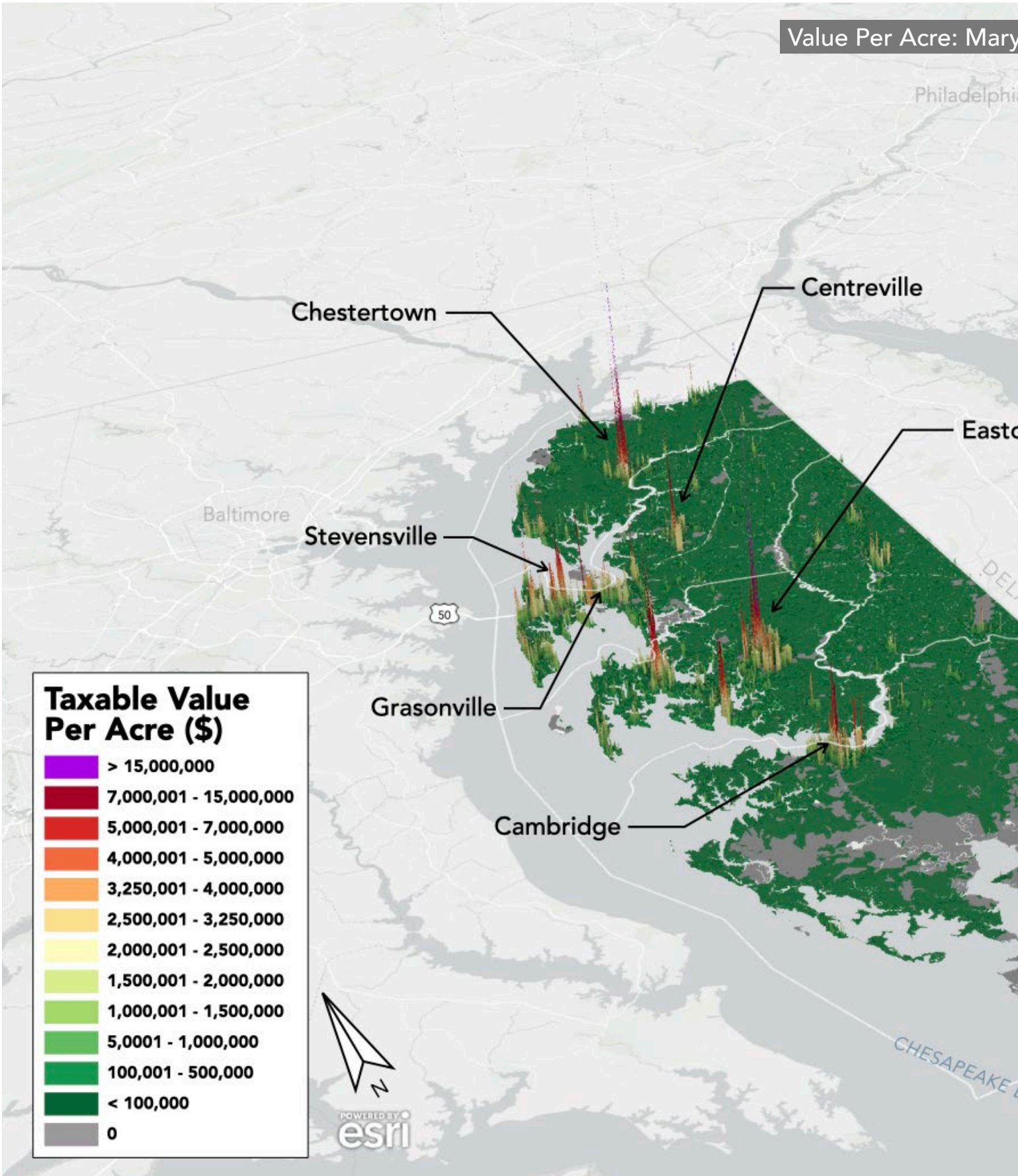
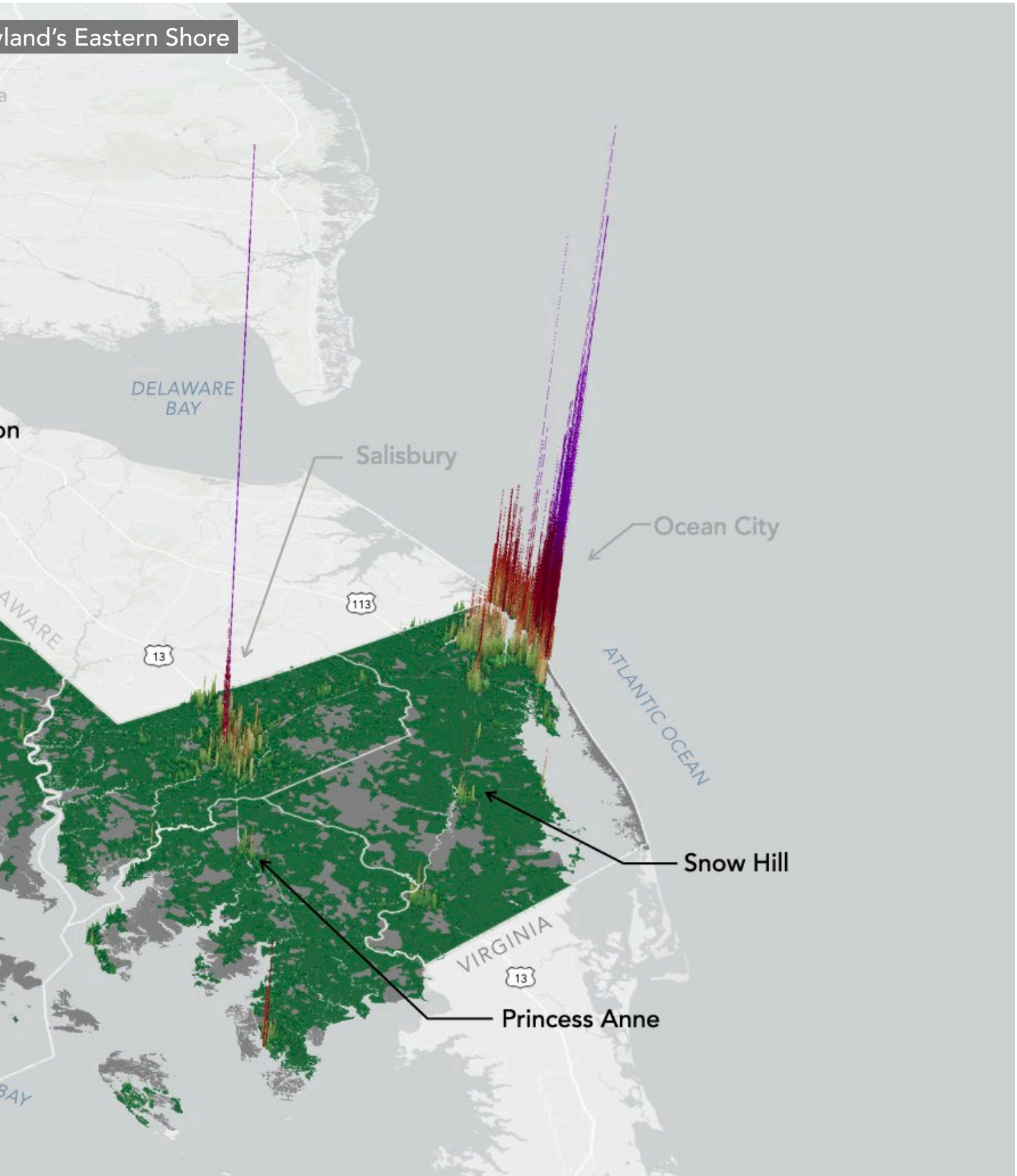


Figure 7. The Value Per Acre (VPA) of parcels on the Eastern Shore extruded to three dimensions
Source: Maryland Department of Planning (2024)


yland's Eastern Shore
DELAWARE BAY
Salisbury
Ocean City
113
13
ATLANTIC OCEAN
Snow Hill
VIRGINIA
13
Princess Anne

Land Use Patterns

The Value Per Acre model helps reveal patterns that otherwise may not be visually apparent. Figure 8 shows how various land uses compare in terms of their potency. Land uses that typically have larger footprints, such as Country Clubs and Industrial properties, are generally less productive on the per-acre metric, while denser developments, such as Multifamily and Mixed Use, are at least 8 times as potent. But the primary takeaway of this categorization shows that Single Family Attached housing is the most productive housing type. This demonstrates that small land use changes such as opting for attached housing styles, as opposed to detached, can have a significant impact on public revenue.

"Single Family Attached housing is the strongest land use on the Eastern Shore."

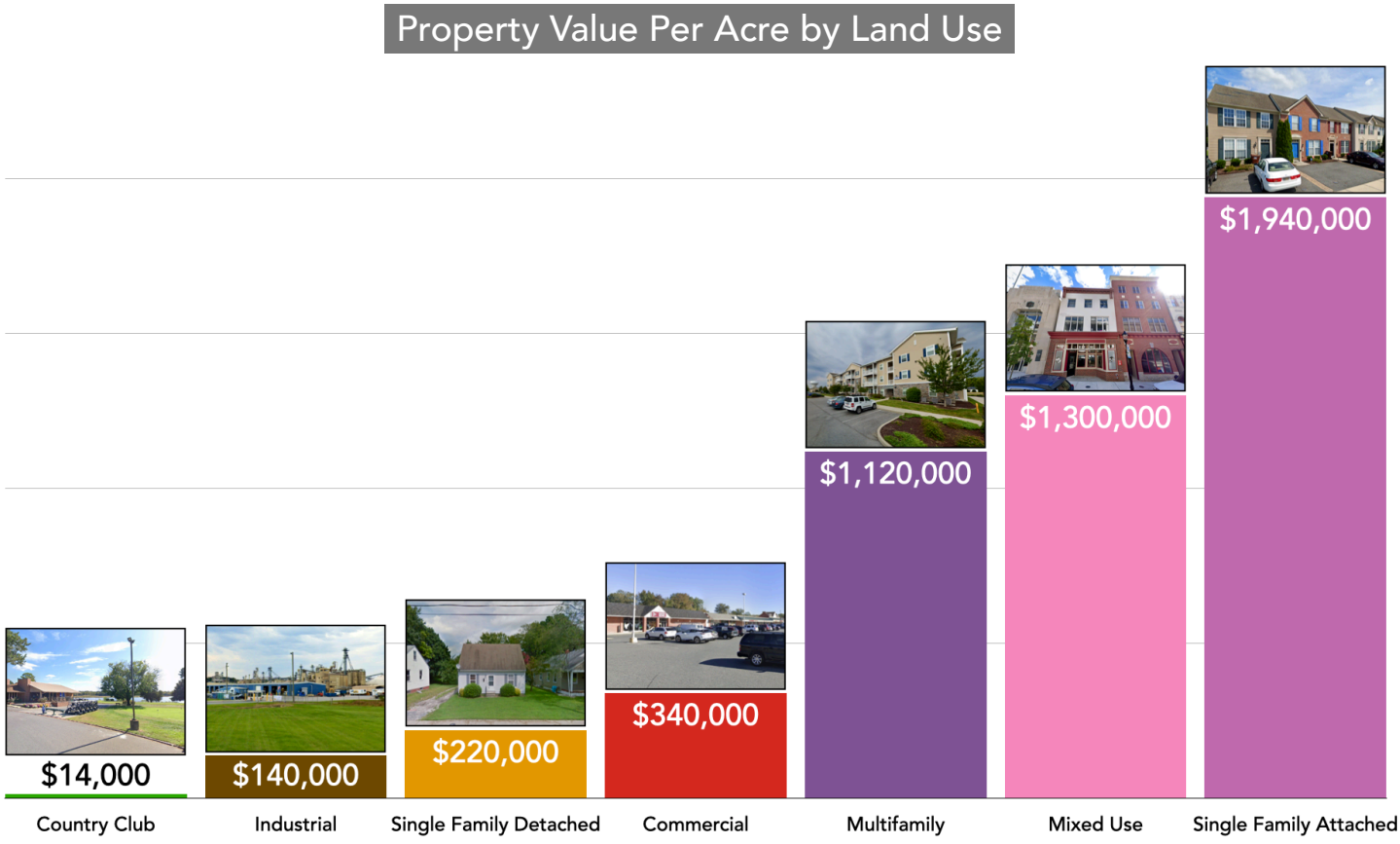


Figure 8. Comparison of values per acre by land uses across the Eastern Shore
Source: Maryland Department of Planning (2024), Google Maps

Historic Development

In 1952, the Chesapeake Bay Bridge was constructed and permanently altered the dynamic of Maryland's Eastern Shore. The bridge linked rural eastern communities to Maryland's more urban interior, inciting rapid development over the following decades. While another bridge expansion project is underway, it is likely that the

Eastern Shore will undergo another transformation. By looking at the historical impacts of the bridge, we can learn valuable lessons about how increased accessibility will drive pressures to develop in the region (Figure 9).

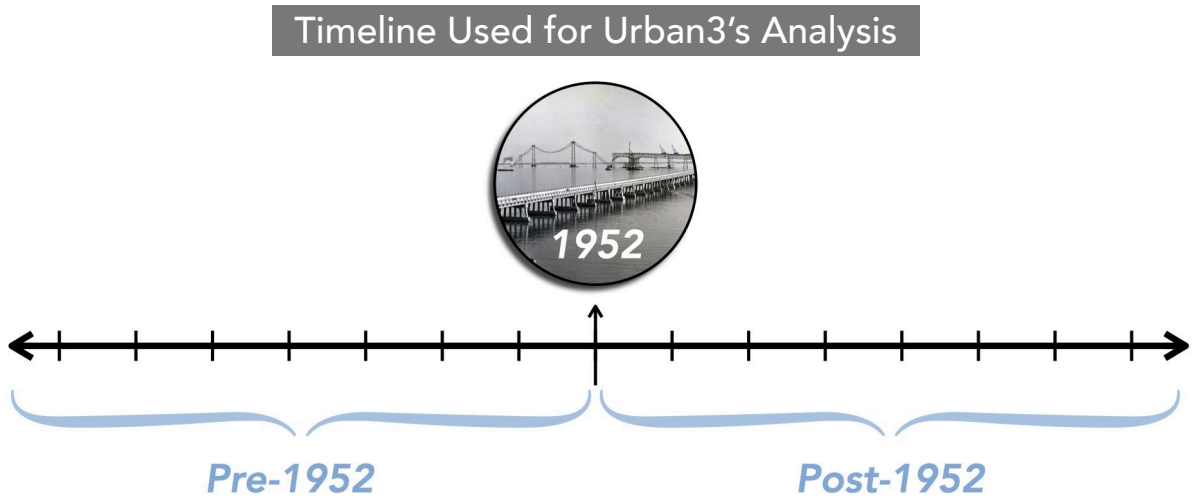


Figure 9. Illustration of how Urban3 divided our analysis between two time periods: before and after construction of the Chesapeake Bay Bridge
Source: Maryland Department of Planning (2024), Google Maps

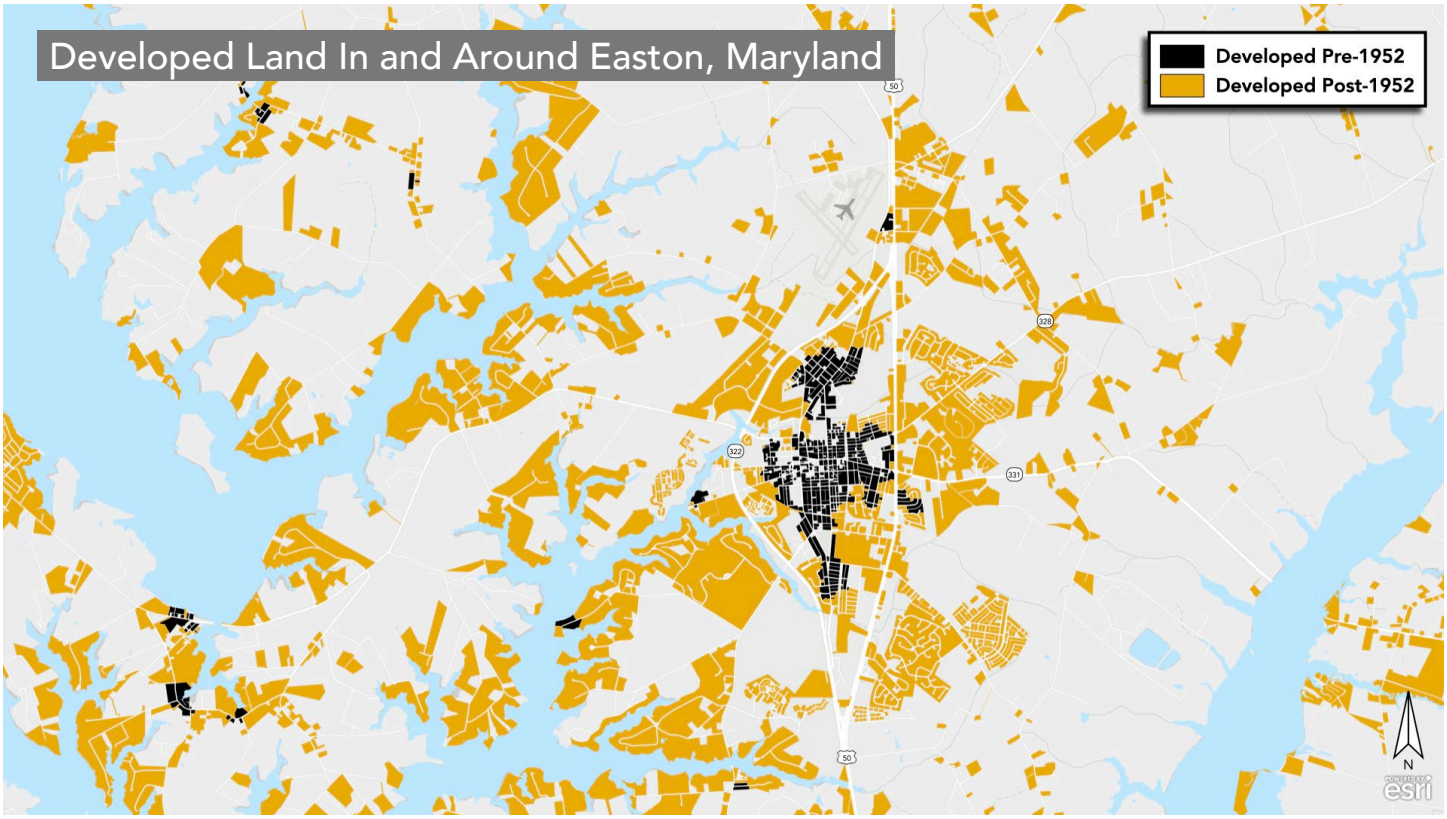


Figure 10. Map examining developed land before and after Chesapeake Bay Bridge construction
Source: Maryland Department of Planning (2024)

To understand these historical impacts, Urban3 analyzed development patterns in Easton both before and after 1952. The images in Figure 10 clearly show a dramatic shift in development from the first half to the second half of the century. Before 1952, development was predominantly concentrated in Easton's downtown core, whereas after 1952, it became more dispersed and less centralized. We can continue to examine this pattern across the

entire region in three dimensions (Figure 11), noting that pre-1952 development carries significantly more value compared to the more suburban and dispersed development that emerged afterward.

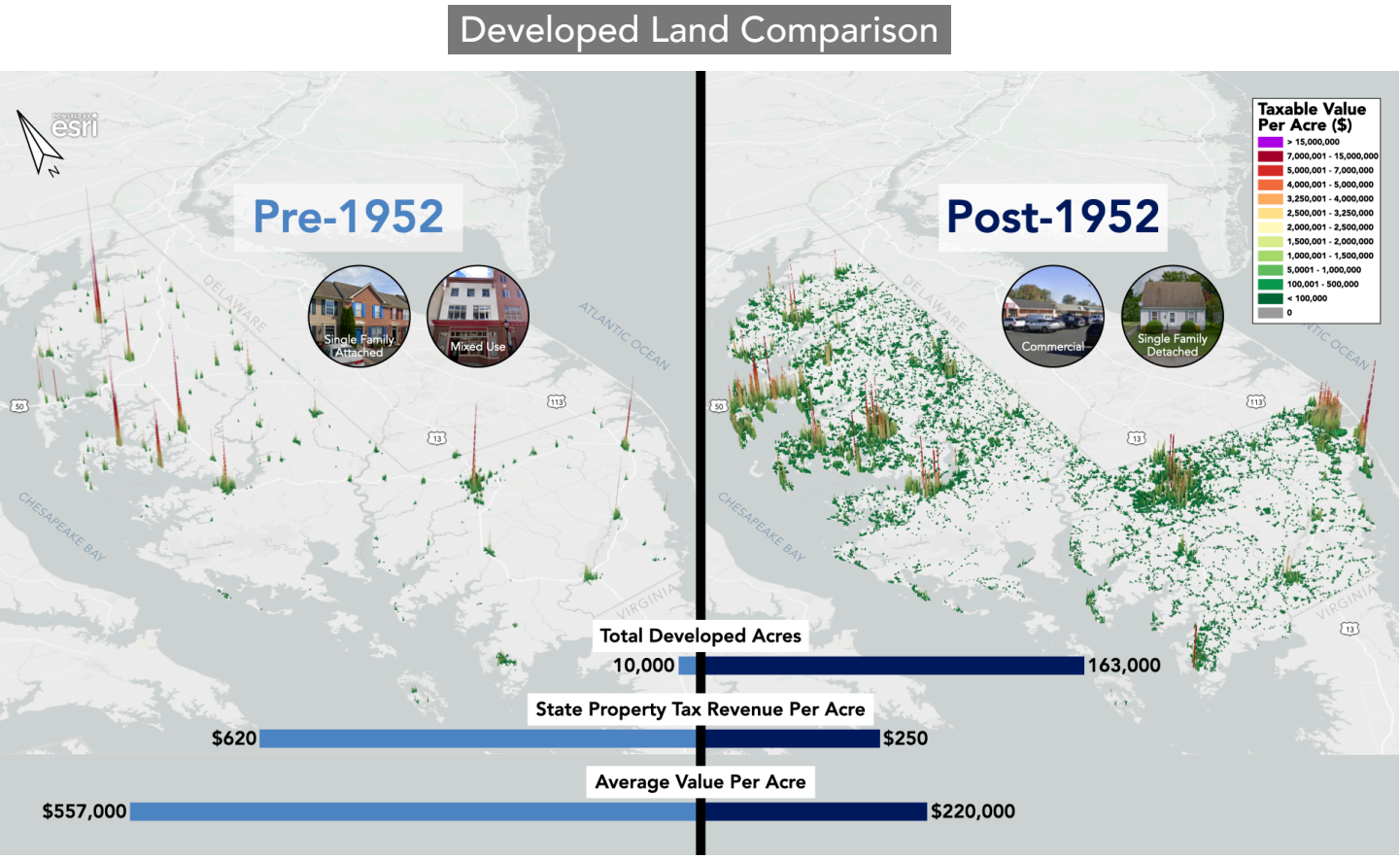


Figure 11. Maps demonstrating the Value Per Acre of developed land before and after Chesapeake Bay Bridge construction
Source: Maryland Department of Planning (2024), Google Maps

Looking to the Future: Sea Level Rise

In conjunction with the expansion of the Bay Bridge, sea level rise also threatens another kind of regional transformation. Increased developmental pressures stem from the bridge expansion, while developable land area decreases as a result of sea level rise. These changes will dictate how Eastern Maryland communities develop over the next century. By 2100, the Eastern Shore is likely to experience 3 feet of sea level rise. Under this scenario, the region faces losing a staggering $1.8 billion in taxable property value and over 269,000 acres of land (Figure 12).

Storm surge will only exacerbate these risks. In the event of an extreme storm, flooding as a result of storm surge has the potential to impact 41% of the Eastern Shore's taxable value, and nearly 30% of its land area.

Figure 13 shows how each of the cities included in this analysis fare after 3-feet of sea level rise. Comparing the percent of taxable value and acres lost,

"Under this scenario, the region faces losing a staggering $1.8 billion in taxable property value and over 269,000 acres of land."

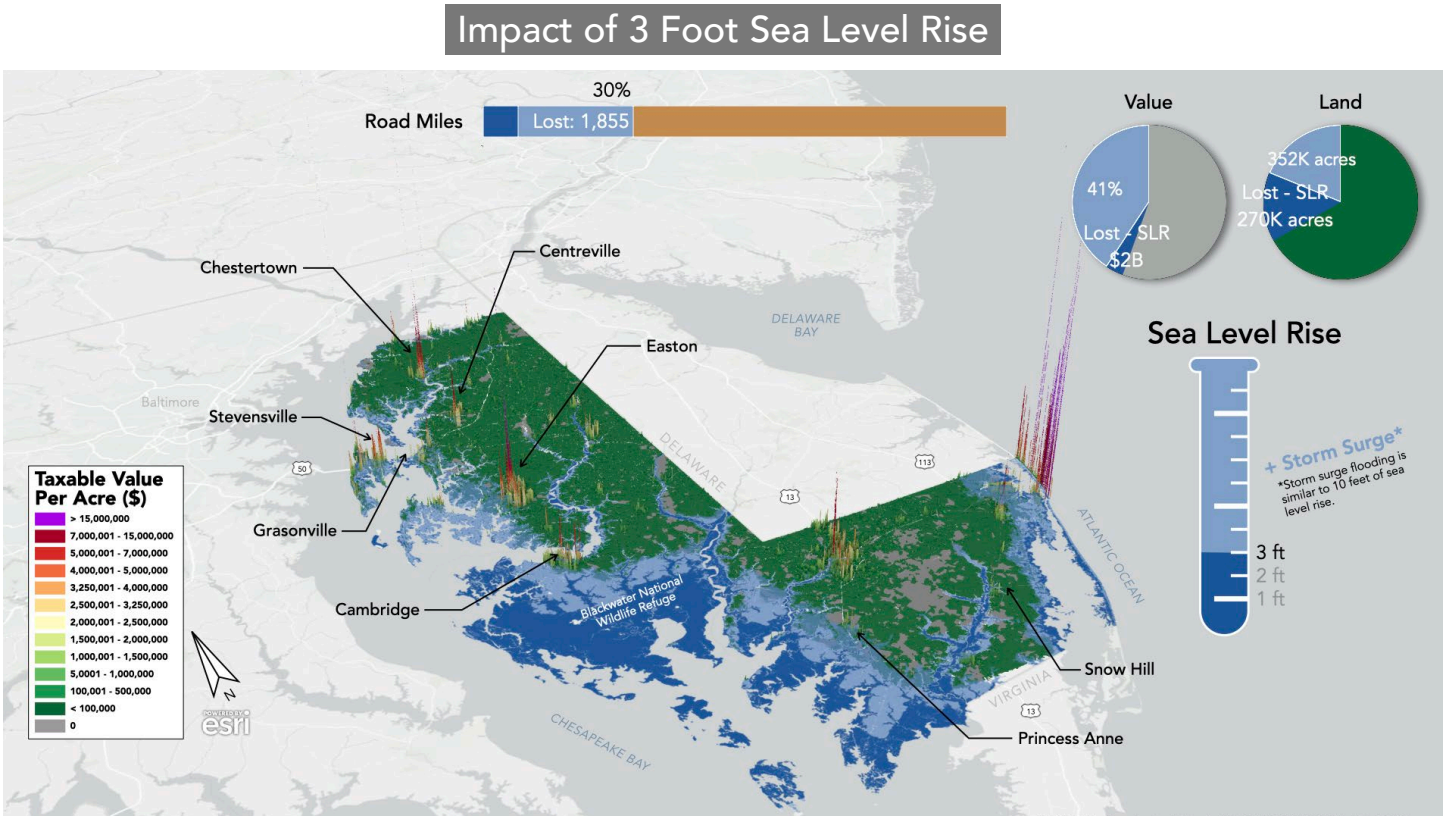


Figure 12. Value Per Acre model of remaining parcels after 3 feet of sea level rise
Source: Maryland Department of Planning (2024), NOAA SLR (2023), Category 4 Storm Surge Model (SLOSH) (2024)

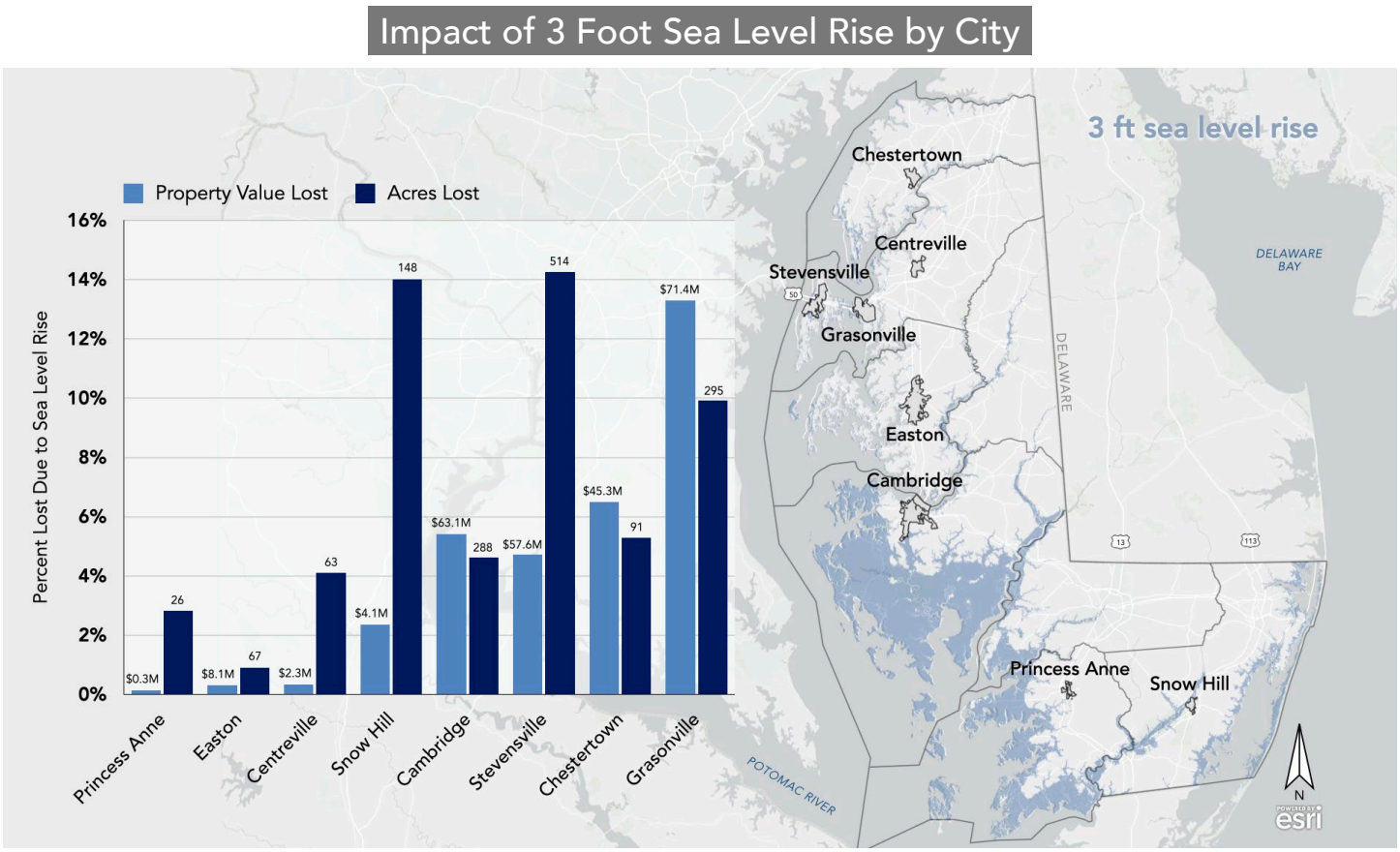


Figure 13. Impact of sea level rise for cities across the Eastern Shore by the year 2100
Source: Maryland Department of Planning (2024), NOAA SLR (2023)

communities that have settled along the coast or near river inlets are most at risk to experience impacts from sea level rise.

We can also assess the impact of sea level rise by evaluating its effect on developable land. Figure 14 highlights current land uses alongside projected land availability in 2100. In this analysis, areas affected by sea level rise, designated as wetlands, or identified as ecological zones are prioritized for conservation. The remaining areas, shown in green, represent land under municipal control that could potentially be developed. This projection underscores that by 2100, the availability of developable land will significantly diminish, emphasizing the need to prioritize efficient and sustainable land use strategies moving forward.

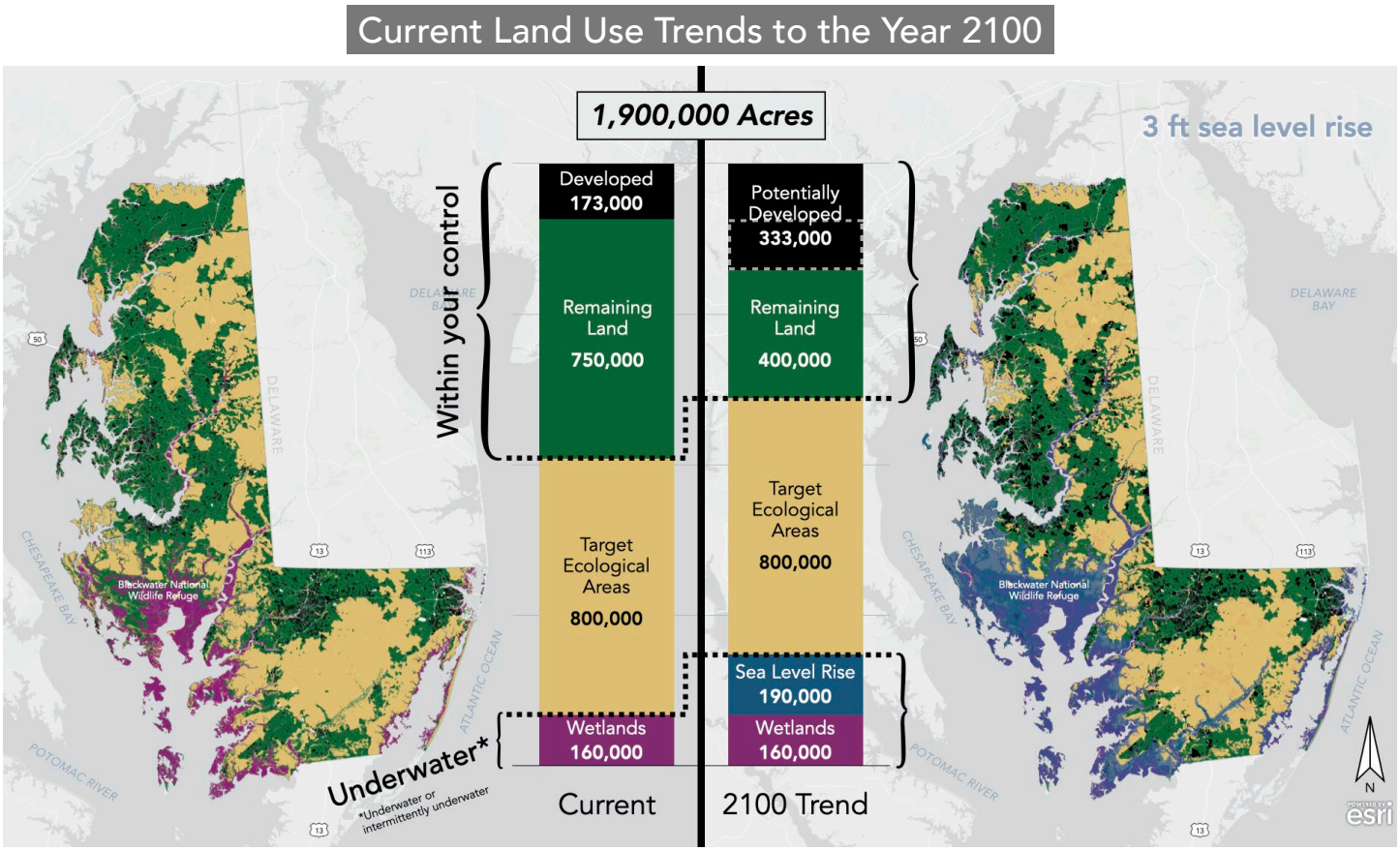


Figure 14. Current land uses on the Eastern Shore (left) and projected available land by 2100 (right)
Source: Maryland Department of Planning (2024), NOAA SLR (2023), MD Land Use Land Class (2010), Target Ecological Areas (2017)

The Eastern Shore is at a pivotal crossroads, facing decisions that will shape its future for generations. Urban3's analysis reveals two distinct paths: continuing to prioritize single family detached housing development or shifting toward attached housing, which generates the same taxable value while requiring significantly less land (Figure 15).

"This projection underscores that by 2100, the availability of developable land will significantly diminish, emphasizing the need to prioritize efficient and sustainable land use strategies moving forward."

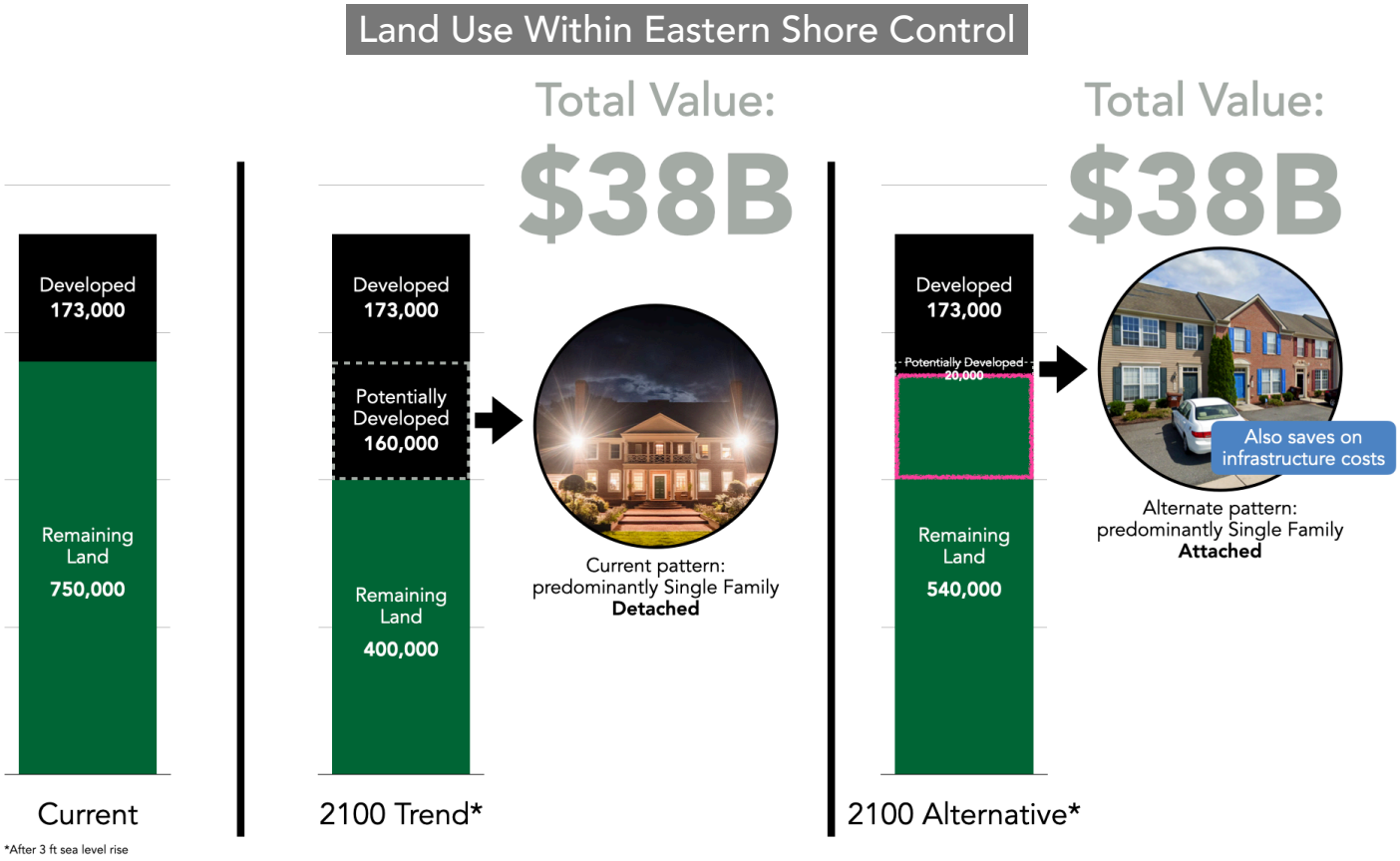


Figure 15. Comparison of the impact of single family detached versus single family attached housing choices on remaining available land
Source: Maryland Department of Planning (2024)

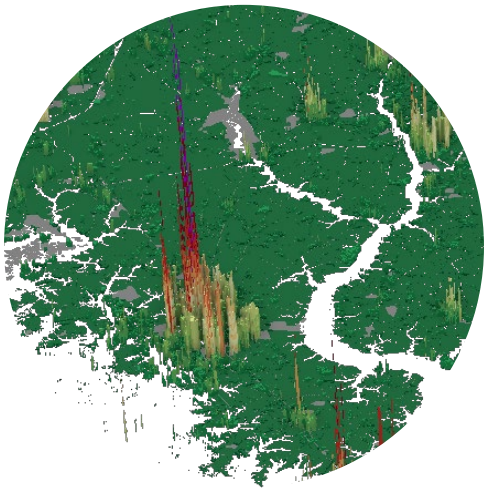
The Value of Green Space

Green spaces, such as parks, forests, wetlands, and other undeveloped lands, provide significant economic, environmental, and social value to communities across Maryland's Eastern Shore. These areas help serve as natural infrastructure that mitigates the impacts of flooding, improves water quality, and enhances resilience to climate change. Economically, green spaces reduce the need for costly stormwater management systems by naturally absorbing and filtering rainwater. Additionally, they enhance property values, attract tourism, and improve public health by offering recreational opportunities and reducing air pollution. Accessible green spaces foster community engagement, improve mental well-being, and create equitable access to nature for residents of all income levels. As the region grapples with development pressures and the threat of sea level rise, preserving and integrating green spaces into land-use planning will be essential for sustaining the Eastern Shore's economic vitality and quality of life.

Figure 16. Blackwater Wildlife Refuge
Source: talbotspy.org

Key Takeaways

How can we increase our Value Per Acre (VPA)?



Understand current revenue and spending patterns.

Urban3's analysis shows how different land uses are tied to public revenue generation and how it impacts local communities' ability to pay for services. Understanding how different land uses affect property tax revenue will allow municipalities to make informed development decisions that maximize revenue productivity, which can then be used in providing services such as public safety and continuing economic development.

Repeat what works.

Inspecting the Value Per Acre (VPA) model allows communities to link fiscally productive areas with their associated land use types. Using a moderate to high productivity sample development, such as mixed-use commercial or missing middle housing types, as an example for how to build in the future can guide community conversation, vision, processes, and future regulations.

Increase density incrementally.

Allowing greater density is a simple way to increase VPA. Increasing the numerator in the "value divided by acres" equation will naturally yield a higher value per acre. Stacking your stories means stacking your dollars. Increasing density by just one or two stories can have a significant impact on productivity. Density increases typically are achieved with land development regulation changes, which may be contentious.

As the Eastern Shore continues to grow, the region will be able to make choices regarding how that growth will look and the resulting financial implications of that growth. Urban3's analysis can help municipalities locate and reproduce some of its most highly productive land use patterns and building types.

Understand that today's choices affect tomorrow.

In an area that is so deeply connected to its surrounding water bodies, the Eastern Shore will need to make difficult decisions that will shape its future for generations. Increased developmental pressures that stem from the bridge expansion, in conjunction with decreased developable land area as a result of sea level rise poses unique challenges for the region. Urban3's analysis con-

siders the impact on available land by continuing to develop single-family detached housing versus shifting toward attached housing, which generates the same taxable value on less land.

How can we increase our VPA and lower our costs?

Understand the costs to maintain infrastructure systems.

Urban3 has seen that funding for infrastructure systems (roads, sewer, water, stormwater) is insufficient in covering the lifecycle expenses for these systems. Certain users of these systems may not be paying for the true cost of what it takes to serve them (meaning other users are subsidizing them). Adjust fees, with geography in mind, to adequately cover the costs of operation and maintenance or encourage infill development rather than servicing new areas.

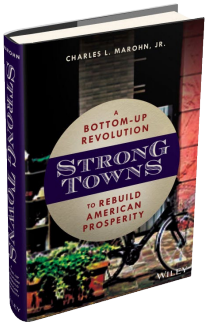
Expanded Readings

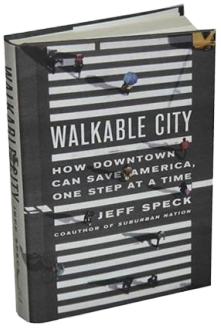
Strong Towns: *A Bottom-Up Revolution to Rebuild American Prosperity*
Charles L. Marohn, Jr.

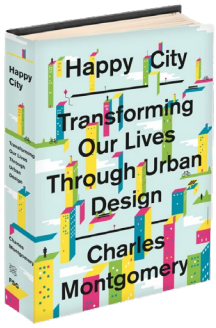
Walkable City: *How Downtown Can Save America, One Step at a Time*
Jeff Speck

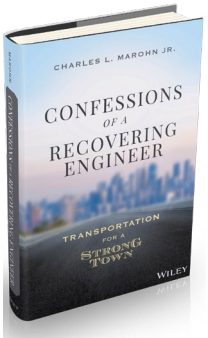
Happy City: *Transforming Our Lives Through Urban Design*
Charles Montgomery

Confessions of a Recovering Engineer: *Transportation for a Strong Town*
Charles L. Marohn, Jr.









URBAN3

Data-driven storytelling

Principal	Heather Worthington
Principal	Joe Minicozzi, AICP
Chief Analyst	Phillip Walters
Project Manager	Adam Carr, AICP
Lead Analyst	Leah Handwerger
Analyst I	Billy Cooney
Graphics Specialist	Brooke Robinson

All maps are created with ESRI software, and all data used in this analysis and report (unless otherwise noted) was provided by the Eastern Shore Land Conservancy, Maryland Department of Planning (2024), NOAA Sea Level Rise Data (2023), MD Land Use Land Class (2010), Target Ecological Areas (2017), Category 4 Storm Surge Model (SLOSH) (2024)

urbanthree.com