

NEW CASTLE COUNTY **Comprehensive Plan 2050**

ncc2050.newcastlede.gov





A very special word of thanks to the residents, community stakeholders, and advocacy organizations of New Castle County for their active participation in this planning effort. We also acknowledge the thoughtful partnership of our incorporated cities and towns, representatives from the State Planning Office, and other state agencies.

Acknowledgments

New Castle County Government

Matthew Meyer, County Executive

New Castle County Council

Karen Hartley-Nagle, President

Kenneth R. Woods, 1st District

Dee Durham, 2nd District

Janet Kilpatrick, 3rd District

Penrose Hollins, 4th District

Lisa Diller, 5th District

David Carter, 6th District

George Smiley, 7th District

John Cartier, 8th District

Timothy Sheldon, 9th District

Jea P. Street, 10th District

David Tackett, 11th District

Bill Bell, 12th District

New Castle County Planning Board

Karen Peterson, Chairperson

Leone Cahill-Krout

Jonathan Cochran

Joseph Daigle

Leah Gray

William McGlinchey

Robert Snowden

Ruth Visvardis

Kiana Williams

New Castle County Department of Land Use

Richard E. Hall, AICP, General Manager

George Haggerty

Antoni Sekowski

Dawn Thompson

Matthew Rogers

Phillip McBride

Alec Davis

Betsy Hatch

Stephanie Martins

Table of Contents

The Plan

A. Introduction	1
B-1. What We Heard	9
B-2. What We Know	17
B-3. What We'll Do	27
C. Future Land Use and Implementation	83

The Topics

D. Conservation	101
E. Open Space & Recreation	131
F. Mobility	147
G. Utilities, Water, and Sewer	189
H. Housing	211
I. Historic Preservation	231
J. Community Planning and Design	249
K. Economic and Community Development	279
L. Climate Change and Hazard Mitigation	303
M. Environmental and Social Justice	329
N. Capital Improvements Plan	353
O. Intergovernmental Coordination	363

The Tools

Appendix A: 2012 Future Land Use Map and Current Zoning Map	383
Appendix B: Goals, Objectives, and Strategy Matrix	389
Appendix C: Planning & Public Involvement Process	429
Appendix D: Youth Planning Board Recommendations	445
Appendix E: Future Scenarios and Analysis Documentation	457
Appendix F: Community Area Master Plan Key Recommendations	499
Appendix G: EJSCREEN Indicators	519
Appendix H: 2022-2023 School Enrollment Projections and Capacity	533
Appendix I: Key Wildlife Habitats	543
Appendix J: Acronym Glossary	547



THE PLAN _____

A. Introduction



NCC2050 The Vision

In 2050, New Castle County is a thriving healthy and equitable community with a clean environment and strong economy. It champions preservation of clean water and the natural environment, and adaptation to climate change, while fostering a prosperous and strong agricultural industry. Residents have equitable access to parks and recreation, a multimodal transportation network, and a robust economy with living wage jobs. The housing stock is diverse in both form and price. Important historic and cultural resources are respected and preserved as part of unique, high quality, walkable places. It is a model for social justice and climate resiliency. Historic overburdening of certain communities with dangerous pollution and health risks has been remediated and regulations are in place to prevent further injustice.

Introduction

New Castle County, Delaware has changed significantly in the last thirty years; the next thirty years will certainly bring big changes as well. This plan anticipates many of these changes and recommends a path forward that is sustainable, equitable, and prosperous. The county is at a crossroads in many respects: while new development continues to expand in some locations, other existing communities will need investments to maintain their desirability for future generations. Agricultural and natural resource preservation and protection will be essential for a sustainable future. Land use planning is more than managing where new growth occurs, it also needs to spur revitalization, equity, environmental justice, sustainability, and vibrant communities.

What is the primary purpose of the Plan? The Plan charts a course for the County's future, while meeting its statutory requirements to guide/direct zoning, subdivision policies and regulations (the Unified Development Code). Any changes to these policies should be consistent with the Plan while serving as a guide for broader growth.

While NCC2050 is the decennial update to the Comprehensive Development Plan, its scope spans the next three decades,¹ hence the plan's name NCC2050. Work on the plan began in June 2020 and the final plan was adopted by New Castle County Council on July 26, 2022, and certified by the Governor of the State of Delaware John Carney on July 26, 2022. The goals, objectives, and strategies in NCC2050 will be used to guide development, infrastructure, preservation, and other land use-related priorities for years to come. These recommendations were shaped by extensive public outreach and engagement.

This plan is occurring with the backdrop of climate change, a global pandemic, and a changing economy. Our future will not permit us to be complacent or reactionary. Our success—as individuals, families, and a community depends on deliberate, proactive measures for our future.

State and County Requirements for Comprehensive Plans

The Delaware State Code requires certain topics (elements) be evaluated in comprehensive plans to ensure consistency throughout Delaware's three counties.² In 2020, New Castle County identified three additional elements essential for a resilient and equitable future for all residents and thus amended Chapter 28 (Planning) of the County Code to include Social Justice, Environmental Justice and Hazard Mitigation.³ It is important to understand that while NCC2050 addresses all of these elements, they do not always break neatly into separate sections.

¹ The New Castle County Comprehensive Plan is required to be reviewed every 5 years and updated every 10 years.

² State of Delaware Comprehensive Plan Requirements can be found at: <https://delcode.delaware.gov/title9/c026/sc02/index.html>, Simplified checklist can be found at: <https://stateplanning.delaware.gov/lup/documents/comprehensive-plan-ncc.pdf>

³ New Castle County Code Requirements for Comprehensive Plans can be found at: https://library.municode.com/de/new_castle_county/codes/code_of_ordinances?nodeId=PTIICO_CH28PL_S28.01.003CODEPL

The Process

The Vision highlighted on the opening page of this plan captures the overarching aspirations that emerged early in the collaborative process. This extensive outreach and engagement effort moved through a series of deliberate steps toward specific policy priorities. Together, we identified six umbrella themes to achieve the Vision.

Themes

The themes provide a framework for the recommendations. They address the diversity of the county and integrate goals across the traditionally defined plan elements.⁴ These themes became the standards for measuring the potential success of the 11 priorities discussed in Section B Plan Priorities of NCC2050:



Sustainable Growth

Development, redevelopment, and revitalization occurs in planned growth areas, efficiently using existing and planned infrastructure while limiting the impact on the environment. Growth will also be economically and socially sustainable.



Robust Economy

The economy is diverse, strong, and resilient, adapts to change with innovation and collaboration, while ensuring access to local, living-wage jobs.



Thriving Places and Community Character

The places we live, work and play are well designed, accessible, and vibrant, with active locations for people to gather. Our communities reflect important aspects of our past and are places in which we take pride.



Livable Built Environment for All

All elements of the built environment (e.g., land use, transportation, housing, energy, and infrastructure) work together providing a high quality of life for all our residents.



Diverse Engagement

Our communities are central to our future and the diversity of the county's residents is represented in civic life, engagement, and leadership.



Conservation and Preservation

Our environmental (air, water, land, natural resources, and climate) and historic resources are protected as part of our thriving county.

⁴Subsequent chapters of the plan are organized by the traditional elements as presented in the State's checklist of plan elements, such as Transportation, Water and Sewer, and Economic Development.

Interconnected Challenges and Opportunities

Effective long range planning demands that we carefully consider the manner that events and trends which are most challenging are intertwined. Strong and deliberate policies that address and leverage interdependencies are required to take us to the future our Vision describes.



Everything is Connected

Protecting open space and achieving the right mix of housing in the right places. Reducing carbon emissions and broadening transportation choices. Addressing environmental justice now and anticipating future threats to those in harm's way. Each priority on our to-do list is woven into relationships with other priorities. If we focus too narrowly on overcoming one challenge, we can undermine success for others. So each of our strategies should be tested against the likelihood they'll distribute opportunities and reduce threats across the broadest possible range of people who live, work, and play in New Castle County. The Comprehensive Plan must be comprehensive.

Implementation

NCC2050 presents ambitious Goals, Objectives, Strategies, as well as 11 Priorities, which have been carefully crafted with input from the public, professionals, and governmental agencies to assist us in achieving our Vision. Implementing this plan will require a holistic, balanced approach that considers the benefits of each applicable strategy. It is imperative that we understand that there will inherently be tradeoffs between Goals, Objectives, and Strategies

within this plan that need to be carefully weighed. Finding a balance that best serves the community is essential. The Vision of NCC2050 will not be achieved overnight; we must strive for the best, while not letting our aspirations for perfect derail incremental benefits. A balanced approach which respects our environment, neighborhoods and economic opportunities will help achieve a sustainable and viable future for all residents.

How to Use This Document

NCC2050 is a more voluminous document than previous plans due in part to the substantial analysis and new topics explored to support its policy recommendations. To help residents most effectively use the document we have structured the plan in a manner that should be read for different levels of depth and understanding. NCC2050 is divided into 3 sections: The Plan, The Topics, and The Tools.

01



The Plan

The Plan section consists of the Introduction, What We Heard, What We Know, What We'll Do, and Future Land Use and Implementation. The Plan provides:

- An understanding of where we've been;
- Where we hope to be; and
- How we hope to achieve the Vision.

This section includes a chronology of the two-year process that took us from what we know about challenges and opportunities ahead; to what we heard in our community conversations; to how we tested potential strategies against our goals; to what we plan to do.

02



The Topics

The Topics section includes the following elements: Conservation; Open Space and Recreation; Mobility; Utilities, Water, and Sewer; Housing; Historic Preservation; Community Planning; Economic and Community Development; Climate Change, Resiliency, and Hazard Mitigation; Environmental and Social Justice; Capital Improvements; and Intergovernmental Coordination. These sections provide an in-depth understanding of important topics that will be instrumental in implementing the Plan, including crafting legislation and policy.

03



The Tools

The Tools section consists of the appendices, which provides greater detail regarding the planning process, scenario development and analysis. It also provides useful maps for evaluating a number of factors impacting Environmental and Social Justice as well as a matrix for all of the goals, objectives and strategies in the plan.

A background image showing two people riding bicycles on a dirt trail. The person on the right is a woman with curly hair, wearing a helmet and a plaid shirt, smiling. The person on the left is wearing a helmet and a light-colored jacket. The image is overlaid with a semi-transparent green filter.

THE PLAN _____

B-1. What We Heard: Community Engagement

What We Heard: Community Engagement

NCC2050 strives to have a positive and meaningful impact on residents and businesses countywide. Community members have been integral to the planning discussion from the plan's launch in 2020 and have continued to provide valuable guidance through the adoption process in 2022. It is imperative that moving forward the county continue this fruitful conversation through the plan's implementation in order for the Vision to be realized.

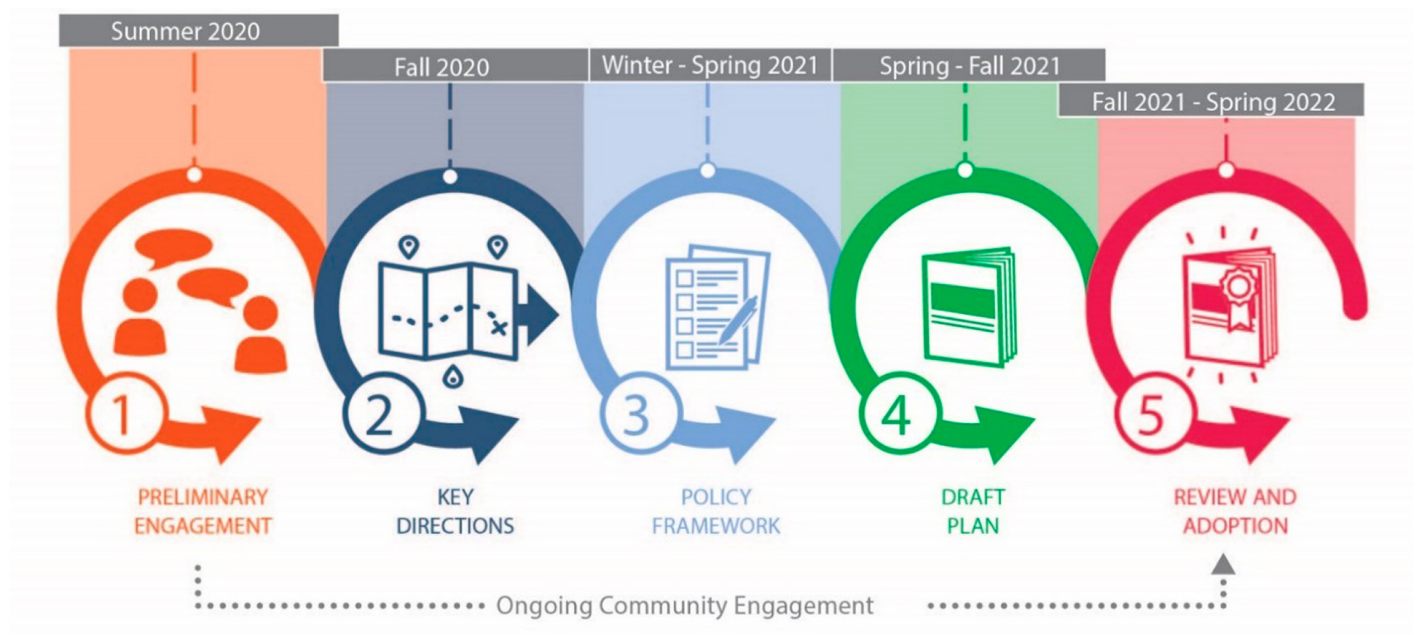


Figure A 1: NCC2050 Planning Process

The Public Process

The NCC2050 planning process occurred during the COVID-19 pandemic, and as such the community had fewer opportunities to participate at in-person events. The county as a community pulled together through the aid of virtual conferencing tools (TEAMS and ZOOM) resulting in the most active public participation for a New Castle County Comprehensive Plan. Moving forward, the County needs to harness new technology to expand the conversation, while providing the opportunity for residents to participate in-person, when possible.

NCC2050 has benefited from thousands of interactions with the community, with hundreds of community members participating in live and virtual NCC2050 events. The NCC2050 planning team ensured opportunities were accessible and inclusive during online discussions by recording the events and placing summaries and video recordings online for those who were unable to attend in person.

40

Youth
Planning Board
Participants

2,000+

Planning Board
Public Hearing
mailings

123,070

Newsletters in
annual sewer bills

700+

registrants for 3 virtual
Public Forums
(November 2020, July
2021, December 2021)

370

people attended 4
virtual workshops
Fall 2020

88

Stakeholder Advisory
Committee &
Interagency Work
Group members
attended
4 meetings

56,000+

visits to
NCC2050
website

837

people attended
5 “Deep Dive”
virtual sessions in
Spring 2021

12+

community
meetings,
Fall 2021

141,000+

social media
impressions

900+

responses to
multiple
surveys

For details on specific engagement events, participants, topics, and community member responses, see Appendices C and D.



Early phases of community engagement focused on developing a shared awareness of New Castle County as it is today and the issues that are important to the future (See What We Know). The following Goals were crafted to reflect public input for the County in 2050:

1. New Castle County has a connected, well-maintained, and well-loved network of open space (natural lands and recreational resources) that benefits all residents. (For context and detail, see Recreation and Open Space; Community Planning and Design)
2. The natural environment of the county continues to be a distinguishing characteristic of our community, and the quality of our natural resources—air, water, land, ecosystems (plants and animals)—are continually improving and meeting the needs of present and future generations. Development/redevelopment patterns that consume less unbuilt “greenfields” and resource lands support conservation of our important natural resources. (For context and detail, see Conservation)
3. Clean water is available to all residents now and in the future. (For context and detail, see Utilities, Water, and Sewer element)

Residents play an equal role in this plan and I think this is great because in the chat, it has not only professional people but community people that have made points that are important to them and professionals as well. I hope that whatever is put in place is for the welfare of all.

– Dora Williams, Community Representative, Route 9 Monitoring, Deep Dive Session 1: Open Space, Conservation, Recreation, Environment, February 3, 2021

“Beautiful and safe neighborhoods that are safe, environmentally friendly and a lot of green spaces with tasteful businesses built with well-designed urban planning.”

— Public Participant, *Our Homes and Neighborhoods*
— Let’s Talk Workshop, October 7, 2020

4. Healthy, safe, inclusive housing options throughout the County are diverse, meeting needs of all people while maintaining building design/form that integrates with existing communities. (For context and detail, see Housing)
5. New Castle County is a strong, resilient hub of the regional economy that provides a range of jobs and services to County residents. (For context and detail, see Economic and Community Development)
6. All residents have the ability to participate in the economy and have access to living-wage jobs. Delaware’s workforce is strong and positioned for emerging industry and jobs as well as applying innovation and adaptation in traditional industries. (For context and detail, see Economic and Community Development)
7. Farming continues to be as a viable way of life and contributes to economic resiliency and healthy communities (for its provision of food access and security, its preservation of farmland, and contribution toward community character). (For context and detail, see Conservation)
8. All New Castle County residents will have safe, efficient, inclusive access to employment, retail services, parks, and other daily needs including by walking, bicycling, public transit, and emerging modes. The transportation and land use systems are integrated and support each other to create livable places and a vibrant county. (For context and detail see: Community Planning and Design; Mobility; Recreation and Open Space)
9. Transportation of people and goods is efficient and fair. The transportation system and land use/development are coordinated; development occurs in areas with ample existing or planned transportation infrastructure (and other infrastructure) and decisions are fiscally sound, inclusive, and fair for present and future generations. (For context and detail, see Environmental and Social Justice; and Mobility)
10. Land uses, transportation, and other infrastructure complement each other, and neighborhoods and areas across the county are distinctive, attractive, functional, comfortable, and scaled to human needs. The physical environment is high quality, inclusively designed, retains value, and is fiscally sustainable. (For context and detail, see Community Planning and Design)
11. The built environment and streetscapes promote physical activity and healthy lifestyles including options for walking, biking, and other recreational opportunities. All residents have safe, inclusive access to lead physically active and healthy lifestyles. (For context and detail, see Economic and Community Development, and Mobility)
12. The value and significance of the historic, prehistoric, and cultural resources in the county are known and promoted; significant resources are preserved for the benefit of residents and visitors. (For context and detail, see Historic Preservation)
13. Environmental protection, climate change mitigation, and adaptation are important considerations in all county policies. Our community’s collective built environment—infrastructure, transportation, nature, and development patterns—are designed in a way that limits greenhouse gas emissions and protects our people and critical infrastructure from impacts of climate change. (For context and detail, see Hazard Mitigation and Climate Change)
14. Pursue a net zero built environment by following emerging technologies, and alternative regional and individual energy sources. (For context and detail, Hazard Mitigation and Climate Change)

15. New Castle County's infrastructure and economic and social systems are strong, and our communities are prepared for future climate-related and man-made/natural events; all residents will live in neighborhoods that are protected from negative impacts of incompatible non-residential land uses/activity and other hazards such as flooding (discrete and cumulative); and economic growth, prosperity and change in New Castle County is equitable and accessible by all. (For context and detail, see Environmental and Social Justice); and Hazard Mitigation and Climate Change)
16. Participation in planning and development represents the full diversity of the county. (For context and detail, see Environmental and Social Justice)

**This list helped us
identify the overarching
aspirations reflected in
the NCC2050 Vision**



17. Development, infrastructure, and change is well-planned and coordinated, achieving sustainable and effective public investment in our communities. (For context and detail, see Community Planning and Design)

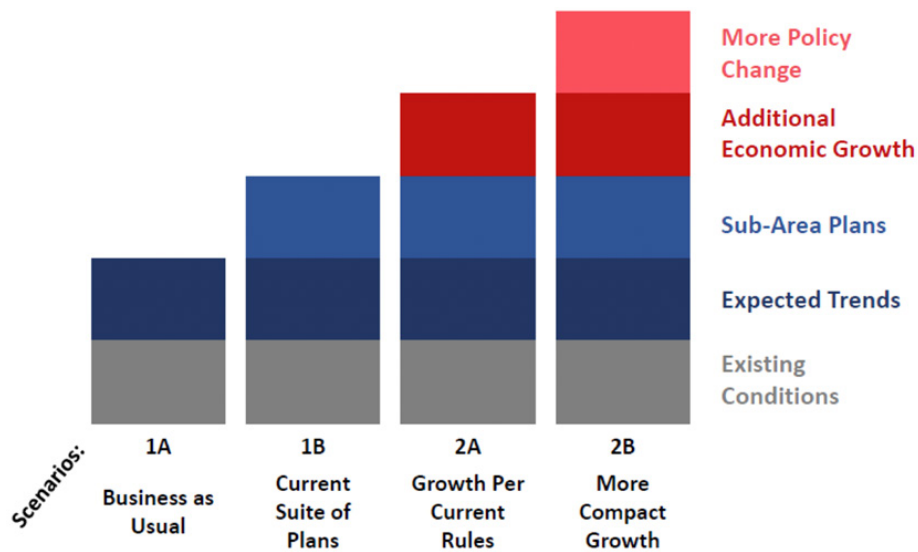
Scenario Planning

Scenario planning is an important tool to achieve our goals by forecasting a range of approaches and how they might lead to different outcomes. Broad, consensus-supported goals and ideas about how to bring the plan's Vision to fruition, assists in narrowing the scope of land use policy.

During the early stages of NCC2050 we identified interdependent and overlapping components, including where people live and their place of employment. Such imbalances could lead to undesired results including an increase in car commutes and greenhouse gases. A logical approach to combating housing/work mismatches is better coordination of infrastructure, economic development, community design, and climate change planning. Holistic planning and coordination may also be employed to explore ways to address and mitigate the impacts of climate change, which often disproportionately impacts people and neighborhoods already struggling with poverty, housing, and public health issues. This process will require integrating goals of social and environmental justice with those for community design, hazard mitigation, and economic development.

Thinking and planning across policy silos requires a deliberative approach testing the probabilities of advancing individual goals, as well as how well strategies might work in combination, thereby avoiding undermining other goals.

NCC2050 developed the following scenario planning process (For a detailed report, see Appendix E, Future Scenario and Analysis Combination). The planning team developed four scenarios based on community input and current conditions. They ranged from limited growth and retaining our current land use policies, to an alternative future with higher population and job growth and implementation of land use policies supported throughout the community engagement processes.



Scenario Building Blocks

Scenario 1A in the graphic above assumes business as usual, projecting a future where the County does not alter its current land use policies or regulations. Any impacts to the environment, conservation, preservation, economic or equity would be the results of our current policies. Projections suggest low growth and increasing costs.

Scenario 1B assumes the County adopts plans currently in the works, including the subarea plans, but does not alter current land use policies or regulations beyond those plans. Outcomes differ from scenario 1A in that more compact development patterns, jobs/housing balance, increased housing options, and more walkable conditions are achieved in the parts of the County that are the focus of the subarea plans. Countywide impacts would depend on cascading effects of area plans and from successes of our current policies. This scenario's projects more moderate growth with increasing costs, but building on strengths that might help residents and businesses be resilient.

Scenario 2A assumes the same limited policy interventions as 1B (including implementation of subarea plans), but with higher population and job growth driven primarily by market forces. Left mostly to the market and current regulations, it results in more driving, lost farmland, etc.

Scenario 2B assumes higher growth guided by policy strategies that focus on infill, redevelopment, and traditional neighborhood design. It projects a future where the county experiences growth in jobs and population as a result of the adoption and successful implementation of the subarea plans, along with policies promoting growth in more compact patterns and in locations where existing shopping centers and other nonresidential uses may redevelop. Countywide outcomes would be tied to changes in policy designed to achieve the community Vision.

When we project outcomes of various policy interventions over the next three decades, the approaches most likely to achieve our Vision's ambitions are those that work in combination with others to: align future development with supportive infrastructure; reduce car dependency; anticipate and prepare for the impacts of climate change; address social and environmental injustice; encourage an economic ecosystem that spreads prosperity across industry sectors and worker populations; increase the range and variety of affordable housing; and preserve open space.

An aerial photograph of a residential neighborhood, showing houses, streets, and trees. The entire image is covered with a semi-transparent green overlay. The text is positioned in the upper left quadrant.

THE PLAN _____

B-2. What We Know: Current Conditions and Trends

What We Know: Current Conditions and Trends

The path to our Vision for 2050 starts from where we find ourselves in 2022.

Ideally situated in the Mid-Atlantic Region, New Castle County is a vibrant and desirable place to live, work, and play. While our County is the smallest in the State of Delaware by area (426.2 square miles), it has the highest population and overall population density of any Delaware county. It's home to over half of the state's population.

Ours is a maturing county with both older and newer communities and populations. Among our assets: a high quality of life; lower property taxes than surrounding states; ample access to recreational and cultural activities; a large County and State Park systems; Delaware's largest employers and industry hubs; and easy access to the New York City, Philadelphia, and Washington D.C. metropolitan areas. Map B-1 shows New Castle County and its surrounding region.

However, New Castle County is changing every day, responding to influences that originate both within our county and from regional, national, and global trends.

As a community we face a variety of challenges and opportunities:

Population

New Castle County's **population is aging and diversifying, and the overall growth rate is slowing**. With those trends come different needs and preferences for housing, healthcare, and services government provides or influences through policymaking.

Increased migration could bolster growth in employable populations and in customers for employers' products. But the future of immigration is uncertain, since incentives and restrictions change with federal policies and global economics, which are hard to predict.

There's an upside to demographic shifts, however, provided our policies encourage growth in supply to accommodate growth in demand.

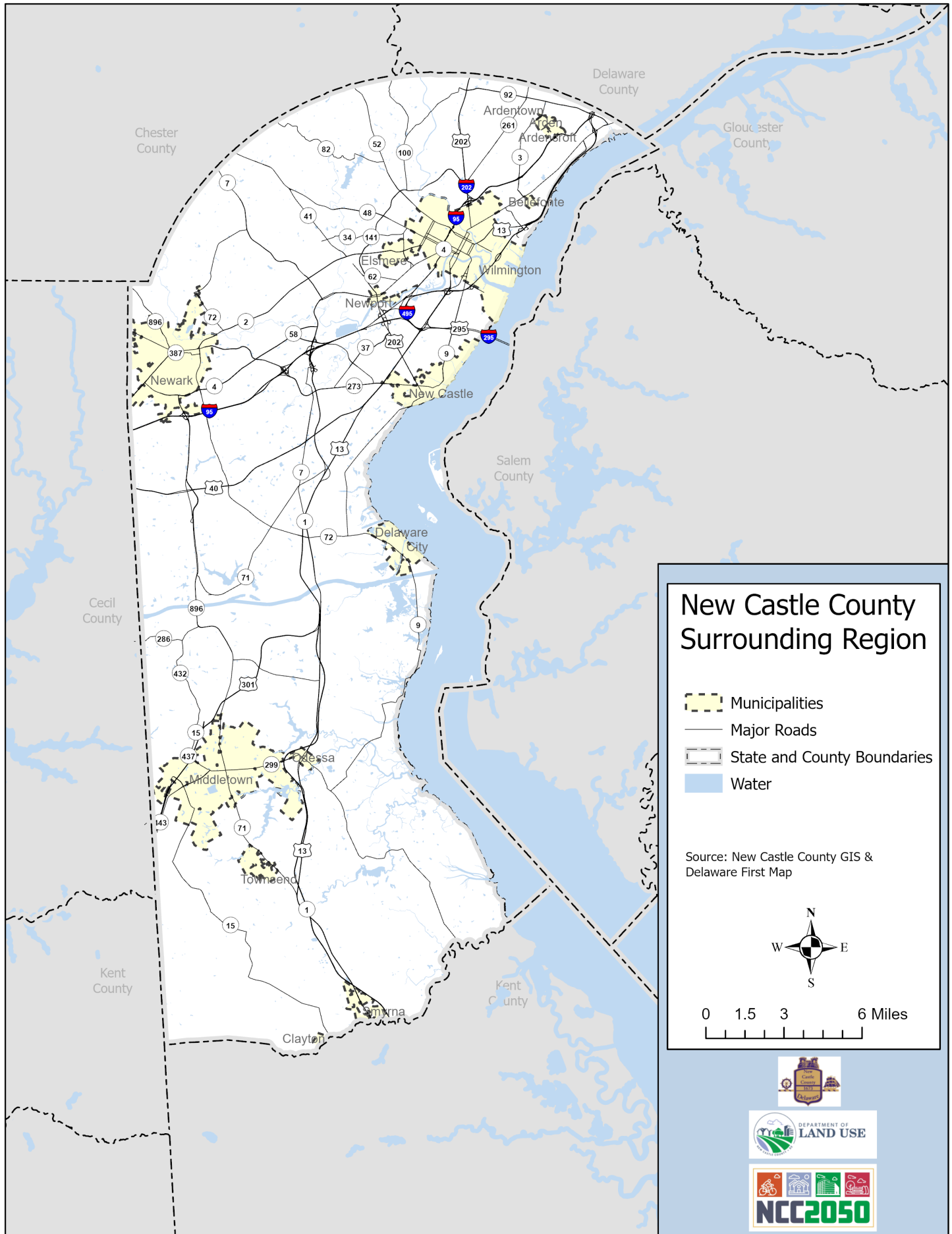
Table B-1

Future New Castle County Population Change							
Year	2020	2025	2030	2035	2040	2045	2050
Total Population	564,780	574,435	580,351	583,564	583,975	581,937	577,814
Population Change*	9,655	5,916	3,213	411	- 2,038	- 4,123	N/A
Births*	30,997	29,729	29,201	29,221	28,856	28,053	N/A
Deaths*	26,547	29,004	31,886	34,652	36,599	37,578	N/A
Net Migration*	5,205	5,191	5,898	5,842	5,705	5,402	N/A

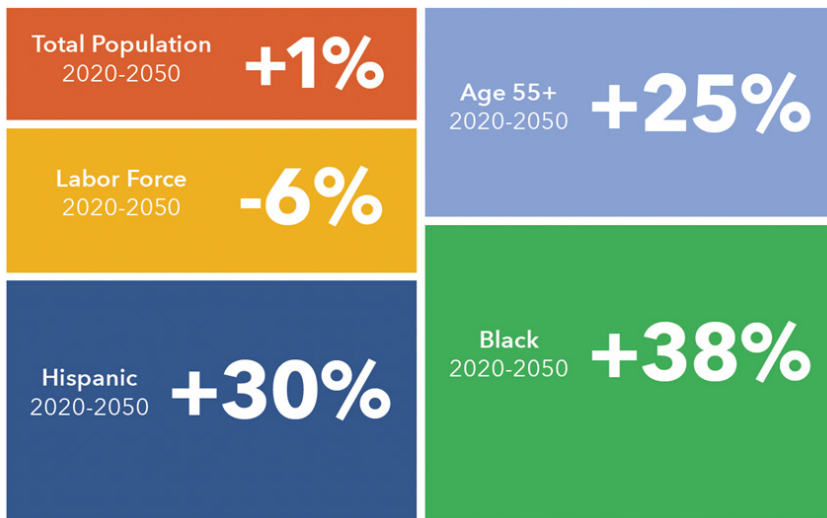
*Represents a five-year total beginning with specified year

Source: Delaware Population Consortium Population Projection Series, October 31, 2019

Map B-1 New Castle County Surrounding Region



Projected Community Change (2020-2050)

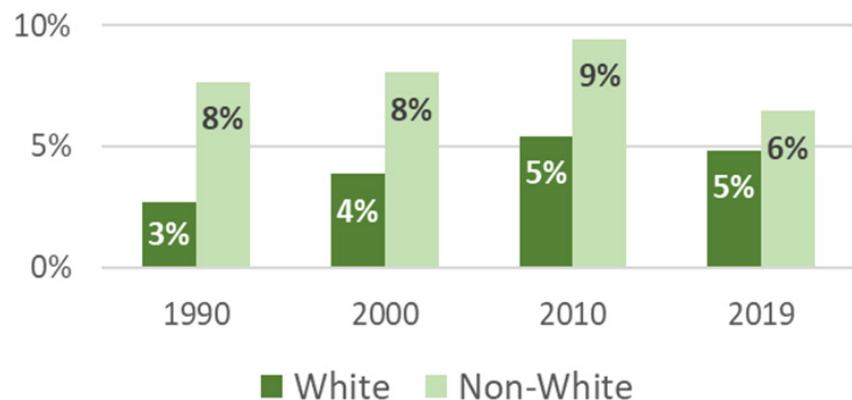


Where's the growth? Largely in Black and Hispanic populations, but not enough to offset the decline in overall population numbers. And individuals and neighborhoods within those populations are the ones most vulnerable to social, economic, and environmental challenges.

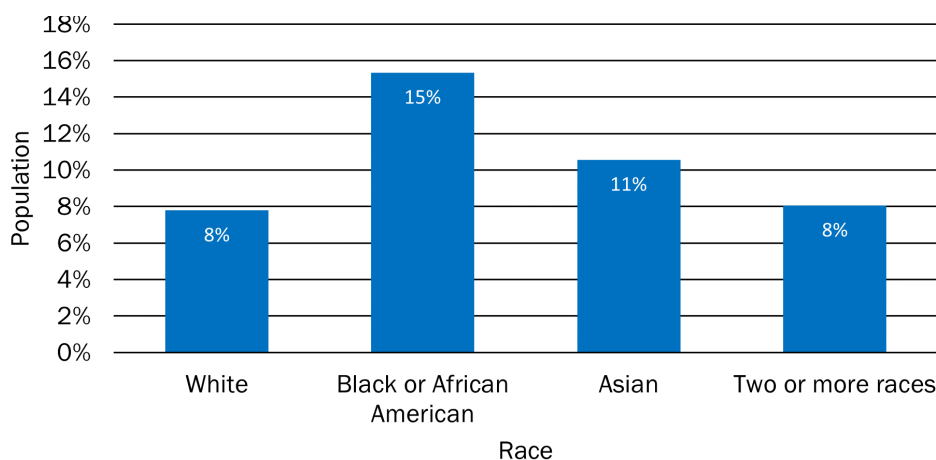
Source: <http://www.stateplanning.delaware.gov/demography/dpc-projection-data.shtml>

Unemployment by Race

Non-whites experienced higher unemployment than whites over the last three decades.



New Castle County Population Below Poverty Level, By Race



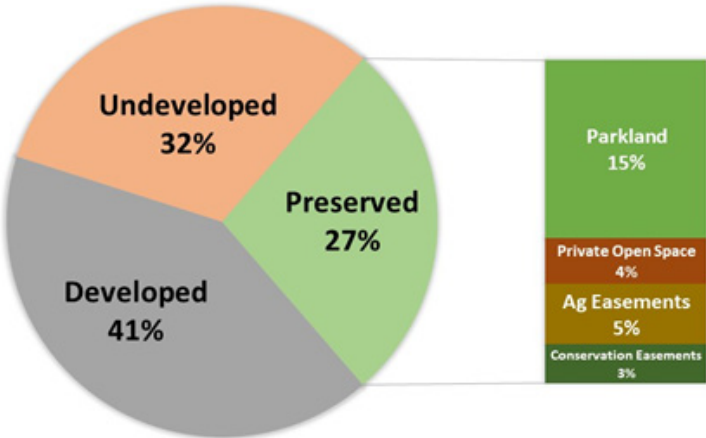
Higher percentages of Blacks and Asians live below the poverty level.

Many of the community characteristics preferred by both older adults and younger job seekers—walkability, transit accessibility, proximity to shops and services, diversity of housing options—are ones that make communities more economically vibrant and successful. While these amenities are currently lacking in many parts of the county, they should be integrated into community planning and design, and serve as attractors for new people and businesses. They also, serving a range of other policy goals including those related to housing affordability, open space and recreation, and economic and social justice. (See Community Planning and Design Element)

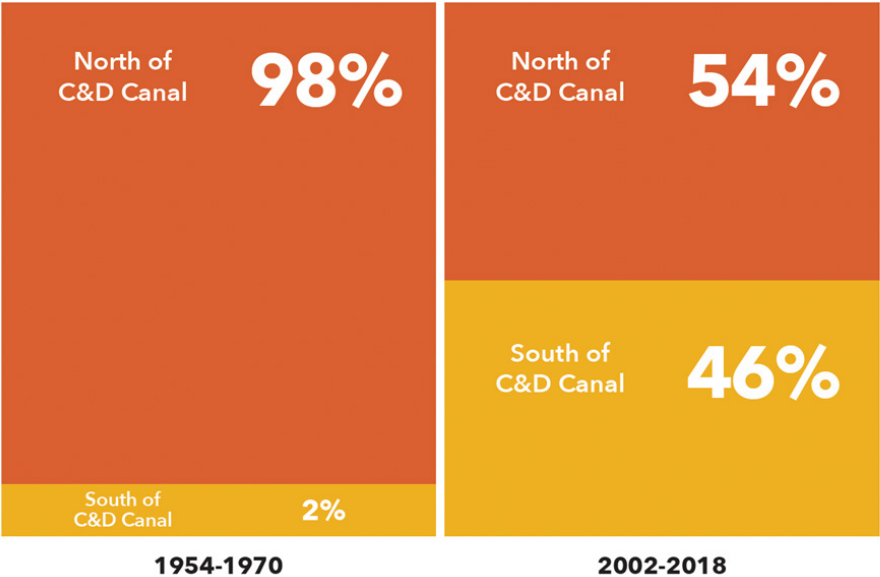
Land Use and Infrastructure

Harmonious development patterns balancing residential with nonresidential development are prevalent in the county, however a disproportionate number of low-income communities are near incompatible land uses which results in negative health outcomes. (See Social and Environmental Justice Element)

Current Snapshot of Land Development/Preservation, New Castle County



Shift in New Single Family Detached Home Development

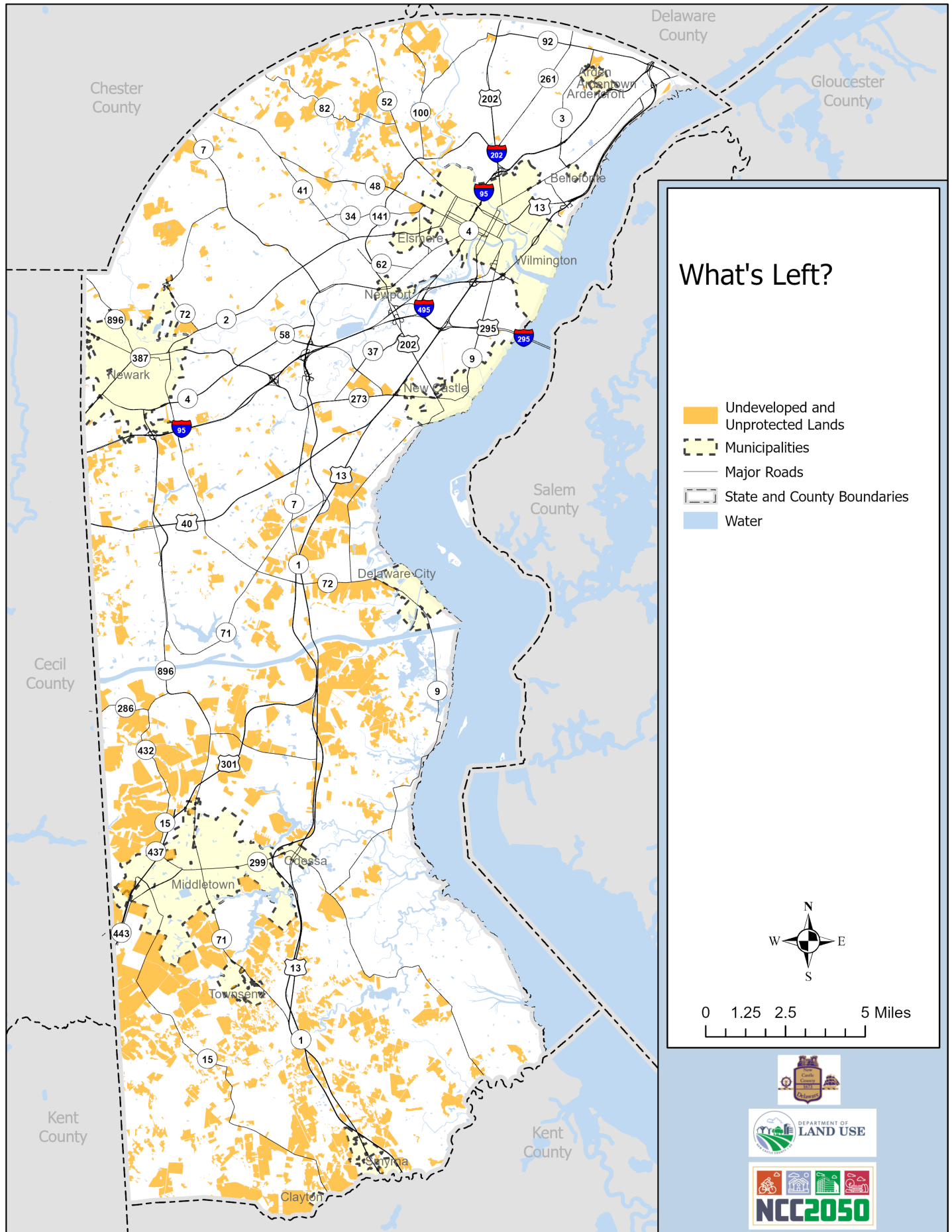


Increased suburban-style residential growth, especially in the southern parts of the County, has begun to impact traditionally rural communities raising questions about where investments in infrastructure and schools are best allocated.

Since jobs are concentrated in the north sections of the county, while suburban housing expands in the southern areas, there’s a growing mismatch between where people live and where they work. (See Community Design and Planning Element)

The likelihood of wetter and more severe weather resulting from climate change will require increased investments in maintenance and repair to aging infrastructure. Impervious surfaces, tied to development, result in more frequent flooding and stormwater management challenges. (See Hazard Mitigation and Climate Change Element)

We have the ability to alter our current trajectory, in part, by encouraging redevelopment of existing areas thereby better directing development areas with existing or planned infrastructure. Areas such as North Claymont, the Route 9 Corridor and Concord Pike/US 202 present an extraordinary opportunity for innovative reuse and reinvestment. (See Mobility Element)



“More preservation of remaining open space (open space tax fund?), especially forested/wetland areas, in southern NCC (some for parks/trails) and along 202 Concord Mall and other areas redevelopment. Create areas to attract employers/wider range of jobs.” — Community Survey #1 respondent

The transportation system is also integral to equitable development of the county. Public feedback during the NCC2050 process indicates a strong support for mixed-used development with pedestrian, bicycle, and transit facilities and open space preservation. (See Community Design and Planning and Mobility element). Work-from-home trends permitting employees to work from anywhere may help reverse the people/jobs mismatch by reducing commuting trips.

Open Space

There are roughly 74,700 acres of protected lands in New Castle County (about 27% of the total land area). Protected Lands include parkland, agricultural easements, private open space, and private conservation easements.

In this plan, land that is not already developed and that is not encumbered by preservation easements or important natural resources such as steep slopes, Critical Natural Areas, floodplains, wetlands, etc. is considered “What’s Left.” (**Map B-2: What’s Left?** displays the areas in the County that are potentially available for residential development).



What’s the policy opportunity?

The County needs to better direct development to growth areas with infrastructure, while conversely limiting development in non-growth areas. Additionally, we need to enhance our land preservation efforts by partnering with the State and other stakeholders to augment existing programs.

Economic Development

Downward trends in industrial and manufacturing uses are having a negative impact on countywide job growth. Conversely, the expanding “gig economy,” which provides less job stability and fewer employer benefits, is expected to account for a growing percentage of jobs. The COVID-19 pandemic has further complicated the local and global economy with labor and supply chain disruptions. If we traverse along our current economic trajectory, we could exacerbate several issues faced by our communities including disparities of home ownership and unemployment rates between whites and non-whites. (See Economic Development Element). Addressing these problems that will require reimagining economic development support systems in partnership with the private sector.

How might better planning and targeted investment counteract some of these trends?

There are industry sectors poised to expand. Among them: retail, transportation, warehousing, real estate, financial, insurance, and healthcare. A robust transit system and transit-supportive infrastructure helps us compete with surrounding states to attract employers and jobs. (See Mobility)

Diversifying housing types and encouraging development patterns that are less automotive dependent helps increase the range of affordable housing and mobility options. While work-from-home opportunities explored during the COVID-19 pandemic have isolated many workers from traditional networks of retail, finance, and healthcare in urbanized areas, they present enterprising entrepreneurs the opportunity to explore creative economic ventures.

Hazard Mitigation and Climate Change

New Castle County is in the mid-Atlantic coastal region, which is considered a “sea level rise hotspot” where levels are rising faster and higher than elsewhere, making it vulnerable to a wide range of natural hazards including floods, tornadoes, tropical storms and hurricanes, winter storms, and earthquakes. Climate exacerbates these occurrences by contributing to hotter, wetter, and more severe weather related events. (See Hazard Mitigation and Climate Change Element)

Addressing the root causes of climate change and mitigating its impacts will require collaborative efforts at international, national, regional, and local levels. New Castle County should play an important role in these efforts, by committing to greenhouse gas reductions while prioritizing resilience.

Our Long-Term Vision and Our Immediate Realities

Acknowledging the gaps between current trends and our Vision for New Castle County in 2050 helps us focus community discussion on how to overcome the challenges and seize the opportunities.





THE PLAN _____

B-3. What We'll Do: Action Steps

What We'll Do: Action Steps

NCC2050's Vision was crafted from an analysis of current conditions and trends, as well as the goals and potential strategies arising from continued community conversations. Scenario planning/idea testing helped move from analyzing background information and gaining public input to developing recommendations.

The Plan is organized under six umbrella themes:



Sustainable
Growth



Livable Built
Environment for All



Conservation &
Preservation



Robust
Economy



Thriving Places &
Community Character



Diverse
Engagement

Under these themes we have developed 11 policy priorities, which are summarized below:

- 1 Planned Growth** - direct development to planned growth areas with infrastructure and limit it outside of these areas, promoting preservation.
- 2 Environmental Justice** - reduce the risk and impact from environmental and health hazards on historically overburdened communities.
- 3 Land Preservation** - preserve a minimum of 7,100 acres of land for open space in the county and improve the lands' ecosystem health (including increasing farmland & historic preservation).
- 4 Sustainability & Climate Change** - lead in addressing climate change with a path for New Castle County government to reach net zero greenhouse gas emissions by 2050, prepare the built environment for a clean energy future, and become more resilient to environmental and health risks by greening and related efforts.
- 5 Economic Development** - develop policies and programs to create an economic environment that supports a range of industries and businesses while leveraging equitable and robust outcomes that limit negative effects.
- 6 Economic Justice** - as economic growth occurs, strive for equitable distribution of benefits.
- 7 Implementation** - ensure government is oriented to implement the plan in a comprehensive and coordinated fashion, including systematic data collection, tracking, reporting, and evaluation. Ensure growth and change in our communities is coordinated across agencies; that infrastructure and services are timed with new growth; and that decision-making leverages the full range of available data and technology.
- 8 Housing** - increase the variety and range of safe, quality housing options for all, in a diversity of locations; focus on revitalizing and preserving areas already developed, while responsibly guiding future development in a manner consistent with adjacent communities.
- 9 Targeted Strategies** - implement corridor, water, and other target-area-based revitalization programs that emphasize integration and accessibility of green infrastructure.
- 10 Diversity** - increase diversity of engagement in community planning activities and on professional staff.
- 11 Use the Plan Guiding Growth, Including Rezonings** - update the practice for rezonings and Future Land Use Map (FLUM) changes. Zoning (and rezonings) must conform to the FLUM, achieving the right balance between predictability and flexibility. The Comprehensive Plan should be the basis for land use decisions and changes to the Future Land Use Map should be the product of a public planning process, such as a community plan, or done at the 5-year evaluation of the Comprehensive Plan.



Setting measurable goals provides credibility to plan development and the potential for greater predictability for plan implementation.

How We'll Measure Success

We have identified quantifiable metrics and indicators of progress where possible to use along with the plan priorities. Where quantifiable measures and goals are not possible, we made qualitative (typically directional goals) assessments that will be re-evaluated as on-the-ground realities require.

Tracking and reporting metrics will also be useful for guiding public sector investments during annual reviews of capital and operating budgets for state and local agencies, directing investments to those resources (i.e., education, emergency services, transportation) and communities with the greatest needs.

The metrics applied in the priority explanations below acknowledge current conditions in the context of key goals and objectives of the plan and track them into the future. Many of the metrics will be compiled

annually and will be included in an annual report, while others are collected less frequently and will be included as updated information is available. The list of metrics should change over time, as data availability and analysis capabilities evolve.

New Castle County will publish an online metric dashboard to track progress toward the goals in the plan. As part of plan implementation, the County will need to work with other agencies and organizations to gather and evaluate the data and monitor plan implementation.



Priorities and Strategies

The metrics applied in the priority explanations below acknowledge current conditions in the context of key goals and objectives of the plan and track them into the future.

32%

Undeveloped land in New Castle County



As a reminder of how we leveraged interconnected strategies to target multiple challenges and opportunities, we've included icons representing the umbrella themes addressed under each of the priorities below. Also detailed are: explanations for why new policies are needed; the specific strategies

required to realize ambitions; how policies will be tracked through implementation phases; what agencies and other potential partners might collaborate; and over what time frame strategies are likely to be implemented.

1 Planned Growth

Focus growth. Direct growth to Delaware's Level 1 (most urban/developed) and Level 2 (suburban) Investment Areas, as outlined in [2020 Delaware Strategies for State Policies and Spending](#) (achieving at least 70% of growth in Level 1 and 90% in Levels 1 and 2).

(Objectives 2.3, 5.3, 10.1, and more)

THEMES



Sustainable
Growth



Livable Built
Environment for All



Conservation &
Preservation



Robust
Economy



Thriving Places &
Community Character



Diverse
Engagement





The State encourages “local government land-use policies that promote higher densities and mixed-use type development in appropriate areas such that complete communities be developed—places where people could live, play, work, and shop.”

Why?

Increasing the proportion of growth in Level 1 and 2 Investment Areas (see **Figure B-1**) promotes transportation options and enhances community identity and quality of life by reducing vacant or underutilized property and by providing additional housing, community resources, and/or employment in those communities.

The State describes Investment Level 1 Areas as those that are often municipalities, towns, or urban/urbanizing places in counties, where density is generally higher than in the surrounding areas and where there are a variety of transportation opportunities available.

Investment Level 2 areas are described as: less developed areas within municipalities; rapidly growing areas in the counties that have or will have public water and wastewater services and utilities; areas that are generally adjacent to or near Investment Level 1 Areas; smaller towns and rural villages that should grow consistently with their historic character; and suburban areas with public water, wastewater, and utility services.

In both Investment Levels 1 and 2 the State encourages “local government land-use policies that promote higher densities and mixed-use type development in appropriate areas such that complete communities be developed—places where people could live, play, work, and shop.”¹

Encouraging growth, development, and redevelopment in areas with existing infrastructure and services is the best way to use our investments most efficiently, and to have compact, mixed-use development. Leveraging existing infrastructure reduces development costs and renews purpose for underused or disused properties.

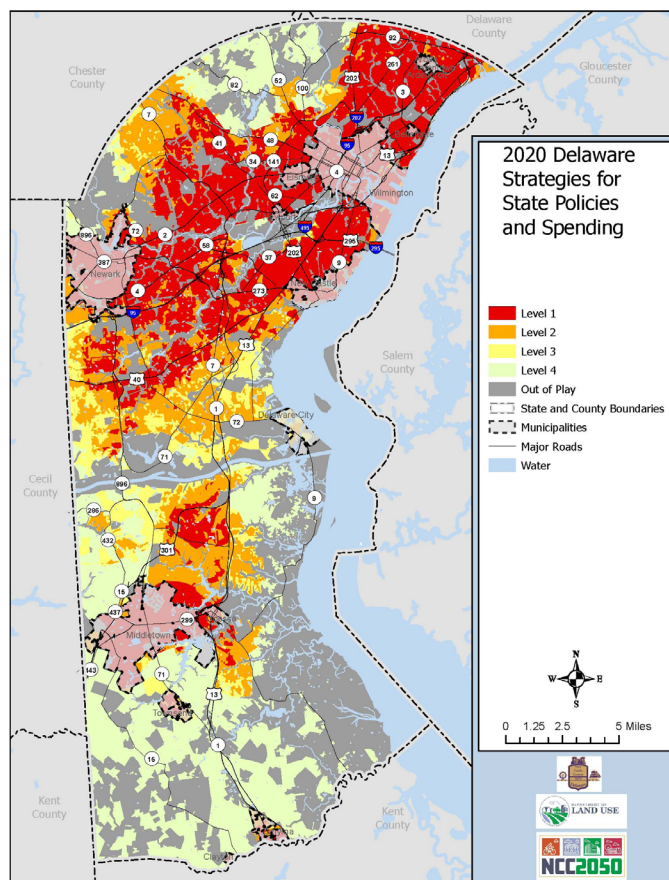


Figure B-1: 2020 Delaware Strategies for State Policies and Spending

¹Delaware 2020 Strategies for Sate Spending and Policy, <https://stateplanning.delaware.gov/strategies/documents/2020-state-strategies.pdf>

Land is a finite resource, and we must use it wisely. There are many facets to sustainable growth, but directing development to growth areas and limiting it in preservation areas are fundamental.

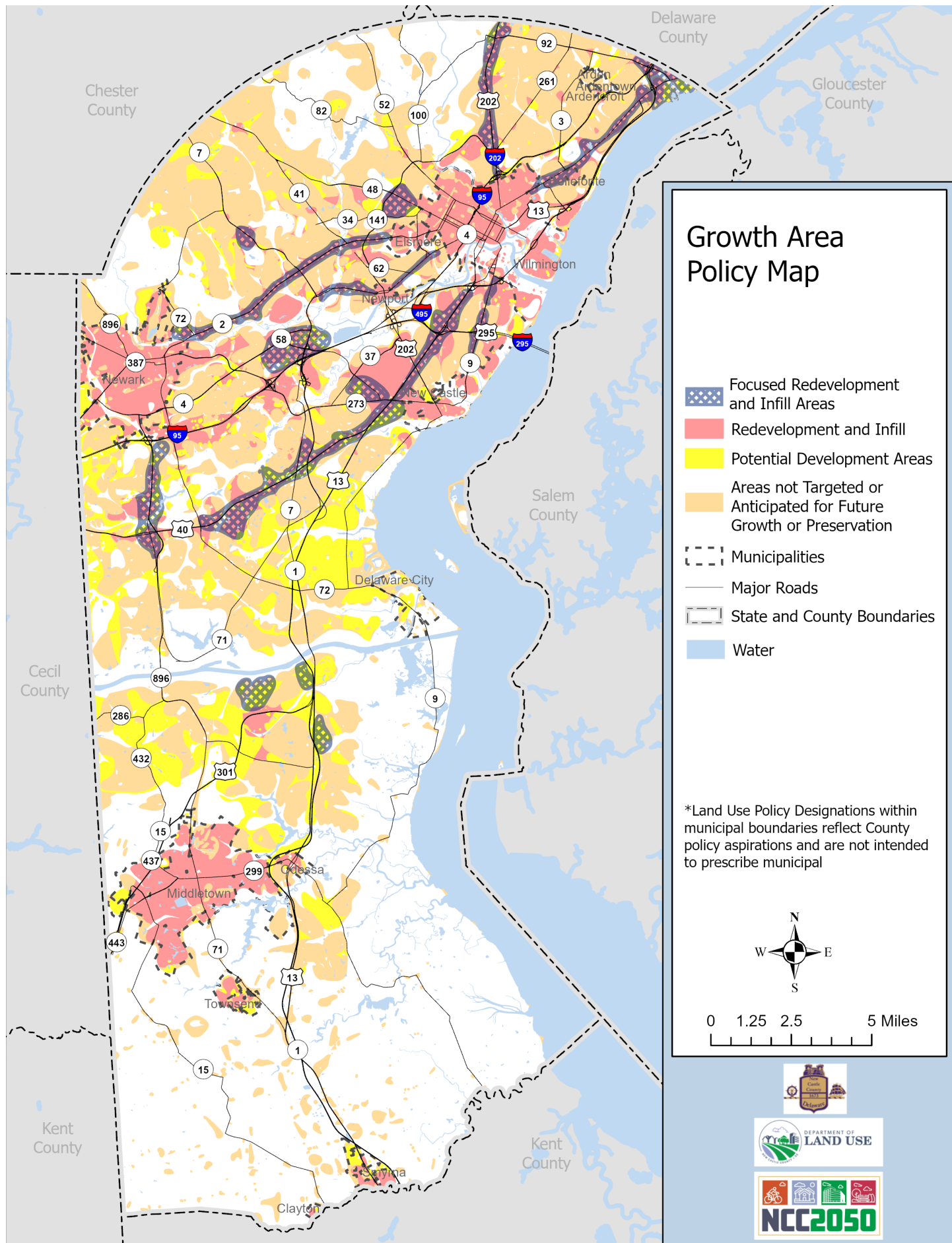
Map B-3 is the New Castle County Growth Areas Policy Map, which is different from, but complementary to the Future Land Use Map. Unlike the Future Land Use (FLU) Map, which defines the planned future development character of an area parcel-by-parcel, the policy map more generally depicts areas of the county where growth (development and redevelopment) is prioritized, and it gives a spatial relationship to policy recommendations. The map provides the ability to target and prioritize policies toward areas where infill and growth are most desirable. The categories shown on the map are defined as:

- **Redevelopment and Infill:** These are 2020 State Investment Level 1 areas, as described above, excluding areas both preserved or targeted for preservation in the New Castle County Land Use Priority Preservation Areas Map (see **Map B-5; page 43**) and existing residential communities. These are colored salmon in the New Castle County Growth Area Policy Map.

- **Potential Development Areas:** These are 2020 State Investment Level 2 areas, as described above, as well as areas having or planned for sewer service in the near term but excluding areas both preserved or targeted for preservation in the New Castle County Land Use Priority Preservation Areas Map (see **Map B-3**) and existing residential communities.
- **Focused Redevelopment and Infill Areas:** These are areas that we've identified as corridor, hamlet/village, and/or (re)development areas in the draft FLU Map, they also include growth nodes such as Churchman's Crossing and North Claymont. The transparent crosshatch purple in the New Castle County Growth Area Policy Map identifies these areas.
- **Areas not Targeted or Anticipated for Future Growth or Preservation:** These are existing residential neighborhoods where little change is anticipated by 2050.



Map B-3: New Castle County Growth Area Policy Map



Metrics / Tracking

The following metrics will help the County track progress with the goal of focusing growth:

Since 2000, approximately 59% of new single family residential development happened within State Strategy Level 1 and 30% happened within State Strategy Level 2.

STRATEGY: Enact land use policies and regulations that incentivize infill and redevelopment in and around job centers.
(5.3.2)

Purpose

Improve inclusive access to employment opportunities and facilitate complete communities through a variety of strategies and policies:

- Focus on coordinated planning with municipalities such as Wilmington, Newark, Newport, Elsmere, Bellefonte, Middletown, Townsend, and consider Joint Planning Areas.
- Prioritize target areas and facilitate public and private investment to improve multi-modal accessibility (community area master plans, CCEDs, TIDs, around transit stations). Smart, multi-modal transportation investments that are coordinated with land use policies are critical to accomplishing successful infill and revitalization. Notably, corridor redevelopment should implement design features that contribute to achieving Vision Zero, such as reducing site access points when possible.²
- Focus on implementing modern infrastructure and emerging/new technology (e.g. renewable energy transportation, Connected/Autonomous vehicles, microtransit, high speed internet, green energy, etc.) in these areas to increase access to jobs and opportunities

Metric	Data Source	Frequency of Updates
Percent of new residential units and non-residential square feet development and estimated value of development in State Strategies Levels 1&2.	New Castle County building permit data	Annual, as part of the comprehensive plan annual report
Share of school construction and transportation spending within State Strategies Levels 1&2.	Further research needed to determine best analysis methodology.	Annual, as part of the comprehensive plan annual report
Number of new residential and commercial developments approved within growth areas within the land use policy map.	New Castle County development activity data	Annual, as part of the comprehensive plan annual report
Land consumption from development (density of new development)	New Castle County development activity data	Annual, as part of the comprehensive plan annual report
Percent of residential growth on central sewer vs. individual septic systems	New Castle County building development activity data	Annual, as part of the comprehensive plan annual report
Automobile Ownership and mode of travel to work	U.S. Census Bureau, DMV	Annually, based on American Community Survey & DMV Decennially based on U.S. Census

² Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all.
<https://visionzeronetwork.org/about/what-is-vision-zero/>

- Focus a suite of policy recommendations to support implementation of Community Area Master Plans (CAMPs)
- Focus on adding an inclusive mix of housing options in/near job centers

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Several relevant examples should be reviewed by NCC Department of Land Use and vetted with both agency and community stakeholders.

Related Examples / Resources

- The [LEED-ND](#) (Leadership in Energy and Environmental Design - Neighborhood Development) is a rating system that is a collaboration among the U.S. Green Building Council, the Congress for the New Urbanism, and the Natural Resources Defense Council. The scoring system includes credits for locations such as previously developed sites, housing/jobs proximity, and access to local shops, services, and other amenities.
- Cities across Florida offer [infill incentives](#) like expedited permitting and reduced impact fees for developers. Other strategies like land banking are also used.
- Expedite Development Review - San Diego, California, uses [expedited permit review](#) to encourage infill development through its Affordable/ In-Fill Housing and Sustainable Building Expedite Program.
- Ease parking requirements for location efficient development – [St. Paul, Minnesota](#) recently eliminated minimum parking requirements and strengthened TDM requirements for certain developments.
- Density bonuses in and around job centers.
- Locate public facilities in and around job centers and encourage mixed use development – [Milwaukee, Wisconsin](#) has developed libraries with affordable housing in the upper floors.

- [Form based code](#) and focus on design; consider requirements that set lot size maximums rather than minimums

Anticipated Partners

NCC Department of Land Use

Timeline

Proceed with comprehensive rezoning associated with the Future Land Use map.

STRATEGY: Eliminate parking minimums for certain smaller buildings and in mixed use developments; establish parking caps. (2.2.1)

Purpose

Reduce impervious surface that contributes to stormwater runoff and heat island effect; promote a “park once” approach in business/commercial areas to reduce vehicle miles of travel. The benefits of reducing parking requirements also includes enabling alternative uses for the space, which should help achieve other local community development objectives.

Currently parking is tied to the land use in the Unified Development Code.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Parking demand is sensitive to a variety of contexts including: different land use types that influence trip generation and parking duration; development density and diversity (i.e. land use mix) that influence parking cost (surface versus structure); likelihood of alternative modes of access like transit and walk/bike; multiple, nearby destinations that contribute to the “park once” approach; and whether parking costs are passed through to the user.

Replacing required minimums with required maximums (parking caps) helps reduce overparking. Shared parking provides flexibility incentives for relaxing rules on parking for customers only. Parking benefits districts

help leverage user fees to provide local community amenities, typically oriented toward non-auto transportation options.

Related Examples / Resources

- Montgomery County, MD has [baseline parking](#) minimums and maximums adjustable for shared parking implementation based on concepts from their [planning study](#)
- Portland, OR has [parking](#) minimums and maximums (To view the provision see Portland, OR, City Code § 33.266.115 (2018)).
- Hartford, CT has [parking maximums](#) only (for a compact, fully urbanized city)
- Ease parking requirements for location efficient development – [St. Paul, Minnesota](#) recently eliminated minimum parking requirements and strengthened TDM requirements for certain developments.

- Other: <https://sustainablecitycode.org/brief/parking-maximums/> ; <https://whyy.org/articles/ideas-worth-stealing-parking-benefit-districts/>
- [Parking Requirements Subcommittee](#) | City of Newark, DE
- [A Bold New Future for Newark: A Comprehensive Parking Solution Report](#) | City of Newark, DE
- [Parking Task Force](#) | City of Rehoboth, DE

Anticipated Partners

NCC Department of Land Use, NCC Department of Public Works, NCC Department of Community Services

Suggested Timeframe

Complete study during 2025



2 Environmental Justice

Reduce the risk and impact from environmental and health hazards on overburdened communities.

(Objectives 15.1 & 15.2)

THEMES



Sustainable
Growth



Livable Built
Environment for All



Conservation &
Preservation



Robust
Economy



Thriving Places &
Community Character



Diverse
Engagement





New residential development should be located at an adequate distance from these uses to provide adequate protection. Residents of New Castle County have the right to healthy and safe places to call home.

Why?

While New Castle County's long industrial history has shaped the places we inhabit today, much has changed. The legacy of industrial development, surrounding Wilmington and points along the Delaware River have resulted in negative impacts in communities that experience disproportionate environmental harms and risks and are typically inhabited by minority or low-income populations. The term "overburdened" also describes situations where multiple factors, including both environmental and socioeconomic stressors, may act cumulatively to affect health and the environment and contribute to persistent environmental health disparities (cumulative impacts). Appendix G features maps of environmental justice indicators using the US EPA's EJScreen tool and index.³

While recent legislative actions and economic trends have resulted in a countywide decrease in these activities, their continuing impact has an inherent harm to neighboring communities. As we move to the future, it is important to ensure that new uses with potentially significant negative impacts are not located near residential communities.

Land Use policy should also aim to eliminate, where possible and mitigate, the impacts of existing industrial development. New residential development should be located at an adequate distance from these uses to provide adequate protection. Residents of New Castle

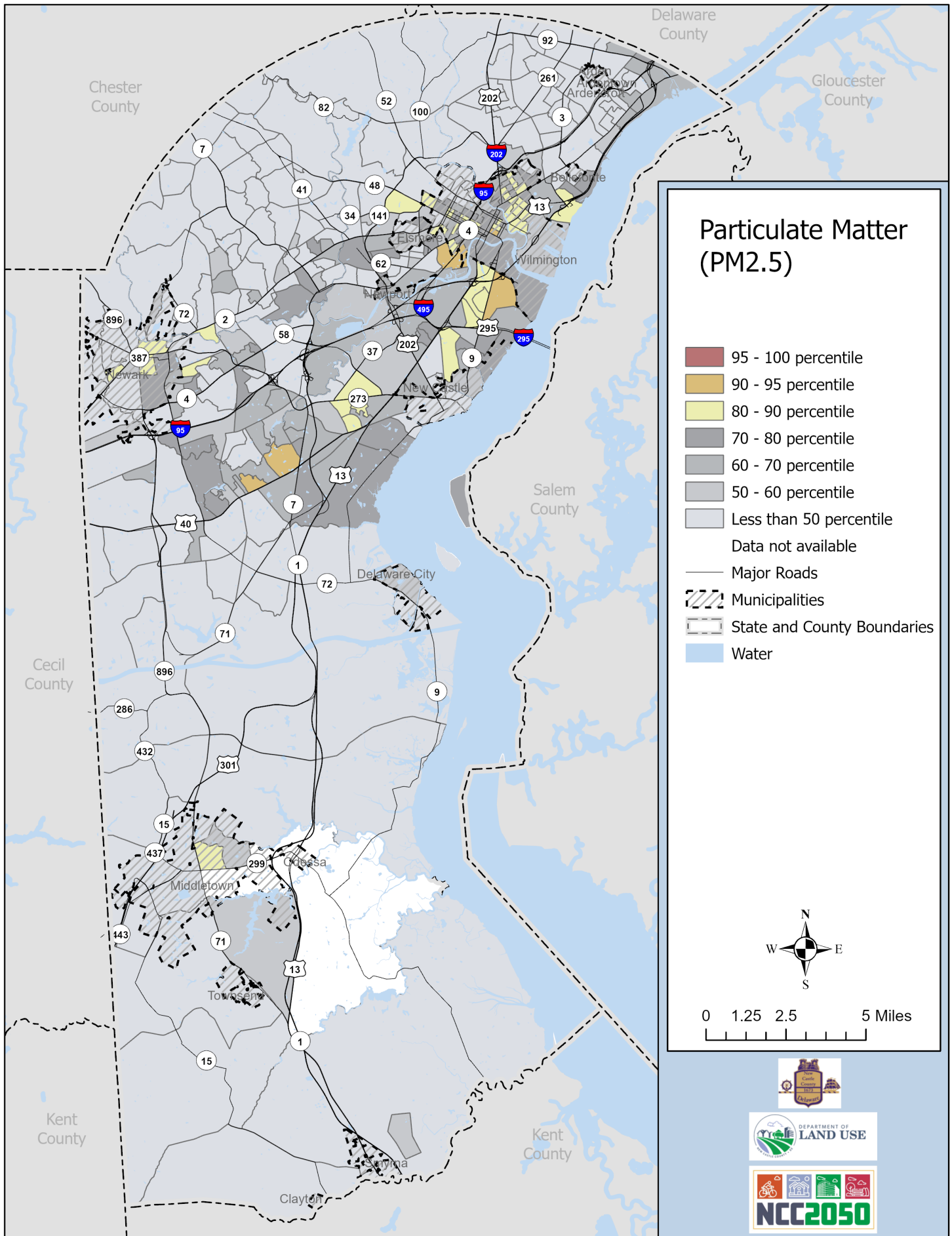
County have the right to healthy and safe places to call home.

It is important to recognize that the County has limited experience with health and environmental risk and impact to date. Addressing disparate impact and environmental justice issues in this context will require partnerships, resources, and outside expertise.

Several resources are available to support evaluation and monitoring of environmental and health risks, including the EJ Screen Tool produced by the US EPA. Tools such as this, which are generated by experts, based on uniformly tracked data, and are regularly updated, are important resources to rely on. **Map B-4** shows areas in darker greys to orange/reds where the Environmental Justice Index of Particulate Matter (PM 2.5) is above the 60th percentile relative to the national average. This map is one of several environmental risk variables the tool analyzes (additional maps are also presented in the Environmental and Social Justice section of this plan). For each environmental factor, such as PM 2.5, the EJ Index finds the block groups that contribute the most toward the nationwide disparity in that environmental factor. Disparity, in this case, means the difference between the environmental indicator's average value among vulnerable groups (low-income and minority) and the average in the US population.

³ It is important to understand that EJSCREEN is not a detailed risk analysis. It is a screening tool that examines some of the relevant issues related to environmental justice, and there is uncertainty in the data included. It is important to understand both of these limitations. Further information on this tool is available at <epa.gov/ejscreen>; information on the EJScreen Index: <https://www.epa.gov/ejscreen/ej-index-calculation-case-study>

Map B-4: Particulate Matter (PM2.5)



Metrics / Tracking

The following metrics will help the County track progress regarding environmental impacts on low-income and minority communities:

does little else to mitigate current conditions. Further modifications to the zoning regulations for heavy industry, and an evaluation of methods to create a greater distance between residents, including programs to assist residents in relocating, when necessary, should help reduce environmental and

Metric	Data Source	Frequency of Updates
Number of residential structures within ¼ mile, ½ mile, and 1 mile of HI zoned parcels	County zoning map and parcel data.	Annual, as part of the comprehensive plan annual report
Number of undeveloped residential parcels within a ¼ mile of HI zoned parcels	County zoning map and parcel data.	Annual, as part of the comprehensive plan annual report

Countywide, there are 14,721 residential structures within a half mile of Heavy Industrial-zoned parcels. There are 6,949 residential structures within a half mile of developed parcels within the Heavy Industrial zoning district. Countywide, there are 5,895 residential structures within a quarter mile of Heavy Industrial zoned parcels. There are 3,697 residential structures within a quarter mile of developed parcels within the Heavy Industrial zoning district.

STRATEGY: Examine further opportunities through zoning and future land use designations to distance Heavy Industry from residential neighborhoods.
(Goal 15 & Strategy 10.1.8)

Purpose

While heavy industrial zoned land makes up a small percentage of land area and relatively few parcels of land in the county, heavy industrial activity presents some of the most detrimental impacts on public health in comparison to other land uses. Recent legislation passed in 2019 (Ordinance 19-046) requires heavy industrial uses to obtain a special use permit, thereby rendering all existing heavy industrial uses as nonconforming. This requirement means that for an existing heavy industrial use to expand it must receive approval from the Board of Adjustment, it

health hazards.

Possible actions could include:

- Consider split zoning HI zoned parcels adjacent to residential uses and assign appropriate zoning to serve as a buffer adjacent to the residential.
- Consider rezoning undeveloped residential land adjacent to HI zoned land to provide a better land use transition.
- Consider rezoning Heavy Industry zoned land that is not actively being used for a Heavy Industrial use.
- Consider offering opportunities for Environmental Justice training for NCC Board members and NCC Staff.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Identify sites actively being used for Heavy Industrial activity, evaluate the problems, and conduct outreach to property owners and neighboring residents to discuss potential land use changes in the area.

Conduct a study of best practices regarding buffering, transitioning of uses/intensity, and distancing of residential neighborhoods from Heavy Industrial uses and craft zoning regulations that ensure that such distance is maintained with future development. For existing sites evaluate the appropriate distance and

consider split zoning the HI zoned land.

Engage: One recommendation of the Route 9 Corridor Master Plan was to conduct a survey of residents living in the Eden Park and Hamilton Park neighborhoods. These communities along the Route 9 Corridor are severely impacted by the adjacent active Heavy Industrial Uses. In January 2019, a survey was conducted by the University of Delaware to gauge residents' attitudes towards environmental and health concerns, as well as, potential mitigation efforts, including rezoning or relocation. Continued engagement with the community is imperative, as we work to address the impacts of Heavy Industrial activities near residential areas.⁴

Related Examples / Resources

- [Land Use Policies to Protect Industrial Lands and Public Health](#) | Oakland, CA

Suggested Timeframe

2024

STRATEGY: Evaluate cumulative impacts of pollutants and other community stressors to residents of Environmental Justice Communities. (15.2.1.)

Purpose

Develop standards for cumulative impacts on communities. Regulations around pollution tend to focus on individual facilities or individual pollutants; they fail to fully address the problematic cumulative impacts (all impacts taken into account, in total) which overburden some communities. Cumulative impact strategies provide a platform for examining equity and establishing appropriate maximums. Establish expectations for all communities regarding maximum cumulative exposure to stressors that considers past, present, and reasonably probable future development impacts.

Cumulative impacts are commonly addressed in



National Environmental Policy Act (NEPA) studies to assess the magnitude and significance of effects on a variety of both natural and human environmental resources beyond those caused by the proposed action that is the subject of the study. Also, typical Adequate Public Facilities evaluations operate under a type of cumulative impact cap (i.e., number of school children, traffic level of service thresholds). These may be helpful examples to consider.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Conduct collaborative study with sister agencies/experts to identify overburdened and/or vulnerable areas, the most appropriate impact categories to be evaluated, geographic definitions (from neighborhood to countywide depending on the category considered) and use types. Based on results, proceed to draft/enact policy (likely to require multi-levels of government).

Study: Investigate programs that assist residents in relocating, when necessary, away from heavy industry.

Related Examples / Resources

- [California's Environmental Quality Review](#) (CEQR) process has been applied to development projects, such as this example for the [City of Irvine](#)
- [Environmental Justice and Green Zones](#) | Minneapolis, MN
- [House Bill 2488](#) requires the Land Conservation and

⁴ A Residential Survey of Environmental Concern and Attitudes Towards Relocation, Rezoning, and Revitalization in Two New Castle County, DE Communities: Eden Park and Hamilton Park: <https://www.nccde.org/DocumentCenter/View/29865/Residential-Survey-Final-Report-January-25-2019>

Development Commission to adopt a new statewide planning goal to address climate change mitigation and environmental justice for disadvantaged communities | Oregon

- [Senate Bill 232](#) requiring State Department of Environmental Protection to evaluate the environmental and public health impacts of certain facilities on overburdened communities when reviewing certain permit applications | New Jersey
- [EJScreen Tool](#) | EPA
- [Toxic Release Inventory Tool](#) | EPA
- [My Healthy Community](#) | Delaware's community health mapping resource:
- [Transportation Justice data, reports, and maps](#) for the New Castle County region | WILMAPCO

Anticipated Partners

NCC Department of Land Use, NCC Department of Community Services, Delaware Department of Natural Resources and Environmental Control, Delaware Division of Public Health

Suggested Timeframe

Complete two-year study during 2025

STRATEGY: Establish programs to monitor and track progress associated with environmental justice objectives and policy and bring this data into the development process. (15.2.2 & 6.2.3)

Purpose

Improve public health by reducing exposure to pollution. A vibrant economy is important to the vitality of the community and to providing the ability for community members to support themselves financially. Some business-related activity, including on-site business operations and traffic, results in serious environmental and health impacts. Identifying and bringing forth environmental and health impacts into the development review process, such as through

a requirement for an impact statement, enables decision-makers and the community to proactively address tradeoffs and consequences.

Being able to measure and know local data and conditions supports better decision-making and ultimately mitigating environmental justice issues. The County should create a screening tool/process to identify areas of vulnerability and cumulative/disparate impact to help identify areas of concern, set funding priorities, target regulatory and enforcement attention, and also track progress toward community clean-up and revitalization. (Also supports preceding strategy 15.2.1)

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Work with the community and agency partners to define the areas of concern: variables (pollutants, diseases, etc.), types of non-residential development (industrial or certain/all types of commercial), economic benefits in addition to adverse health effects, mitigation strategies. Consider the value of [Health Impact Assessments](#) as an organizing schema.

Study: Work with the community and agency partners (such as DNREC, State Division of Public Health, WILMAPCO Air Quality Subcommittee (AQS), etc.) to address and monitor air quality and environmental concerns in EJ neighborhoods through community air monitoring, fence line monitoring, dust control, etc.

Study: Build on established [programs](#) to monitor and track various indicators, generally oriented towards measuring outcomes for which individual departments and agencies are responsible. Work with other agencies, departments, and groups to evaluate available data/tools, identify new/needed data/tools, and opportunities to collaborate.

Develop: Based on study findings and other resources, such as EJ/TJ data and analyses produced by [WILMAPCO](#), develop a screening tool/process that helps identify areas of vulnerability to support land use planning and other community and public policy decision making (e.g., transportation decisions).

Enact: Develop legislation that requires social equity/health impact statement to identify impacts, risks, and opportunities to promote equity through decisions

about growth and investment.

Related Examples / Resources

- National: [EnviroAtlas Use Cases | US EPA](#) , [Toxic Release Inventory](#) | US EPA , [EJScreen Tool](#) | US EPA
- Regional ([South Atlantic Coastal Study](#), leveraging social vulnerability and climate risk assessment databases):
- Local (King County, WA) <https://www.communitiescount.org/->
- Local (Monterey County, CA) [Resilient Monterey County Dashboards - Climate Change | Monterey County, CA](#)
- Equity in Master Plans (impact statements found on page) | [Montgomery County, MD](#)
- [Displacement Risk Index](#) | Seattle, WA
- Incorporating [HIAs into the zoning](#) code for Baltimore, MD
- Study of rezoning to [consider industrial use impacts](#)

and Environmental Justice in Eugene, OR

- [Health Impact Assessment of the Fort DuPont Master Plan](#) | New Castle County, DE
- [My Healthy Community](#) – Delaware Environmental Public Health Tracking Platform | Delaware
- [Epidemiology, Population health, and Health Impact Assessment](#)

Anticipated Partners

NCC Department of Land Use, DeIDOT, WILMAPCO, DNREC

Suggested Timeframe

Initiate in 2024

Suggested Resource Needs

Train existing staff or hire outside support for health impact assessments, to the extent that becomes desirable.



3 Land Preservation

Preserve a minimum of 7,100 acres of land for open space in the county and improve the lands' ecosystem health (including increasing farmland & historic preservation).(Objective 1.1, 7.1)

THEMES



Sustainable
Growth



Livable Built
Environment for All



Conservation &
Preservation



Robust
Economy



Thriving Places &
Community Character



Diverse
Engagement





New residential development should be located at an adequate distance from incompatible uses to provide adequate protection. Residents of New Castle County have the right to healthy and safe places to call home.

Why?

Open space and recreation provide vital functions for a community’s wellbeing, both mentally and physically. Access to natural lands for active and passive recreation are key to a robust and thriving community providing numerous health benefits to county residents. As of 2020, approximately 27% of land in New Castle County is preserved, including as public parkland (both active and natural resource/passive), protected resource land/community open space, agricultural easements, and privately protected land. To protect a total of 30% of land, a total of approximately 7,000 acres must be protected between now and 2050. Achieving the goal will require an increase in land preservation over previous years, particularly a concerted effort to fund purchase of fee simple land and easements.

Map B-5 shows the Priority Preservation Areas policy map. The map depicts the areas across the county that are desirable for preservation and is intended to

function similarly and in complement to the Growth Areas Policy Map (see **Map B-3**). For example, the Priority Preservation Areas policy map is expected to be used with preservation-related policy recommendations below, whereby preservation strategies and resources would be targeted to the areas shown in green on the map. The priority preservation areas are defined based on the following:

- High quality and critical natural resource areas
- Areas at risk of inland flooding and sea level rise
- Important natural, cultural, historic, and other features of the landscape to be preserved.

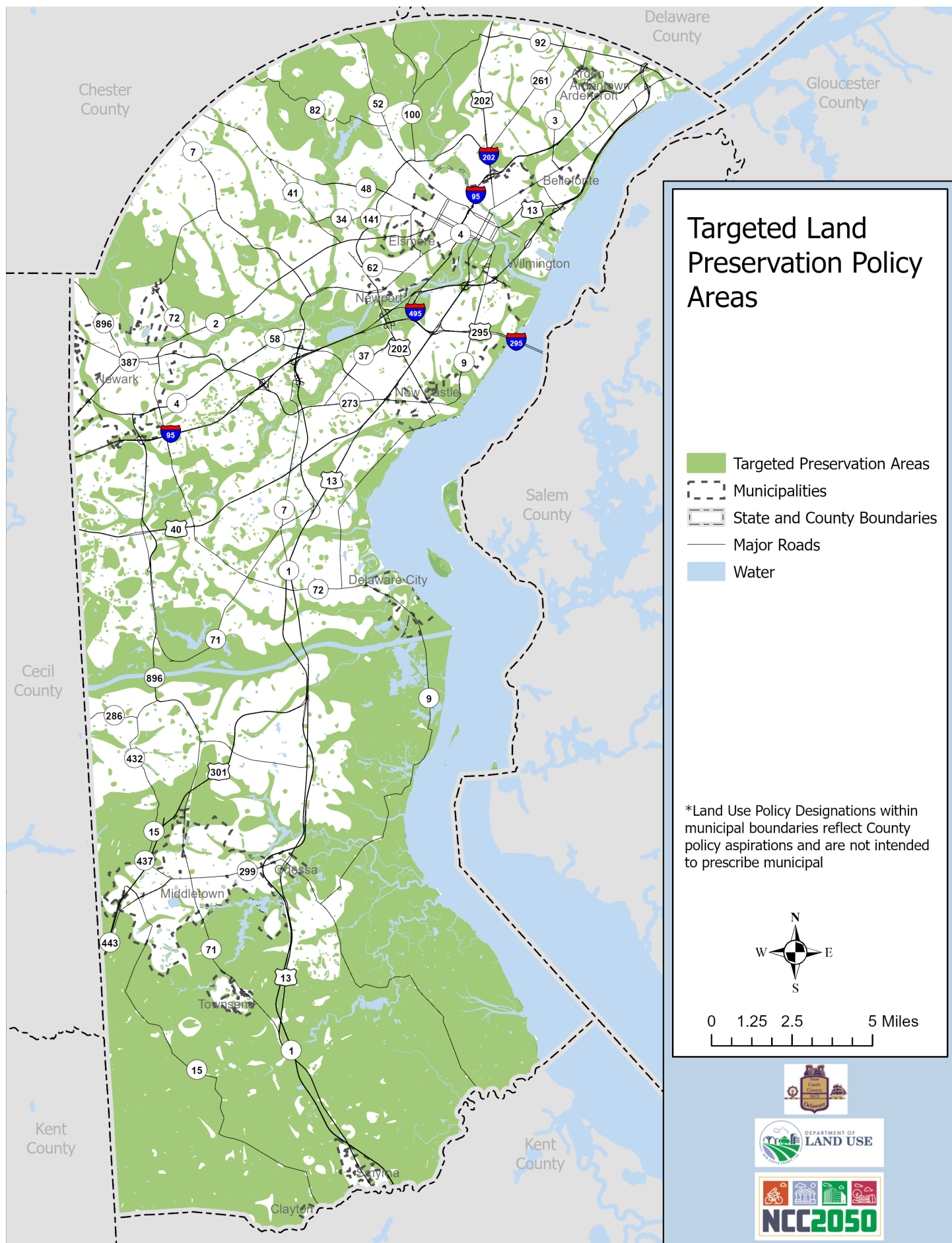
(Note: areas delineated as priority preservation include areas that are already preserved.)

Metrics / Tracking

The following metrics will help the County track progress with the goal of protecting a minimum of 7,100 acres of the land for open space:

Metric	Data Source	Frequency of Updates
Percentage of New Castle County’s land area that is protected	County protected lands database	Annual, as part of the comprehensive plan annual report
Number of new acres protected	County protected lands database	Annual, as part of the comprehensive plan annual report
Number of acres protected by type (public lands, private open space, conservation easements, agricultural easements)	County protected lands database	Annual, as part of the comprehensive plan annual report

Map B-5: New Castle County Targeted Land Preservation Policy Areas



Currently, there are approximately 74,700 acres of protected lands in New Castle County, which is approximately 27% of the County's land area. This percentage was comprised of land classified as parkland (15%), private open space (4%), agricultural easements (5%), and conservation easements (3%).

STRATEGY: Establish the New Castle County Open Space Advisory Board in partnership with the state Open Space Preservation Council and implement the 2020 Land Preservation Task Force Report recommendations. (1.1.1)

Purpose

A body composed of community members and professionals with relevant subject matter expertise is needed to carry forward implementing the 2020 Land Preservation Task Force recommendations. A priority action of this body will be to develop viable and sustainable funding for land preservation.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Study and consider different funding strategies, such as impact fees, for the preservation and acquisition of county owned open space and easements.

Study: Evaluate opportunities for other market-based preservation strategies, such as Transfer of Development Rights.

Related Examples / Resources

- [Land Preservation Task Force Report \(2020\)](#) | New Castle County, DE
- [Open Space Committee](#) | East Brandywine Township, PA
- [Open Space Board](#) | Montgomery County, PA



Anticipated Partners

NCC Department of Land Use, NCC Department of Public Works, Delaware Department of Agriculture, DNREC, Community organizations

Suggested Timeframe

Once committee has been established, begin acting on Land Preservation Task Force Report immediately. Anticipated 2023.

STRATEGY: Develop a Land Preservation Master Plan with weighted project selection criteria. (1.1.2)

Purpose

Undeveloped land available for preservation is increasingly diminishing. As options to purchase land or easements become fewer, prices generally rise, and the qualities of the land and ecosystems are important to an overall strategy for maximizing public benefit, a land preservation master plan serves to guide a successful program.

This action will involve analysis and mapping to identify priority lands and will also include establishment of criteria for determining priorities. Build on successful land and resource preservation requirements in code to ensure land with greatest ecological and ecosystem services value is preserved.

This strategy should be done in complement with strategies to focus on redevelopment, infill, and growth

⁵ Chapter 38 and Public Works policies should be updated to achieve consistency with the UDC and Comprehensive Development Plan updates.

in areas already served by infrastructure (water, sewer service⁵, road network, etc.).

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Evaluate and confirm priorities for land preservation, coordinate with the County Open Space Advisory Board to identify target preservation lands based on priorities and criteria developed, and establish associated project selection methods to support effective land preservation program. Consider a full range of environmental, cultural, and social values as well as resiliency functions of the land and the land cover to develop criteria that also support other goals of NCC2050.

Study: Work with partners to evaluate the effectiveness of the County's existing Critical Natural Areas mapping and related code provisions. Based on findings, refine the features and definitions so the protections achieve the desired environmental protection and ecosystem enhancement objectives.

Related Examples / Resources

- [Land Preservation Task Force Report \(2020\)](#) | New Castle County, DE
- [Land Preservation, Parks & Recreation Plan](#) | Carroll County, MD
- Critical Natural Areas mapping and application of protections in the Unified Development Code | New Castle County, DE

Anticipated Partners

NCC Department of Public Works, NCC Department of Land Use, County Open Space Committee, community organizations, DNREC

Suggested Timeframe

Initiate 2024

STRATEGY: Establish the New Castle County Agricultural Preservation Committee and develop methodology and criteria to prioritize County funding for agricultural land preservation based on best practices and implement the 2020 Land Preservation Task Force Report recommendations. (7.1.1)

Purpose

Establish process for selecting contiguous, high-quality farms for preservation, maximize use of preservation funds, and reach a sustained and effective mechanism for farmland preservation that supports land preservation goals and local farming industry.

Status (Study, Develop Implementation Tool, Enact, Engage)

Develop Implementation Tools: Proceed where Land Preservation Task Force left off and develop a methodology and criteria that complements other land use planning and policy strategies that protect important resource land.

Study: Evaluate opportunities for other market-based preservation strategies, such as Transfer of Development Rights.

Related Examples / Resources

- [Land Preservation Task Force Report \(2020\)](#) | New Castle County, DE
- [Agricultural Land Preservation Board](#) | Centre County, PA
- [Farmland Preservation Advisory Board](#) | State of Connecticut

Anticipated Partners

NCC Department of Land Use, NCC Department of Public Works, Delaware Department of Agriculture, NCC Agricultural Land Preservation Committee, Farm Bureau

Suggested Timeframe

Once committee has been established, begin acting on Land Preservation Task Force Report immediately. Anticipated 2023.

4

Sustainability & Climate Change

Lead in addressing climate change, with a path for New Castle County government to reach net zero greenhouse gas emissions by 2050⁶, prepare the built environment for a clean energy future, and become more resilient to environmental and health risks. (Objectives 2.1, 3.1, 14.1, 14.2)

THEMES



Sustainable
Growth



Livable Built
Environment for All



Conservation &
Preservation



Robust
Economy



Thriving Places &
Community Character



Diverse
Engagement

⁶ New Castle County will strive for compliance and consistency with the Whitehouse 2050 Greenhouse Gas Pollution Reduction Target and United States commitments from the 2021 United Nations Climate Change Conference (COP26).





Stormwater moves faster across impervious surfaces than natural land cover and causes erosion, more pollution, and at times, property and infrastructure damage.

Why?

Climate change will affect the daily lives – the economy, ecosystems, and overall quality of life – of everyone in New Castle County, from downtown Wilmington to rural farms and everywhere in between.

New Castle County needs a strategy that reduces GHG emissions that contribute to global warming as we prepare our communities to be resilient. That requires strategies to mitigate loss, reduce risk, and respond as the consequences of climate change come. This is essential for safety and quality of life that our residents deserve today and into the future. Actions taken to reduce emissions and address climate change will also help address environmental and social justice issues.

A key example: Targeting flood-prone impermeable surfaces. Approximately 15% of the land area in New Castle County is impervious; generally defined as paved surfaces and rooftops that prevent water (typically rain) from seeping into soil. Stormwater moves faster across impervious surfaces than natural land cover and causes

erosion, more pollution, and at times, property, and infrastructure damage. More than half (53%) of the total impervious surfaces in New Castle County are made up of parking lots, with the remaining 47% are buildings and roads.

Metrics / Tracking

The following metrics will help the County track progress with the goal addressing climate change, preparing for a clean energy future, and resiliency:

STRATEGY: Establish a sustainability implementation team, with representation from a range of sectors and communities across the county. (2.1.1)

Purpose

Sustainability is inherently multi-disciplinary and requires knowledge, skills, and involvement from

Metric	Data Source	Frequency of Updates
Number of houses and commercial structures within sea level rise categories and flood prone areas; See Section L	County permit data and DNREC coastal inundation areas	Annual, as part of the comprehensive plan annual report
Number of new energy efficient buildings (e.g. LEED certified)	Further research needed to determine best source of this data.	Annual, as part of the comprehensive plan annual report
Percent of land area that is impervious cover (or the inverse: pervious cover and tree canopy)	Analysis of the State of Delaware’s land use/land cover map; Conservation Innovation Center land cover dataset, Chesapeake Conservancy	Every 5 years, as land use/land cover dataset updates occur

across the community. Establishing a group of diverse members and organizations who will work with County Government to compose a sustainability action agenda and then support implementation and monitoring will help ensure that principles of sustainability are increasingly achieved through the actions of government and the community.

Status (Study, Develop Implementation Tool, Enact, Engage)

Develop Implementation Tool: Develop a Sustainability

Agenda: Building on the sustainability focused policies in NCC2050, engage a diverse group from the community to develop a community sustainability action plan.

Related Examples / Resources

- [Community Sustainability Plan](#) | Newark, DE
- [Sustainability Plan](#) | Office of Sustainability, Baltimore, MD
- [Office of Sustainability](#) and Greenworks Philadelphia | Philadelphia, PA

Anticipated Partners

NCC Land Use, NCC Public Works, other NCC Departments and community organizations

Suggested Timeframe

Initiate in 2023

STRATEGY: County government leads by example and reviews County operations to reduce greenhouse gas emissions. (14.1.1)



Purpose

Community stewardship principles should guide the County’s day-to-day operations. The County invests significant funds annually through procurement, capital investments, and operations. Additionally, the County conducts operations such as indoor and outdoor facility maintenance and is responsible for a large fleet of vehicles. Strategically managing these resources with climate change goals in mind is an important component of the County’s effort.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Evaluate or audit for sustainability in areas of procurement, public space management, buildings, vehicles, and other areas of operations to identify areas for improvement. Consider opportunities for positive change, such as:

- Convert County passenger and heavy-duty vehicle fleet to electric and low-emission technology.
- Conduct energy audits at all County-owned properties and implement energy upgrades.
- Establish work policies that support reduced transportation emissions, such as flex schedule and remote work.
- Enhance renewable energy at County-owned properties.
- Upgrade County land maintenance equipment (mowers, tractors, etc.) to electric.
- Convert large areas of mowed space at County properties (including offices and parks) to meadows, pollinator gardens, and forests with native species.
- Develop tracking system to establish baseline and track progress.

Related Examples / Resources

- [Greenhouse Gas Reduction Policies and Initiatives](#) | Tompkins County, NY

- [Climate Roadmap 2030](#) | Santa Clara County, CA
- [Washtenaw County Environmental Council](#) | Washtenaw County, MI

Anticipated Partners

NCC Department of Land Use, NCC Department of Public Works, NCC Procurement/Finance, other NCC Departments

Suggested Timeframe

Ongoing

STRATEGY: Expand and enhance opportunities for renewable energy (Goals 13 & 14)

Purpose

While energy efficiency is one most cost-effective methods for reducing energy use and associated emissions, replacing fossil fuels-based energy sources with renewables is another important tool to address climate change and air quality. New Castle County has an important role in encouraging the transition to clean energy, whether it be on a single residential parcel or large-scale solar energy system. Land use policies and regulations need to encourage, enable, and facilitate the transition to renewable energy while ensuring equitable outcomes.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Build on recent County and State renewable energy legislation and building codes, and further study market for solar and renewables and identify needs and opportunities in County policy and processes to increase access and use of renewable energy.

Study and Evaluate: Develop a tracking system: establish baseline and gauge solar growth over time, supporting enhancement of regulations and policy. (Focus on what NCC LU is able to directly measure,

such as acres or parcels of land used for solar to gauge change over time by use type; further tracking of energy production and use would be best done at statewide level)

Enhance: Enhance existing policies to expand opportunities for solar, including:

- Incentivizing for infill and retrofitting
- Evaluate existing code as it encourages/discourages solar and enhance as appropriate, such as enabling solar in community area open space and other underused space. (Accessory use of solar is currently allowed in all zones and large-scale solar is currently allowed in Suburban and Suburban Reserve zoned areas as well as many non-residentially zoned areas, where up to 85% of a site is usable for solar.)
- Consider buildings of a certain size be built to allow for the option of solar panel installation.

Related Examples / Resources

- [Renewable Energy Ordinance Framework](#) | Delaware Valley Regional Planning Commission
- [Miscellaneous resources](#) | American Cities Climate Challenge Renewables Accelerator

Anticipated Partners

NCC Department of Land Use, NCC Office of Economic Development, NCC Department of Public Works, DNREC Office of Energy, Public Service Commission

Suggested Timeframe

Initiate in 2024

⁷ Center for Climate and Energy Solutions. Accessed 9/20/21 at: <https://www.c2es.org/document/decarbonizing-u-s-buildings/>

STRATEGY: Add sustainability requirements at construction or time of sale, including electric vehicle charging capability and energy efficiency disclosure. (4.4.3)

Purpose

Over a quarter of total U.S. greenhouse gas emissions come from fossil-fuel combustion attributed to residential and commercial buildings.⁷ Ensuring the county's existing and future building stock is outfitted to leverage modern technology will help reduce greenhouse gas emissions and support affordability as well as financial well-being of lower-income community members.

Status (Study, Develop Implementation Tool, Enact, Engage)

Engage: Engage housing and residential real estate industry to develop policy to lead to efficiency and modernization of housing across the County. Consider also encouraging/collaborating with municipalities to do the same.

Enact: Develop legislation to amend the building code to require attached garages include a 220 volt receptacle.

Enact: Ensure County building code regulations are consistent with State Law requiring new residential buildings to be zero net energy capable by 2025 and new commercial buildings by 2030.

Enact: Build on the 2021 ordinance requiring EV charging stations.

Study: Develop incentives in County Code to encourage the construction of green buildings. While, Chapter 6 of the New Castle County Code recognizes the four (4) most widely recognized rating systems for green building. There currently is little incentive for builders to pursue one of these green building rating system designations. These rating systems include Green Globes sponsored by the Green Building Initiative (GBI), Leadership in Energy and Environmental Design (LEED) sponsored by U.S. Green Building Council, Model Green Home Building Guidelines sponsored by National Association of Home Builders (NAHB) and the National

Green Building Standard sponsored by International Code Council (ICC) and National Association of Home Builders (NAHB).

Related Examples / Resources

- [Energy Disclosure Report](#) | Minneapolis, MN
- [Residential Energy Performance Rating and Disclosure](#) | Portland, OR

Anticipated Partners

New Castle County Department of Land Use, Real Estate and building organizations, such as Delaware Association of Realtors, Homebuilders Association, etc.

Suggested Timeframe

Initiate by 2024

STRATEGY: Perform analysis of the criteria and prerequisites as well as develop a plan to achieve a National Flood Insurance Program Community Rating System Class 4 Rating. (13.2.3)

Purpose

According to FEMA, the Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management practices that exceed the minimum requirements of the National Flood Insurance Program (NFIP). The CRS uses a Class rating system that is similar to fire insurance rating to determine flood insurance premium reductions for residents. CRS Classes are rated from 9 to 1. As a community engages in additional mitigation activities, its residents become eligible for increased NFIP policy premium discounts. Each CRS Class improvement produces a 5% greater discount on flood insurance premiums for properties in the Special Flood Hazard Area (SFHA).

Status (Study, Develop Implementation Tool, Enact, Engage)

Develop Implementation Tool: Map the areas that are most vulnerable ("repetitive loss properties")

Enact: Develop mitigation fund to use toward the match for the mitigation of “repetitive loss” properties.

Develop Implementation Tool: The County currently has the best rating in the state at level 6 and the 5-year renewal cycle is anticipated in the Spring of 2022. The County should seek to improve its classification, reaching Level 4 by 2032.

Anticipated Partners

NCC Department of Land Use, NCC Department of Public Works, DNREC, FEMA

Suggested Timeframe

Initiate in 2024

STRATEGY: Collaborate with partners and other agencies to achieve reduction in Vehicle Miles Traveled (VMT) per capita. (14.2.2)

Purpose

Roughly one third of greenhouse gas emissions in the U.S. stem from the transportation sector. Vehicular emissions contribute to poor local and regional air quality affecting public health, especially of vulnerable populations. Dispersed development or “sprawl” (depicted through NCC2050 future scenario analyses) has the effect of increasing VMT and contributing to the health and climate impacts. Delivery-based retail and anticipated advances in driverless vehicle technologies will have an impact on VMT, though how is currently unclear. The importance of land use and development to this issue necessitates a collaborative approach between New Castle County and organizations focused on transportation, including DeIDOT and WILMAPCO.

Reducing vehicle miles traveled per capita is accomplished in two essential ways: reduce the amount of vehicle travel and/or replace vehicle travel with transit or non-vehicular travel, such as bicycling or walking. However, achieving reduction overall or replacement of trips by different modes is influenced by many factors, such as cost of travel and its different modes; comfort and experience of travel; essential

need to travel long distances to get to daily needs or desired destinations. The full range of strategies is collectively called Travel Demand Management, Compact and mixed use development is part of this suite of strategies.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Continue addressing travel demand through sub-area plans:

1. Implement existing policies and programs that result in fewer people traveling by car and more bicycling, walking, and taking transit.
2. Plan and implement strategies in target areas where there is opportunity to guide change toward more compact, mixed use development patterns and toward a better balance of jobs and housing, a greater mix of uses, and increased transit opportunities.

Engage: Work with municipalities to support infill, revitalization, and transit connectivity between important origins and destinations that exist between jurisdictions.

Develop Implementation Tool: With changes in commuting and the retail environment, collaboratively evaluate those trends and associated forecasted impacts, and identify needs and opportunities to reduce VMT per capita.

Related Examples / Resources

- [Reducing Vehicle Miles Traveled Through Smart Land-Use Design](#) | New York State Energy Research and Development Authority
- [Reducing Vehicle Miles Traveled, OneSTL](#) | East-West Gateway Council of Governments

Anticipated Partners

DeIDOT, WILMAPCO, New Castle County Department of Land Use, municipalities

Suggested Timeframe

Ongoing

5 Economic Development

Develop policies and programs to create an economic environment that supports a range of industries, including emerging industry, while ensuring policy is based on leveraging equitable and robust outcomes that limit or mitigate negative effects.
(Objectives 5.1, 5.2, 6.2)

THEMES



Sustainable
Growth



Livable Built
Environment for All



Conservation &
Preservation



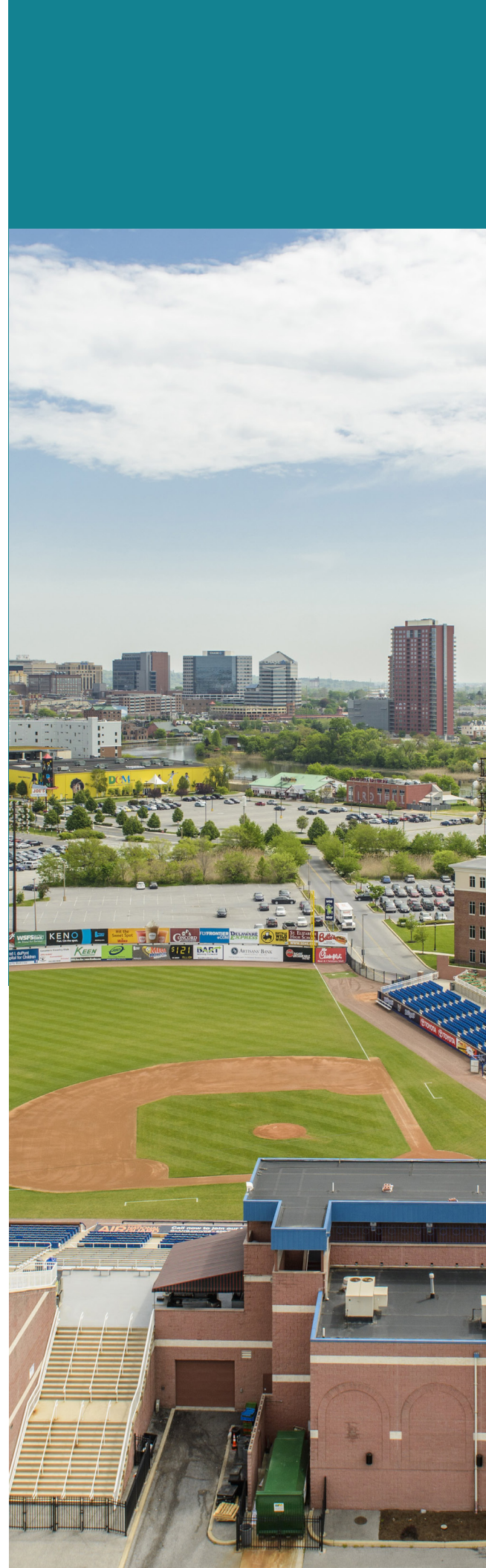
Robust
Economy



Thriving Places &
Community Character



Diverse
Engagement





A strong economy will also be a more equitable one, in which all county residents are able to take advantage of employment opportunities, housing opportunities and transportation infrastructure.

Why?

A strong and stable economy provides for job growth, thriving businesses, as well as resources for developing and preserving the other important aspects of our communities. Global and national economic shifts already in play were further disrupted by the COVID-19 pandemic and its aftermath. New technologies and new adaptations in retail and other commercial business sectors will add to the challenges of planning ahead. A deeper understanding of the local effects of these changes is needed so that new strategies for economic and workforce development are developed and implemented. A strong economy will also be a more equitable one, in which all county residents are able to take advantage of employment opportunities, housing opportunities and transportation infrastructure.

Metrics / Tracking

The following metrics will help the County track

progress with the goal addressing economic development:

Jobs in New Castle County are concentrated in leisure & hospitality, wholesale & retail trade, FIRE, business services, and health and education. New Castle County falls in the 99th percentile for percentage jobs in the FIRE sector among metro counties in the nation. Corporate and management sector is also very high. Top employers in the County include: Christiana Care (12,181), JP Morgan Chase (11,000), Bank of America (6,400), University of Delaware (4,500), and Nemours (3,795). Currently, the county is more of a housing resource than a jobs resource with 1.45 jobs/household overall (ideal jobs housing ratio is 1.6 jobs/household), but the jobs/housing balance varies significantly in different parts of the county. In Southern New Castle County, the jobs housing ratio is 0.46 jobs/household. In contrast, within the other CAMPs (North Claymont, Rt. 202, Rt. 9, and Churchman's Crossing), the ratio is 2.55 jobs/household.

Metric	Data Source	Frequency of Updates
Employment trends (measure recent increase and decrease in major industry categories)	Delaware Department of Labor	Annual, as part of the comprehensive plan annual report
Jobs/housing balance countywide and in CAMPs	WILMAPCO Transportation Analysis Zone (TAZ) data	Every 5 years, with annual adjustments based on DPC and WILMAPCO data.
Access to retail, entertainment venues, and other services from existing neighborhoods	Further research needed to determine best source of this data.	Every 5 years

STRATEGY: Support emerging and existing business (logistics, startups, bioscience, eds & meds and other areas where demand from the market is growing) to complement traditional industry and business in the County (business services, agriculture, banking, chemical and life sciences, healthcare, etc.) (5.1.1)

Purpose

New Castle County has recently experienced a significant increase in warehousing and logistics centers, a trend also seen in the surrounding region and other parts of the country. There is also emergence of a wide range of other new business, including startups, financial technology, and biotechnology. Sustaining and enhancing the local economy must include by building on the strengths of our existing/ foundational industries (noted above), while fostering new business and innovation.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Research and evaluate the needs and opportunities associated with existing and emerging business in New Castle County. Explore ways that land use policy are able to support emerging business to strengthen the local economy, such as through opportunities for redevelopment, complementary/ accessory business uses and siting, business support activity, etc. Also identify and evaluate negative externalities of economic changes.

Develop Implementation Tool: Create an economic development strategy that aligns and coordinates resources and focuses policies to achieve an attractive and supportive economic environment for new business and prevents negative consequences. Update policy accordingly.

Related Examples / Resources

[Economic Value Atlas](#) | Oregon Metro



Anticipated Partners

NCC Department of Land Use, NCC Office of Economic Development, Office of State Planning, Delaware Prosperity Partnership, WILMAPCO, DeIDOT, NCC Chamber of Commerce, Committee of 100, as well as new or smaller economic development organizations

Suggested Timeframe

Ongoing

STRATEGY: Work with other agencies and partners to focus transportation and other investments in the built environment that support and attract local business, such as corridor reinvestment, streetscape enhancement, new technology and energy infrastructure, etc. (5.1.2)

Purpose

Infrastructure and the quality of the built environment are important factors for the success and sustainability of all business. This includes roads, sidewalks, trees and green infrastructure, broadband/high speed internet, emerging transportation technology, and capability for green energy. Further, the aesthetic quality of a place serves to help or hinder business activity both in terms of attracting customers as well as employees.

Status (Study, Develop Implementation Tool, Enact, Engage)

Engage, Study, Develop Implementation Tool: Building on sub-area studies and local community development efforts, such as corridor monitoring committees, work with partners and communities to evaluate needs/opportunities and align strategies, policies, and effort into action plans.

Consider prioritizing efforts toward small business COVID recovery through Corridor / Main Street

Enhancement programs as has been discussed by the Community and Economic Development Committee the County convened for American Rescue Plan Act funding.

Engage with partners such as DelDOT, Delaware Transit Corporation, and others to plan for emerging transportation modes and technologies (e.g., renewable energy-based, autonomous, e-bikes/scooters, micro-mobility, etc.) to leverage benefits and minimize potential negative externalities; embrace technology designed to address existing infrastructure issues, benefit the environment, and improve how people experience travel. Include addressing support transition to electric and other renewable and efficient vehicles.

Related Examples / Resources

- [Route 9 Corridor Monitoring Committee](#) | Wilmington Area Planning Council

Anticipated Partners

NCC Department of Land Use, NCC Office of Economic Development, DelDOT, DTC, Office of State Planning, Delaware Prosperity Partnership, NCC Chamber of Commerce, Committee of 100, as well as new or smaller economic development organizations, municipalities, community development corporations,

Suggested Timeframe

Initiate in 2023, focusing on leveraging ARPA opportunities



6 Economic Justice

As economic growth occurs, strive for equity with distribution of benefits across the community. (Objective 6.2)

THEMES



Sustainable
Growth



Livable Built
Environment for All



Conservation &
Preservation



Robust
Economy



Thriving Places &
Community Character



Diverse
Engagement





In New Castle County, more than half of the housing units are one-unit detached houses, 21% are one-unit attached, 24% are two or more-unit structures. Two percent are classified as Other (includes mobile homes, boat, RVs).

Why?

All New Castle County residents should benefit from economic growth and change. The County should encourage workforce training opportunities so that our residents are well equipped for a modern economy. Community Benefits Agreements are a mechanism to consider in support of this priority.

Metrics / Tracking

The following metrics will help the County track progress with the goal addressing equity within the community:

In New Castle County, more than half of the housing units are one-unit detached houses, 21% are one-unit attached, 24% are two or more-unit structures. Two percent are classified as Other (includes mobile homes, boat, RVs). Approximately 30% of households have housing costs that are higher than what is considered affordable.

STRATEGY: As the retail economy shifts away from brick and mortar and toward delivery-based, ensure sufficient access to goods and services. (6.2.2)

Purpose

Changes in access to goods and services that result from economic and market shifts are likely to have greater impact on low-income communities. The shift to delivery-based retail and the COVID-19 pandemic put many local, smaller stores out of business. While the long-term impacts are unclear, for those who do not have access to the internet or are on a constrained budget, access to goods and services in the local community has decreased. Further, the shift to delivery-based systems has the potential to bypass customers who have poor access to the digital economy, including online access for ordering and paying for goods and services.

Metric	Data Source	Frequency of Updates
Percent of households spending more than 45% of income on housing and transportation	US Census Bureau, American Community Survey	Annual, as part of the comprehensive plan annual report
Housing by type (housing diversity)	US Census Bureau, American Community Survey	Annual, as part of the comprehensive plan annual report
Housing supply/demand for various income needs	Further research needed to determine best source of this data.	Every 5 years

Policies and programs that support continued existence of local stores, locally available goods and services, and ready access to the internet for online retail are important for bridging this emerging divide.

Status (Study, Develop Implementation Tool, Enact, Engage)

Develop Implementation Tool: Ensuring equitable access to the digital economy may include consideration of a wide range of [regulatory actions](#), which should be considered.

Enact: Ensure County libraries continue have adequate computer access and training to provide residents with an opportunity to participate in the digital economy (e.g., Route 9 Innovation Center/Library).

Engage: Work with local business and communities to enhance opportunities for strengthening local retail, including ensuring flexibility in the zoning code to support adaptation.

Related Examples / Resources

- Through a public-private partnership pilot program, residents in the historically low-income and underserved area of East Cleveland, OH will receive [access to high-speed internet](#) service.
- San Francisco, CA created the [Digital Equity Strategic Plan \(2019-2024\)](#) to address digital access and literacy challenges in the city and county. The plan includes three major goals and 5-year targets to measure success.

Anticipated Partners

NCC Department of Land Use, NCC Department of Community Services, NCC Office of Economic Development, community development corporations and community organizations, NCC Chamber of Commerce

Suggested Timeframe

Initiate 2024 followed by program development and implementation



7 Implementation

Ensure County government is oriented to implement the plan in a comprehensive and coordinated fashion, including systematic data collection, tracking, reporting, and evaluation. Ensure growth and change in our communities is coordinated across agencies; that infrastructure and services are timed with new growth; and that decision-making leverages the full range of available data and technology. (Objectives 15.2, 17.2, and many others)

THEMES



Sustainable
Growth



Livable Built
Environment for All



Conservation &
Preservation



Robust
Economy



Thriving Places &
Community Character



Diverse
Engagement





Tracking and publishing data helps promote transparency, government accountability, collaboration, community engagement, and data-driven decision making.

Why?

Planning and development do not happen in a vacuum. Coordination among local, state, and national agencies as well as community and nonprofit groups helps to ensure that we are working toward shared and mutually beneficial goals. Without this coordination, future development could become disconnected and create negative impact instead of positive growth.

Metrics / Tracking

The following metrics will help the County track progress with the goal of focusing growth:

STRATEGY: Establish a public-facing dashboard to report key metrics and support tracking of NCC2050 implementation. (8.2.3, 15.2.3 & 16.1.1)

Purpose

Tracking and publishing data helps promote transparency, government accountability, collaboration, community engagement, and data-driven decision making. As data becomes more abundant and technology supports improvements in efficiency and

effectiveness in operations and decision-making, the County should continue to enhance its tracking and reporting.

Status (Study, Develop Implementation Tool, Enact, Engage)

Develop Implementation Tool: Collaborate across departments to build on technology capabilities, data collection/analysis/applications, and workflows, especially in support of tracking implementation of this plan and other priority actions across government.

Related Examples / Resources

- Sustainability Dashboards – [Cambridge, MA](#) has a sustainability dashboard focused on buildings, GHG emissions, energy, transportation, and waste reduction.
- [Regional Planning Metrics Dashboard](#) | Delaware Valley Regional Planning Commission

Anticipated Partners

NCC Department of Land Use, other County departments, collaborating agencies and organizations that consistently collect data

Suggested Timeframe

Initiate 2023

Metric	Data Source	Frequency of Updates
Number of planning related data/analysis dashboards deployed	New Castle County Department of Land Use	Annual, as part of the comprehensive plan annual report

STRATEGY: Integrate long-range planning and sustainability functions across all departments. (17.1.9)

Purpose

Greater integration of long-range planning and sustainability functions across departments to help build on data analytics and application of data toward enhancing effectiveness and sustainability of county operations. While all departments do some form of planning, it is often short-term, operational planning, and few departments are able to fully leverage the benefits of longer-range planning and or skills of those in planning and sustainability fields.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Evaluate where the needs and opportunities exist for long-range planning, applied data/analytics, and sustainability

Related Examples / Resources

- [Sustainable Long Range Planning](#) | Washington County, OR
- [Office of Long-Term Planning and Sustainability](#) | New York City, NY

Anticipated Partners

All County Departments

STRATEGY: Conduct study of impact fees and other economic cost-benefit analysis to ensure sustainability of community infrastructure and services over time. (Goal 17)

Purpose

Better understanding the costs and benefits of policy, services, and infrastructure and linking that across

agencies to sustainable finance is important to ensuring continued quality of service and more broadly the vibrancy of communities. Development patterns across the county vary widely, from compact, urban neighborhoods to dispersed suburban development, to rural farms. The associated costs for infrastructure and services to different development varies and it's important to recognize these differences.

Notably, impact fees must have a direct relationship to provision of services/facilities to accommodate new development. While the County is specifically excluded from using impact fees for maintenance of existing facilities, ensuring the current fees are commensurate with the true costs is an important step in assuring sustainability of communities. Other policies and approaches will also be important to ensuring infrastructure and services to the community are sustainable.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Study/adjust impact fees and conduct economic cost-benefit analysis of other policies associated with financing infrastructure and service, to address issues such as ongoing parks and open space maintenance needs that cut across multiple departments.

Related Examples / Resources

- [Rate Study for Impact Fees for Transportation, Parks, and Fire Protection](#) | City of Renton, WA
- [Transportation Impact Fee Rate Study](#) | City of Bainbridge Island, WA
- [Transportation and Water Impact Fees](#) | City of Fort Worth, TX

Anticipated Partners

NCC Department of Land Use, NCC Department of Public Works, NCC Department of Community Services, NCC Finance

Suggested Timeframe

Begin study in 2022

8 Housing

Increase the variety and range of safe, quality housing options for all, in a diversity of locations; focus on revitalizing and preserving areas already developed, while responsibly guiding future development in a manner that is consistent with adjacent communities. (Objectives 4.1, 4.2)

THEMES



Sustainable
Growth



Livable Built
Environment for All



Conservation &
Preservation



Robust
Economy



Thriving Places &
Community Character



Diverse
Engagement





It is critical that our land use policies support a variety of long-term housing solutions to provide opportunities for all residents to have safe and affordable homes throughout the county.

Why?

In recent years, wages have not increased proportionally to housing costs, and many residents have been experiencing housing insecurity. Affordable housing is also disproportionately located in Wilmington. It is critical that our land use policies support a variety of long-term housing solutions to provide opportunities for all residents to have safe and affordable homes throughout the county. Element H presents greater detail on the current challenges, opportunities, and trends the County faces with regard to housing and affordable housing.

Metrics / Tracking

The following metrics will help the County track

progress with the goal of providing safe, quality housing options in New Castle County:

STRATEGY: Enable a greater range of housing types and price points in exclusively residential zones, including Accessory Dwelling Units (ADUs), duplexes, multiplexes, and tiny homes. (4.1.1 & 4.1.2)

Purpose

While County code already enables a range of housing types in many residential zones, including attached ADUs as by right in all residential zones and detached with a 2-acre minimum, a fresh look at the housing

Metric	Data Source	Frequency of Updates
Percent of households spending more than 45% of income on housing and location; See Section H for more details.	US Census Bureau, American Community Survey	Annual, as part of the comprehensive plan annual report
Housing by type (housing diversity)	US Census Bureau, American Community Survey	Annual, as part of the comprehensive plan annual report
Age and condition of existing housing stock	New Castle County Assessor’s data	Annual, as part of the comprehensive plan annual report
Number of development projects (and number of units in each project) that include workforce or affordable housing	New Castle County development activity data	Annual, as part of the comprehensive plan annual report
Housing supply/demand for various income needs	Further research needed to determine best source of this data.	Every 5 years

Approximately 30% of households in New Castle County are considered “cost burdened”. This means that they spend more than 30% of their income on housing related costs. A draft objective of NCC2050 is to increase the variety and range of price-points of safe, quality housing in diverse locations. In New Castle County, more than half of the housing units are one-unit detached houses. Approximately 95% of the existing housing stock in New Castle County is categorized as average, good, excellent, or superior condition and 5% area categorized as fair or poor condition. Approximately 42% of the County’s existing housing stock was built between 1950 and 1979, 26% were built between 1980 and 2000.

market/economics and comparison with policy could help refine rules and incentives to increase options for evolving household types by number, age, and relationships among residents.

For example, this could include:

- Expanding the Accessory Dwelling Unit provisions of the code;
- Evaluating undeveloped residential land appropriate to rezone as Suburban Transition, where land is either located in the central core of the southern sewer service area⁸, or should accommodate a gross density of five (5.0) dwelling units per acre or greater and with access to transit services (or if accompanying a plan will have transit access upon completion of a plan) and undeveloped residential land within two (2) mile radius of an existing transit park and ride facility. Consider revising the distance requirement of walkability within current Suburban Transition regulations. Any rezoning will need to consider the context of adjacent communities.
- Enabling apartment conversions; and
- Providing more flexibility for older (pre-Zoning Code, before 1954) multi-family buildings

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Identify barriers to variety of housing, including regulatory, fiscal, and community acceptance concerns. Define what supporting mechanisms may be appropriate to better support private sector investment in each type of housing type.

Study: Consider expanding upon and broadcasting information about the advantages of innovative housing types

Related Examples / Resources

- Santa Cruz, CA developed an [Accessory Dwelling Unit \(ADU\) Development Program](#) to address the increase in local housing costs. As part of the program, the city updated its zoning ordinances and created an accompanying [loan and fee waiver agreement](#) for homeowners renting the unit at a low-income rent.
- [Sightline Institute](#) article on market potential of innovative housing options based on rental price points and owner investment rates of return.
- Pinellas County, FL is applying sales tax revenues toward building affordable homes and developing a multipronged and [coordinated approach](#) to the challenge in a public-facing initiative.
- [Co-Housing Association of the United States](#) - [Creating Co-Housing](#)

Anticipated Partners

NCC Department of Community Services and NCC Department of Land Use

Suggested Timeframe

Initiate 2023

⁸ Described in Resolution 06-069 and adopted by County Council on March 28, 2006

STRATEGY: Expand moderately-priced dwelling units (MPDUs). (4.1.4 & 4.1.5)

Purpose

Increase the availability of affordable housing.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study and Enact: Evaluate and develop policy, such as:

- Reducing the threshold of by-right development size that triggers the MPDU requirement NCC Code 40.07.510 for provision of MPDUs for 15% - 20% of all DU; or
- Require a certain percentage of units fall under a maximum income threshold

Related Examples / Resources

The [Montgomery County \(MD\) MPDU](#) process has elements that might be considered during discussions on enactment:

- Shifting required MPDU percentages to apply to residential floor-area-ratio rather than number of DU
- Requiring payment-in-lieu of MPDU construction for smaller sites (>20 units must build; >10 units must pay into the county's Housing Initiative Fund
- Increasing the affordability/control period from 10 years to 30 years for most properties

Anticipated Partners

NCC Department of Land Use, NCC Department of Community Services

Suggested Timeframe

Develop proposed ordinance text during 2023.

STRATEGY: Using the market value analysis (MVA) from the State and other data, identify priority areas and areas of opportunity and implement affordable and moderately priced housing efforts there to achieve better distribution of housing types and price points along with accessibility to daily needs (jobs, transit, school, etc.). (4.1.5)

Purpose

A main product of the MVA study is classification of the county's housing markets (at census tract geographic scale), which is designed to help public sector officials and private market actors more precisely craft intervention strategies in weak markets and support sustainable growth in stronger market segments. The Balanced Housing Opportunities map on the following page uses MVA data to define areas of the county in one of three categories: distressed, stable, and strong. Using this data (and future refinements), the County should evaluate its current land use and housing policies and programs and use the data to refine policies that are appropriate to the different markets. For example, the County could align its federal housing dollars (e.g., CDBG or HOME programs) and scoring to lead to affordable housing incentives in areas which are identified in NCC2050 as target growth or redevelopment areas and also identified as areas of opportunity in the Balanced Housing Opportunities data/map, see Figure B-2 below.

Neighborhood-level definitions of affordability recognize the variability of price parity power across the county and help more effectively achieve affordable housing in more places across the county, rather than in the currently disproportionate concentration of affordable housing in Wilmington.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: The study should consider the price parity power across the county in conjunction with the combination of housing/transportation affordability that influences

the “drive to qualify” market.

Study: In alignment with recommendations from the Housing Advisory Board evaluate possible adjustments to Impact Fees, such as an exemption/waiver for developers of low to very low-income housing in exchange for covenants that run with the land to continue affordability for 30 years and accept all sources of income for rental unit developments. Importantly, the study will need to weight the benefit of expected impacts from this type of policy change relative to the loss of fees.

Consider establishing sliding scale for moderately priced dwelling unit (MPDU) requirements, which should factor access to transit and nonmotorized transportation modes. For example, in parts of the county better served by affordable housing fewer

MPDUs are required, and in areas with fewer affordable units more MPDUs are required. (4.1.4)

Related Examples / Resources

- [Housing+Transportation Affordability Index](#)
- Virginia DOT Smart Scale consideration of [accessibility to jobs by disadvantaged populations](#) (Measure A-2)

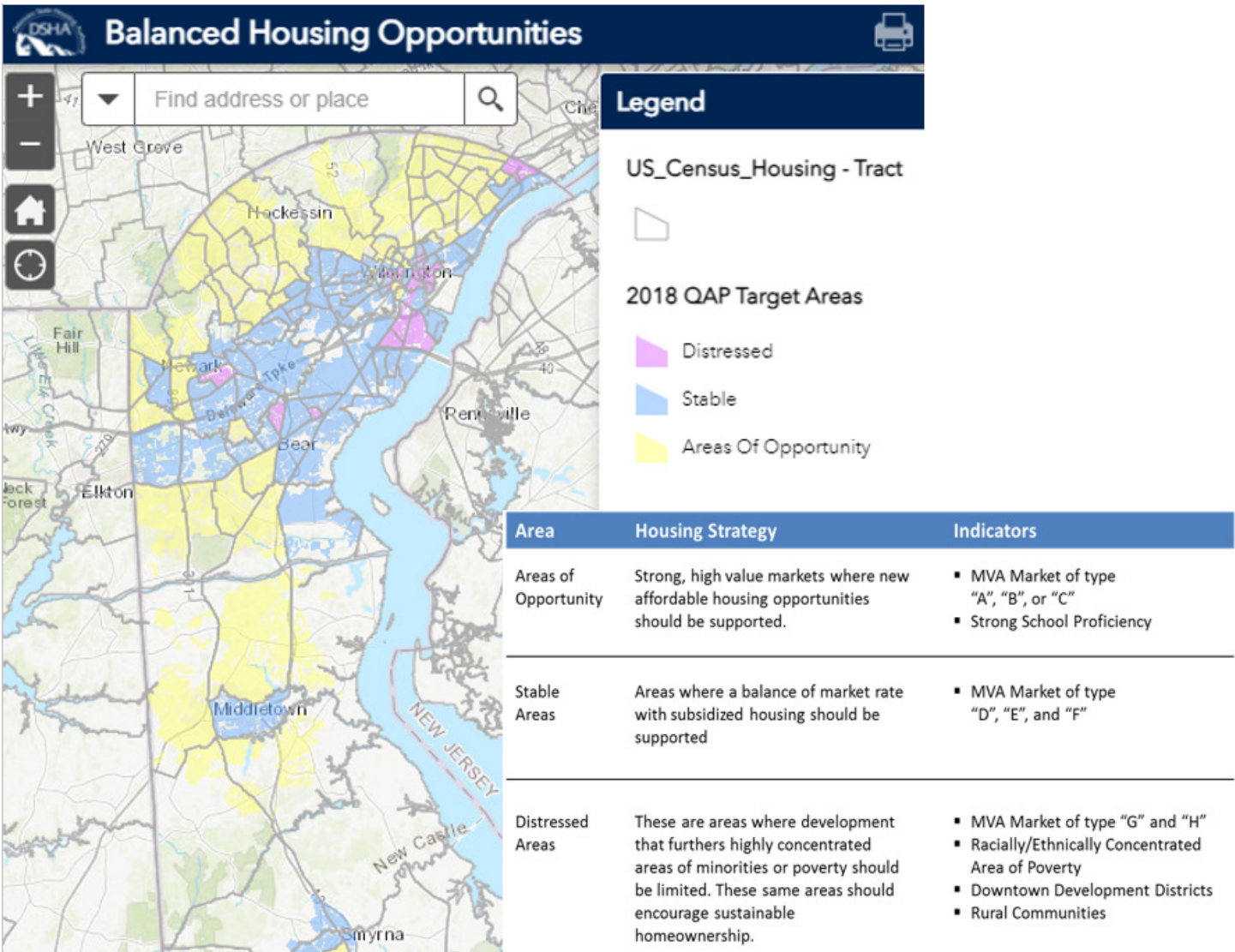
Anticipated Partners

NCC Department of Land Use, NCC Department of Community Services, DSHA, other housing organizations and developers

Suggested Timeframe

Initiate 2023

Figure B 2: QAP Target Areas



Adapted from: “Qualified Allocation Plan, Reference Guide”

9 Targeted Strategies

Implement corridor, watershed-based, and other target-area-based revitalization programs that emphasize integration and accessibility of green infrastructure (stormwater BMPs, trees/landscaping, greenways/trails). (Objectives 1.2, 2.2 & 10.1)

THEMES



Sustainable
Growth



Livable Built
Environment for All



Conservation &
Preservation



Robust
Economy



Thriving Places &
Community Character



Diverse
Engagement





Revitalization efforts could benefit from a multi-pronged program that creates incentives for property owners to enhance the environment

Why?

The natural environment is a distinguishing character of the County, and our natural resources should be continually improved for the use of current and future generations. It is important to recognize that community revitalization and stream/ecosystem restoration are linked and balance the needs of our residents and businesses with conservation of our environment. Improving the built and natural environment includes fixing problems from the past and to do so, a range of collaborative approaches will be needed including public investment, individual action, and public-private partnerships.

Metrics / Tracking

The following metrics will help the County track progress with the goal of increasing revitalization and accessibility of green infrastructure:

Based on an analysis developed by the Delaware Department of Transportation, approximately 55% of households within the County currently have easy and safe access to parks and open space (one mile or less with a low level of traffic stress).

Approximately 15% of the land area in New Castle County is classified as impervious; hard surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. More than half (53%) of the total impervious surfaces in New Castle County are made up of parking lots, with the remaining 47% are buildings and roads.

STRATEGY: Encourage growth and redevelopment in targeted areas through public/private investment and programs that address multiple community enhancement objectives (e.g., preservation, environmental enhancements, non-motorized connectivity, placemaking, etc.). (10.1.1)

Purpose

There's an advantage in spurring investment in priority areas for infill/revitalization and environmental enhancements through a collaborative public/private approach.

Metric	Data Source	Frequency of Updates
Percent of households with access to parks within 1 mile on a low-stress route (LTS 1&2)	DelDOT network analysis	Every 5 years
Percent of land area that is impervious cover (or inverse—pervious and tree canopy cover)	Analysis of the State of Delaware's land use/land cover map	Every 5 years, as land use/land cover dataset updates occur



Revitalization efforts could benefit from a multi-pronged program that creates incentives for property owners to enhance the environment (remove asphalt parking, install trees and Green Stormwater Infrastructure), create bicycle and pedestrian connectivity (as identified in the County Bike Plan and Connecting Communities initiative), and make other place-enhancing investments in target areas (like fostering local jobs training through a locally based maintenance program/agreement). Where full-fledged redevelopment is intended, but the market may not yet be fully ready, such a program could serve as a transitional phase and catalyze subsequent reinvestment.

Addressing stormwater through reduction in impervious surface and strategic application of stormwater BMPs in a watershed would support the County’s requirements under the NPDES program to implement water quality improvement plans. State code does allow for stormwater management districts through legislation signed in September 2021. That approach, as well as others, such as fee-in-lieu, grant, or credit-

based, countywide stormwater implementation and maintenance programs should be considered. (See next strategy regarding stormwater utility/similar mechanism)

Taking a greenways/green corridor-based approach should be considered, in addition to a watershed-based approach.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study and Enact: Evaluate and enact legislation to enhance redevelopment provisions of the UDC to encourage redevelopment consistent with the principles of community plans (e.g. Concord Pike Master Plan).

Engage: Consider opportunities for incentivizing public-private partnerships toward one or more preservation, environmental, non-motorized travel, and placemaking goals.

Study: Study/evaluate existing and proposed local programs and community priorities to develop multi-pronged, focused approach for revitalization. Consider how to fund, whether a program should be area-specific, what criteria/methods for the program would be, etc.

Engage: Consider linking to corridor revitalization/Main Street/COVID-relief efforts getting underway in late 2021.

Related Examples / Resources

- [Green City Clean Waters](#) | Philadelphia, PA

Anticipated Partners

New Castle County Department of Land Use, Department of Public Works, DNREC

Suggested Timeframe

Initiate 2023

Suggested Resource Needs

There may be opportunities to initiate this kind of approach in qualified census tracts under the ARPA program/funds.

STRATEGY: Establish a stormwater utility or similar mechanism to fund and optimize Best Management Practices for stormwater project implementation and ongoing maintenance and restoration. (2.2.4)

Purpose

Fund and optimize stormwater management to protect and enhance natural resources, leverage ecosystem services and “green infrastructure”, and protect and complement the built environment.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Further evaluate opportunities for sustainable funding/maintenance of green infrastructure along streets or other public right of ways within key areas. A first step could include a maintenance fund approach, done on a community-by-community district; any new community would have to create a maintenance district, existing communities could opt in, funds would be collected through the HOA or community maintenance corporation entity and into an account to the maintenance entity, such as the Conservation

District or County Public Works. Draft legislation in 2021 puts forth this idea to build on the existing maintenance fund, which currently exists as a one-time fee solely intended to fund failures; this idea would create a continuous fund.

Related Examples / Resources

- [Stormwater Utility](#) | Newark, DE
- [Integrated Stormwater Management Program](#) | Wilmington, DE

Anticipated Partners

New Castle County Department of Land Use, Department of Public Works, DNREC, NCC Conservation District, Civic/HOAs

Suggested Timeframe

Initiate 2023



10

Diversity

Increase diversity of engagement in community planning activities and in professional staff.

(Objectives 16.1, 16.2 &17.2)

THEMES



Sustainable
Growth



Livable Built
Environment for All



Conservation &
Preservation



Robust
Economy



Thriving Places &
Community Character



Diverse
Engagement





Recruit younger professionals to select careers in New Castle County, and more generally public service, with an eye toward cultivating the next generation of economic and civic leadership.

Why?

New Castle County residents come from all walks of life to make our county great, and it is important that we hear voices that are representative of our population as we develop and update plans, programs, and policies that affect county residents.

Metrics / Tracking

- Demographics of engagement (surveys)
- Employment age pyramid

STRATEGY: Collaborate with partners and agencies to foster a shared public input platform to help bring together the community and all levels of government in civic discourse and public decision-making. (16.1.2)

Purpose

Foster civic discourse, awareness, and engagement in community decision making by providing an accessible, user-friendly, centralized platform for participation working with a wide range of agencies and community

organizations.

Status (Study, Develop Implementation Tool, Enact, Engage)

Engage: Work with partners on evaluation of opportunities and needs for better civic engagement, considering equity in accessibility, convenience, quality of engagement and feedback, opportunities for organizations to share and leverage resources, etc.

Develop Implementation Tool: Develop tools based on lessons learned, focusing on how to leverage existing data and research, portal resources, and other strategies and platforms.

Related Examples / Resources

- [Be Heard Philly](#)

Anticipated Partners

NCC Department of Land Use, Office of State Planning Coordination, State and Local Government, educational/research institutions

Suggested Timeframe

Initiate during calendar year 2023

STRATEGY: Collaborate with partners and agencies to increase exposure and engagement by students and young professionals in planning, public policy, and other fields, creating a pipeline for future employment. (16.2.1)

Purpose

Recruit younger professionals to select careers in New Castle County, and more generally public service, with an eye toward cultivating the next generation of economic and civic leadership.

Status (Study, Develop Implementation Tool, Enact, Engage)

Engage: Collaboration promoting economic development and attracting a skilled workforce already occurs but should be both broadened and focused organically. Working with educational institutes to help

attract and retain leaders is a key in differentiating New Castle County among its peers.

Engage: Continue to build on the Youth Planning Board.

Related Examples / Resources

Jackson, MI developed the [Anchor Initiative](#), a consortium of local employers and educational institutions interested in collaborating to revitalize the downtown area.

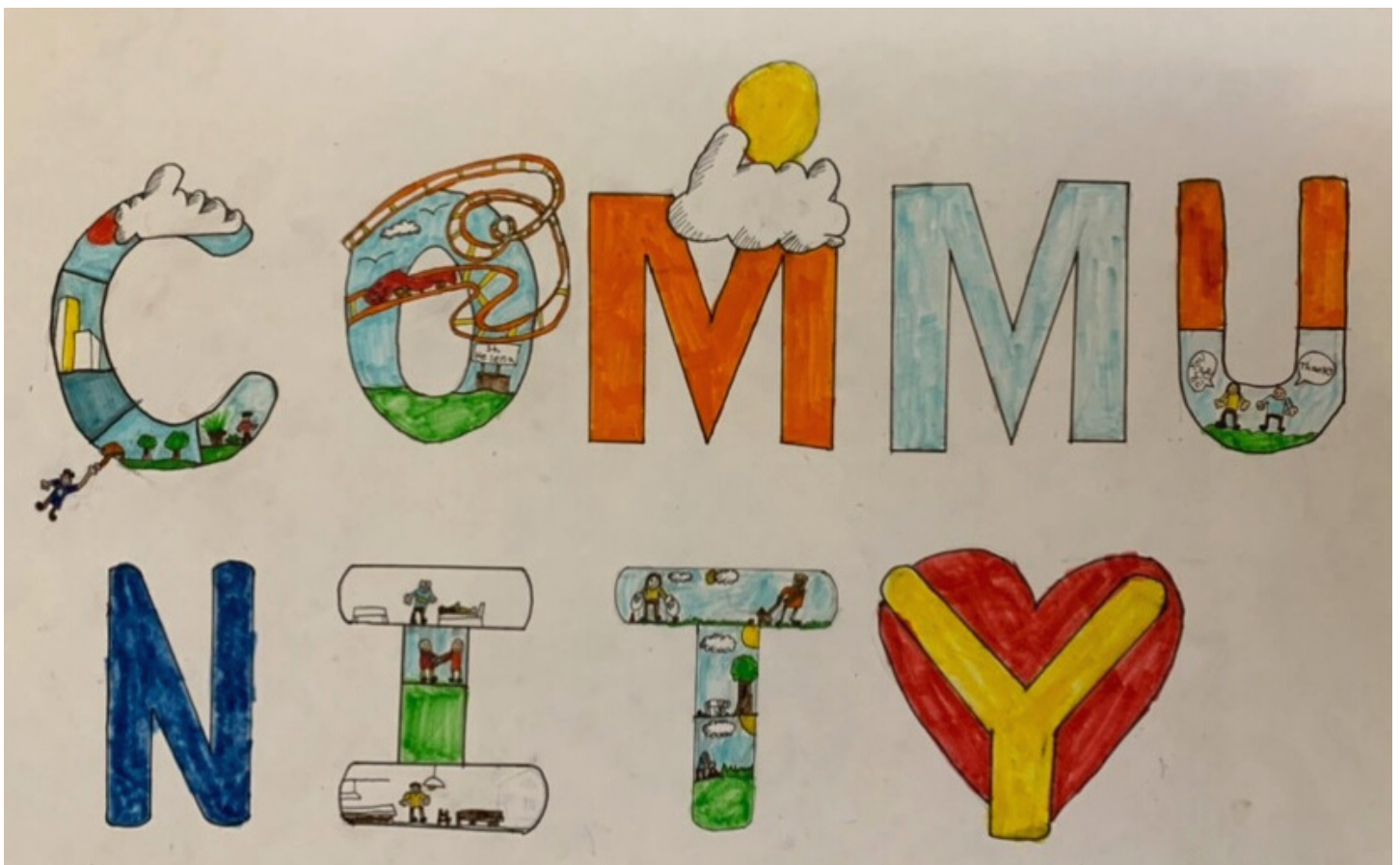
The Tulsa Regional Chamber created [TYPROS](#), an initiative to attract young professionals to live and work in the Tulsa region. TYPROS members not only cultivate their own skills through networking and special events, but they also engage with and help grow their local communities.

Anticipated Partners

NCC Department of Land Use, NCC DHR, Educational institutions

Suggested Timeframe

Ongoing



Use the Plan Guiding Growth, Including Rezoning

Update the practice for rezonings and Future Land Use Map (FLUM) changes. Zoning (and rezonings) must conform to the FLUM, achieving the right balance between predictability and flexibility. The Comprehensive Plan should be the basis for land use decisions and changes to the Future Land Use Map should be the product of a public planning process, such as a community plan, or done at the 5-year evaluation of the Comprehensive Plan. (Objective 17.3)

THEMES



Sustainable
Growth



Livable Built
Environment for All



Conservation &
Preservation



Robust
Economy



Thriving Places &
Community Character



Diverse
Engagement





Maintaining a Future Land Use Map that represents the community vision for the future and then periodically reviewing and consistently undertaking a comprehensive update will support predictability to future development of the county for residents as well as developers.

Why?

The Comprehensive Development Plan serves as the formal land use and planning policy for the County. It is through the Future Land Use Map of the Comprehensive Development Plan that the vision articulated in this plan is translated into official policy serving as the basis for all land use recommendations and decisions. The Future Land Use Map holds the force of law. The following recommendations form an important foundation for sustainable growth and for achieving many of the goals of this plan. In many ways, these recommendations have an overarching role in the plan.

The Comprehensive Plan (especially the Future Land Use Map (FLUM)) should guide all County planning and land use decisions. It is important to coordinate these decisions around a central reference point, so that all efforts are working toward a shared long-term goal. This follows State planning law.

Specifics to Consider

- Simplify future land use map categories providing clear and concise definitions that are consistent with their associated zoning districts resulting in predictability and clarity.
- Clearly define where change is desirable and/or needed and where preservation is desirable and needed. Update the FLUM and framework to enable sufficient flexibility for emerging economic activity and for infill and redevelopment that complement land preservation efforts.

- Where needed and when possible, develop sub-area plans where more unique conditions exist or a more detailed approach is needed. Where appropriate, develop form and design-based regulations that enhance predictability and neighborhood preservation/character, as well as investment, development/redevelopment, and overall economic and fiscal health.

STRATEGY: Update the approach for rezonings and Future Land Use Map (FLUM) changes so zoning conforms to the FLUM (17.3.1)

Purpose

Improve predictability of rezoning by ensuring compatibility with the Future Land Use Map. While the Future Land Use Map is the spatial embodiment of the Comprehensive Plan's vision, the Zoning Map is the spatial implementation mechanism prescribing site specific use and intensity regulations. Maintaining a Future Land Use Map that represents the community vision for the future and then periodically reviewing and consistently undertaking a comprehensive update will support predictability to future development of the county for residents as well as developers.

Status (Study, Develop Implementation Tool, Enact, Engage)

Study: Include the following elements:

- Develop a table showing the relationship between rezoning and FLUM categories/definitions
- Processes to synchronize rezoning and FLUM updates; Consider comprehensive updates to the FLUM and rezonings during Comprehensive Plan updates—every 5 years, with full update every 10 years). This it to address the current practice where rezonings are considered on a project-by-project basis and any required corresponding changes to the Comprehensive Plan are an afterthought.
- Evaluate future land use map categories to confirm appropriate range of categories and details. Future land use categories should reflect the goals and objectives of the Comprehensive Plan.
- Define what set of conditions prompts a needed change to the FLUM.
- Consider needed zoning changes to improve alignment with FLUM. It is important that zoning regulations have provisions that further the implementation of the goals and objectives of the Comprehensive Plan.
- Engage stakeholders through educational materials and clear communication of the processes.

Related Examples / Resources

- [Request Change of Zoning process](#) | Miami, FL
- [Rezoning and Future Land Use process](#) | Cedar Rapids, IA

Candidate Performance Measures

- Annual parcels / acreage of change to the FLUM

Anticipated Partners

- Lead Agency: NCC Department of Land Use

Suggested Timeframe

Develop proposed implementation tool and baseline performance measure during calendar year 2022, enact during 2023 to meet concurrency deadline of 18 months, post-adoption of comp plan, required by State law.

STRATEGY: Provide better predictability to New Castle County residents regarding future residential and nonresidential development. (17.3.2)

Purpose

Improve predictability of future development capacity and design. It is important for existing and future residents to understand the development potential in and around their communities. Public feedback has identified that residents are unaware of the potential intensity (density and gross floor area ratio) and site design (housing type and building layout) on land adjacent to their communities.

Status (Study, Develop Implementation Tool, Enact, Engage)

Engage: Include the following elements:

- Continue to provide and expand outreach and educational opportunities such as Planning 101: Citizen Planner Course and the Youth Planning Board.

Enact: Include the following elements:

- The Future Land Use Map should drive zoning and only be amended in rare instances, when needed to adapt to changing conditions and only after careful consideration.
- Refine zoning district descriptions to provide clarity regarding sewer services.



An aerial photograph of a golf course, showing a winding path, a green, and surrounding trees. The entire image is covered with a semi-transparent green overlay.

THE PLAN _____

C. Future Land Use and Implementation

Land Use Overview

Overseeing the use of land in New Castle County to ensure the built and natural environments support the health, safety, and welfare of the community is a fundamental function of the Land Use Department.

This is achieved in a range of ways from long-range planning, such as this NCC2050 comprehensive plan, to the application and enforcement of the unified development code, building code, and other regulations. Notably, the future land use map

and associated maps are the component of the comprehensive plan that hold legal status, according to State law. The Future Land Use Map directs land use policy and zoning changes.

A Brief Background on Zoning

One of the most common ways of influencing the character and quality of the community is through use-based (Euclidian) zoning. The theory behind this approach is to keep different, non-compatible uses such as homes and factories separate. In practice this type of traditional zoning has shown to have downsides, including separating uses that are compatible and leading to increased vehicles miles traveled and related consequences. Land use and development related policies, including zoning, have also had other problematic results (see Section M for Environmental and Social Justice)—some intentional, some not—and through this comprehensive plan there is opportunity to make corrections and improve on the past.

Other approaches to zoning exist and have been used to some extent in New Castle County, including hybrid and form-based zoning. These tend to focus more on form of the built environment rather than use, acknowledging the benefits of integrating different, but compatible uses, and the importance of form to high-quality places and livable communities.





In addition to land use and zoning policy, other agencies also influence the character of development (and redevelopment and preservation) in our communities.

Future Land Use Map and Zoning

The Future Land Use Plan Element designates general distribution, location, and the extent of the uses of land including residential uses, commercial uses, industry, agriculture, recreation, conservation, education, public buildings and grounds, other public facilities, and other categories of the public and private uses of land.¹

The Future Land Use Plan Element also includes standards to be followed in the control and distribution of population densities and building and structure

intensities; this is depicted in the Future Land Use Map (see **Map C-1**; the 2012 Future Land Use Map, as amended through January 2022 is included in Appendix A for reference).

While the Future Land Use Map is the spatial embodiment of the Comprehensive Plan's vision, the Zoning Map² is a spatial implementation mechanism prescribing site specific use and intensity (Gross Density for residential uses and Gross Floor Area Ratio for non-residential uses) regulations. As such it is imperative to understand the intent of each zoning district and the range in development intensity permitted.

¹ Delaware state code (Del Code, Title 9, Chapter 26, § 2656) requires that comprehensive plans include a Future Land Use Plan Element designate proposed future general distribution, location and extent of the uses of land for such activities as residential uses, commercial uses, industry, agriculture, recreation, conservation, education, public buildings and grounds, other public facilities and other categories of the public and private uses of land. The plan shall include standards to be followed in the control and distribution of population densities and building and structure intensities. Nothing in this future land use map is intended to supersede or alter any provision of the New Castle County Code. This future land use map shall not be regarded as changing any existing zoning district or classification or the zoning and other land development regulations applicable thereto, unless and until the County Council shall adopt a specific ordinance accomplishing such change

² The New Castle County Zoning Map is maintained by the GIS Division of the Department of Land Use and can be found at: <https://apps-nccde.hub.arcgis.com> in the "Explore New Castle County" Viewer as well as in Appendix A

In addition to land use and zoning policy, other agencies also influence the character of development (and redevelopment and preservation) in our communities. For example:

- Wastewater infrastructure is administered by the County Public Works Department and is a significant factor in defining where development can occur;
- Roads are administered by the Delaware Department of Transportation and the presence and design of roads can attract, enable, or deter certain types of development; and
- Land preservation programs are a function of a variety of government and non-government organizations, with two of the largest preservation resources in the county—the Delaware Agricultural Land Preservation Fund and Land and Water Conservation Fund (LWCF)—administered by the State. (The County and other non-profit organizations also play significant roles in land preservation, too.)³
- The State of Delaware’s Outdoor Recreation, Parks and Trails (ORPT) program is a matching grant program that assists municipalities and counties with public parkland outdoor recreation projects and land acquisitions.⁴

These issues are explored further in other elements of this plan, but it’s important to understand the extent to which land use change in our communities is dependent on collaboration and coordination with many stakeholders.

Future Land Use Plan Element and Map Series

The Future Land Use Map is the product of public outreach and land use analysis. During the planning process, we evaluated four scenarios using both adopted projections from the Delaware Population Consortium⁵ (2020) as well as Woods & Poole Economics, Inc.⁶ These projections consider a spectrum of potential futures allocating jobs, population, and household growth across Traffic Analysis Zones (TAZs)⁷ to provide for a more localized understanding of land use and infrastructure needs.

Evaluation of existing conditions, current trends, and alternative future scenarios confirm opportunities to improve effective and efficient development patterns by focusing new development toward infill or redevelopment opportunities in appropriate locations, where substantial investment has already been made by both the public and private sectors, thereby minimizing adverse effects. For many of the key objectives evaluated, the efficiencies embodied in these locations could offset the impact of higher population and employment totals associated with economic growth. The analysis most importantly revealed that there will be sufficient capacity from a land use and infrastructure perspective to support projected growth as predicted by the DPC (at a minimum) and could accommodate much higher rates of growth should that occur. (See Appendix E for more detailed information on individual scenarios, methodologies, and findings) Building on the foundation of the draft community goals and objectives, the planning team devised a map of areas of anticipated change. The map was used along with

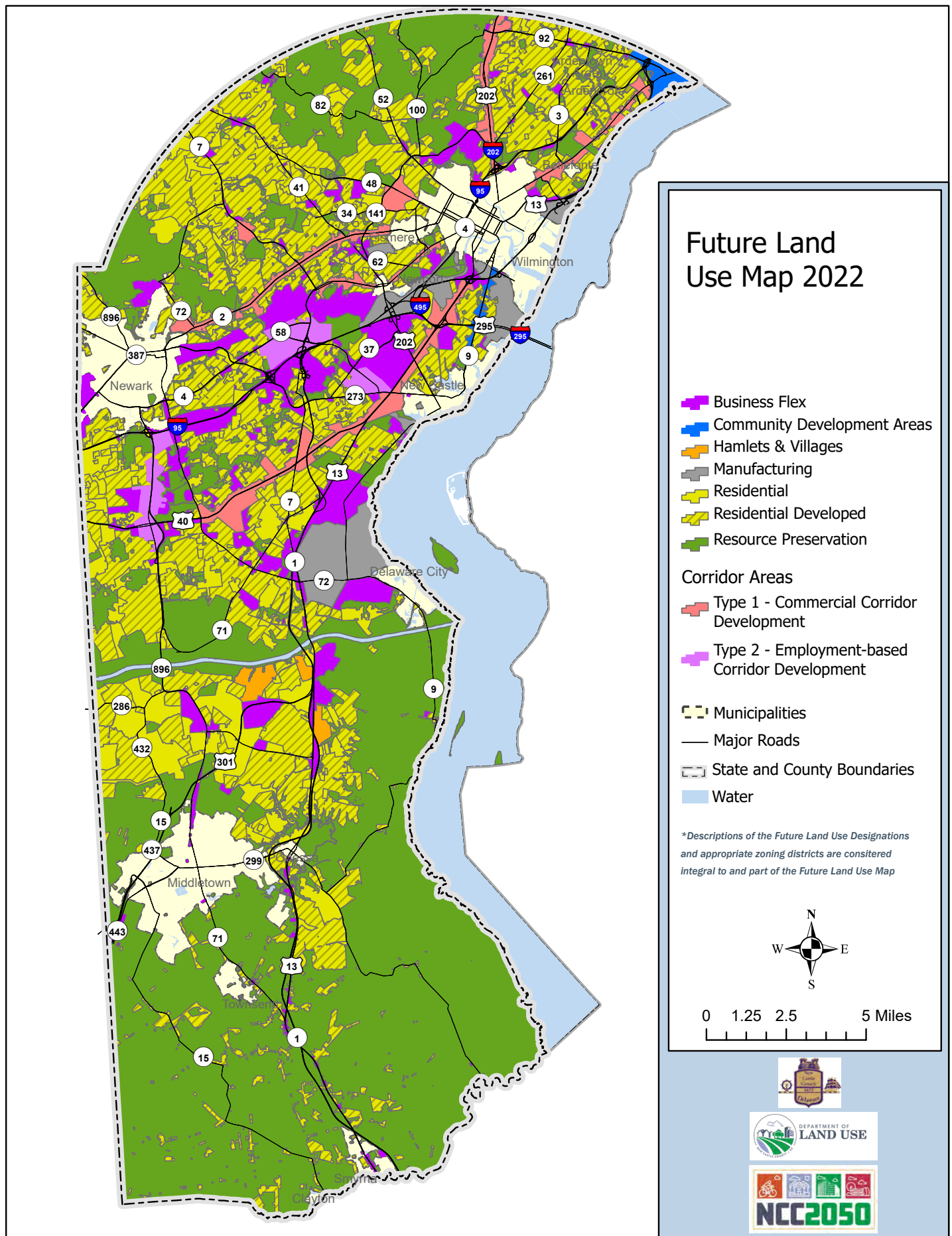
³ The LWCF is a program administered by the federal National Park Service, the LWCF State Assistance Program was established in 1964 to provide matching grants to States and through States to local units of government, for the acquisition and development of public outdoor recreation sites and facilities. (Additional Information: <https://www.nps.gov/subjects/lwcf/index.htm>).

⁴ The ORPT Program was established in June 1986 with annual deposits from real estate transfer tax to grow the Trust. Trust-generated income is used to fund the ORPT Program. Funding is available through this competitive grant program on an annual basis for projects such as park land acquisition, planning and design of parks or trails, and outdoor recreation facility construction. (Additional information: <https://dnrec.alpha.delaware.gov/parks/planning/recreation-parks-trails/>)

⁵ The Delaware Population Consortium (DPC) is a committee established in 1986, that annually prepares a single set of demographic projections for the State of Delaware. These projections have a long-term horizon of 30 years and include demographic data at the levels of state, county, and municipality. These projections are required to be used when comprehensive and infrastructure planning in the State of Delaware.

⁶ Woods & Poole Economics, Inc. is a firm that specializes in long-term county economic data and demographic data projections. Woods & Poole’s database for all U.S. counties contains projections for every year through 2050 for more than 900 variables. Woods & Poole has been making county projections since 1983.

⁷ Traffic Analysis Zones are areas established to provide a localized analysis on the transportation system. These are created by WILMAPCO with input from New Castle County, DelDOT and other agencies.



engagement activities (interactive map exercise, questionnaire, and forum #2) to generate community conversation around the fundamental questions of “where do we want to grow and change?” and “where do we want to preserve?”

Through the planning process the following land use issues consistently were identified as necessary to be addressed through NCC2050:

- The Future Land Use plan element needs to represent the desired future for communities across the county from areas that have had more localized planning efforts such as Community Master Plan areas to neighborhoods in need of protection and enhancement.
- The Future Land Use plan element needs to provide adequate flexibility for vibrant economic activity bringing good jobs to the area as well as address housing and recreational needs for all New Castle County residents.
- The Future Land Use plan should remain unaltered and rezonings need to be consistent with the map as adopted. Any changes to the Future Land Use Map should be the product of public planning process such as a Community Area Master Plan (CAMP) or at the 5-year evaluation of the Comprehensive Plan.
- Land use objectives, policy and regulations need to be accessible, clear, and predictable.
- The Future Land Use plan element needs to facilitate the adoption and implementation of form and design-based regulations in support of predictability and neighborhood preservation/character, as well as investment, development/redevelopment, and overall economic and fiscal health. (Apply in CAMPs and other target areas)

These strategies are detailed in subsequent pages.

Resource Preservation

These areas include existing preserved lands as well as those appropriate for future preservation. Land within this district includes important environmental and agricultural resources as well as National Scenic Byway



areas. Land Use policies shall discourage development and incentivize preservation of these resources.

This includes land with the following zoning classifications:

- Suburban Transition District
- Suburban District
- Suburban Estate District
- Suburban Reserve District
- Neighborhood Conservation District
- Historic District
- Any district created to meet the intent of the Resource and Agricultural Preservation District and implementation of the Goals and Objectives of the New Castle County Comprehensive Plan

Residential Districts

These are lands that are designated for residential and where appropriate mixed-use developments as well as supporting uses. The Future Land Use Map considers two categories:

 ***Residential (Developed) – Land that is part of an existing development***

 ***Residential – Land that is not part of an existing established development***

This includes land with the following zoning classifications:

- Suburban Transition District
- Suburban District
- Suburban Estate District
- Suburban Reserve District
- Neighborhood Conservation Districts
- Neighborhood Preservation Overlay District
- Historic District
- Traditional Neighborhood
- Manufactured Mobile Home
- Any district created to meet the intent of the Residential District and implementation of the Goals and Objectives of the New Castle County Comprehensive Plan

The Comprehensive Plan encourages development in these areas where appropriate infrastructure is present.

Business Flex

These are areas of existing and potential nonresidential development. These areas are essential to the county's continued economic viability, as such, the County Code needs to accommodate changes in form and function of these sites. While the County supports the evolution of these sites to meet future needs, Heavy Industrial uses are not permitted in this District.

The Business Flex District includes land zoned:

- Commercial Neighborhood District
- Commercial Regional District
- Office Neighborhood District
- Office Regional District
- Business Park District
- Economic Empowerment District
- Hometown Overlay District





- Historic District
- Industrial District
- Any future district created to meet the intent and of the Business Flex District and implementation of the Goals and Objectives of the New Castle County Comprehensive Plan

Manufacturing

The Manufacturing District includes all land currently engaged in Heavy Industrial uses. While manufacturing uses have been and will continue to be an important sector in our economy, they have in some cases had an adverse impact on adjacent neighborhoods, and natural resources. Any Land Development Plan, Rezoning, Variance or Special Use within this district should consider the impact and effect on Social and Environmental Justice.

The Manufacturing District permits existing Heavy Industrial zoning and rezoning to the following zoning districts:

- Industrial District
- Business Park District
- Office Neighborhood
- Office Regional
- Economic Empowerment District

- Any district created to meet the intent and implementation of the Goals and Objectives of the New Castle County Comprehensive Plan

Uses permitted in the Business Flex district should be evaluated as an appropriate transition from residential neighborhoods to heavy industrial uses.

Community Development Areas

These are areas that have been studied by the completion of a Community Area Master Plan which prescribed guidance for land use policies for Claymont and Route 9. The County envisions additional areas to be evaluated as the result of the implementation of the 2022 Comprehensive Plan. While no existing use or zoning is made non-conforming within this district, land development plans within the district shall consider the following:

- Claymont – The Claymont Plan envisioned the redevelopment of the area to create a place that centers on built form, walkability, and other non-automotive forms of transportation. The train station will serve as an important anchor for future development. Any development and redevelopment along the corridor should focus on achieving these goals. Any Land Development Plan, Rezoning, Variance or Special Use within the study area should consider the impact and effect on creating a corridor that has appropriate built form and multimodal transportation opportunities of the request.
- Route 9 – The Route 9 Plan examined corridor development, multimodal transportation as well as Environmental and Social Justice issues. Any Land Development Plan, Rezoning, Variance or Special Use within the study area will consider the impact and effect on creating a multimodal corridor that has appropriate built form as well as the impact on Social and Environmental Justice.

Hamlets & Villages

These are areas that, based on existing developments, land use analysis as well as community planning efforts have been determined to be appropriate for development in a manner consistent with the Hamlet and Village provisions of the Unified Development Code. All land development plans within those designated areas shall be consistent with the Hamlet and Village provisions at the time of submission. Developments using the Hamlet and Village provisions subsequent to the adoption of the 2022 New Castle County Comprehensive Development Plan, will be updated on the Future Land Use Map at the 5-year review opportunity or the formal update in 2032.

Corridor Areas

Over the next 30 years there will likely be significant changes in the form, function, and use of land, especially in areas with strong commercial potential, such as along major roadways in the county. Some areas currently designated as Residential Districts may in the future be appropriate venues for Business Flex uses. While no existing use or zoning is made non-conforming within this district, rezoning of land within the corridor areas shall be limited to the following designations and consider the following:

Type 1 **(Commercial Corridor Development)**

Zoning Districts

- Commercial Neighborhood
- Commercial Regional
- Office Neighborhood
- Office Regional
- Business Park
- Economic Empowerment District
- Any district created to meet the intent of the Type 1 (Commercial Corridor Development) and implementation of the Goals and Objectives of the

Considerations

- Type 1 corridors generally have a tight integration of jobs and services with adjacent residential neighborhoods. Future development should seek to bolster this relationship.
- Non-residentially zoned land and uses – All development and redevelopment of these sites should be oriented and designed in a manner that creates massing and design for the corridor consistent with the vision and provisions of the Guiding Principles in the Unified Development Code for Commercial Corridor Development. Corridor redevelopment should implement design features that contribute to achieving Vision Zero, such as reducing site access points when possible.
- Residential Zoned Land and Uses – Residential land may continue to be used and developed for residential purposes, however, rezoning to permit uses allowed by the above zoning districts is appropriate when the proposed development is conducive in form and function to the Commercial Corridor Development (Guiding Principles) of adjacent non-residential land, while being sensitive to the context to neighboring residential development.
- Environmental, Agricultural and Historically significant land – Preservation shall be encouraged, and development shall be discouraged.

Type 2 **(Employment-based Corridor Development)**

Zoning Districts

- Commercial Regional
- Office Neighborhood
- Office Regional
- Business Park
- Industrial
- Economic Empowerment District



Corridor redevelopment should implement design features that contribute to achieving Vision Zero, such as reducing site access points when possible.

- Any district created to meet the intent of the Type 2 (Employment-based Corridor Development) and implementation of the Goals and Objectives of the New Castle County Comprehensive Plan

Considerations

- Type 2 corridors generally have a regional impact regarding jobs and services. Future development should strengthen the impact and importance of these centers while being sensitive to the relationship the developments have on neighboring communities.
- Non-residentially zoned land and uses – Development and redevelopment of these sites should be oriented and designed in a manner creating massing and design for the corridor consistent with the vision and provisions of the Guiding Principles in the Unified Development Code for Employment-based Corridor Development. Balance is essential for these corridors with a variety of uses supported from existing small retail establishments to regional shopping and logistic centers to business parks. Corridor redevelopment should implement design features that contribute to achieving Vision Zero, such as reducing site access points when possible.
- Residential Zoned Land and Uses - Residential land may continue to be used and developed for residential purposes, however, rezoning to permit uses allowed by the above zoning districts is appropriate when the proposed development is conducive in form and function to the Employment-based Corridor Development (Guiding Principles) of adjacent non-residential land while being sensitive to the context to neighboring residential development.
- Environmental, Agricultural and Historically significant land – Preservation shall be encouraged, and development shall be discouraged

Future Land Use Density and Intensity

While Future Land Use Map is the spatial embodiment of the Comprehensive Plan's vision, the Zoning Map is the spatial implementation mechanism prescribing site specific use and intensity (Gross Density for residential uses and Gross Floor Area Ratio for non-residential uses) regulations. As such it is imperative to understand the intent of each zoning district and the range in development intensity permitted.

Existing Zoning Districts

- The **Suburban Transition District** (ST) allows high quality moderately high-density development (Gross Density: 3.69-8.00 dwelling units per acre) with a full range of residential and limited nonresidential uses (Gross Floor Area Ratio up to 0.30). Developments in this district are to have a suburban transition character, encouraging pedestrian linkages in addition to automobile access.
- The **Suburban District** (S) is a residential district that either has existing or anticipated for future sewer service consistent with land use policies and projected residential growth. The district is primarily located in growth areas designated in the Comprehensive Development Plan and intended for moderate density (Gross Density: 0.67-1.56 dwelling units per acre) with a high-quality suburban character, and significant areas of open space and/or landscaping maintaining the balance between green space and buildings. The district also permits hamlets and villages, which are planned communities (Whitehall) having a greater range of permitted uses and higher residential densities by employing Smart Code techniques.
- The **Suburban Estate District** (SE) is a residential district designed to preserve the low density (Gross Density: 0.41-0.44 dwelling units per acre) character of northern New Castle County. While some areas may have access to public water service, the district is not serviced by public sewer. Landscaping and other development design aspects serve to enhance or preserve the character of the area and preserve the views of the landscape.
- The **Suburban Reserve District** (SR) is a residential district not currently planned for sewer, that is designed to preserve the countryside character of the area. Residential development is permitted at a very low density (Gross Density: 0.17-0.30 dwelling units per acre), so as to not foreclose on agricultural preservation and the ultimate sewerage of the area.
- The **Manufactured Mobile Home District** (MM) allows the creation of manufactured home parks having a suburban transition. Residential development in this district is permitted at a medium density of (Gross Density up to 4.7 dwelling units per acre).
- **Neighborhood Conservation Districts** (NC2a, NC40, NC21, NC15, NC10, NC6.5, NC5, NCap, NCga, NCth, NCsd, NCmm and NCpud) - These districts protect the residential character of existing neighborhoods and developments, designed using zoning and subdivision regulations that predate the Unified Development Code (adopted 12/31/97). Since development regulations evolved during the years that many of these developments were planned, they have a range of intensities and uses (Gross Density: generally, between 0.41 and 20.80 dwelling units per acre).
- **Hometown Overlay Districts** (HT) perpetuate and enhance the character of early settlement areas, hamlets, villages, and pre-World War II subdivisions ensuring that infill, redevelopment, and changes to the zoning pattern are compatible with the existing community. Each district has a community redevelopment plan, and design review advisory committee, that ensure development is sensitive to land use, intensity, dimensional characteristics, signage and site design are compatible with and complimentary to residential neighborhoods.



- **Historic Overlay Districts (H)** are designed to preserve and protect buildings, structures, sites, objects, districts and landscape features of historic, architectural, cultural, archeological, educational and aesthetic merit are public necessities and are in the interest of the health, prosperity and general welfare of all residents of the County.
- The **Traditional Neighborhood District (TN)** is intended to be predominantly residential with a traditional urban neighborhood character. This is accomplished through design standards that encourage pedestrian activity and appropriate built form. Residential development is permitted at a medium density (Gross density: 4.39-6.00 dwelling units per acre), and mixed-use facilities are encouraged (Gross Floor Area Ratio: 0.40). No land is currently zoned Traditional Neighborhood.
- The **Commercial Neighborhood District (CN)** allows a variety of small-scale commercial uses having a suburban character, with a scale and intensity of the development (Gross Floor Area Ratio ranges from 0.18-0.35) by ensuring that uses primarily serve the surrounding residential neighborhoods while not promoting strip commercial development that serves highway traffic or regional uses.
- The **Office Neighborhood District (ON)** allows small scale office uses providing for professional and administrative offices in a park-like setting whose character is suburban transition (Gross Floor Area Ratio ranges from 0.24-0.50) and designed to provide a setting that is generally compatible with most of the County's residential areas.
- The **Industrial District (I)** allows light industry uses as well as to a limited extent other uses that include offices, retail establishments and restaurants (Gross Floor Area Ratio ranges from 0.16-0.60). The district does not permit heavy industrial uses.
- The **Commercial Regional District (CR)** allows for community and regional commercial services (Gross

Floor Area Ratio ranges from 0.28-1.00) providing for a variety of uses ranging from mixed-use to heavy retail. Developments should be located near transit and should be designed to promote pedestrian circulation.

- The **Office Regional District** accommodates large regional employment centers that are primarily office employment together with support type uses including mixed-use (Gross Floor Area Ratio ranges from 0.14-0.71). Transit stop facilities are incorporated into the development to reduce automobile traffic on surrounding roads. Mixed use structures are permitted for the same reason.
- The **Business Park District (BP)** allows high-quality business park character with a variety of uses including office, manufacturing, light industrial, warehousing, and uses that support them at a moderate to high intensity (Gross Floor Area Ratio ranges from 0.14-0.60).
- The **Heavy Industry District (HI)** is intended to provide for industrial and heavy industrial uses, typically having access to rail lines or navigable marine waterways in addition to roadways (Gross Floor Area Ratio ranges from 0.34-0.69).
- The **Extraction District (EX)** allows mining, quarry operations, recreational activities and industrial uses (Gross Floor Area Ratio ranges from 0.01-0.15).
- The **Economic Empowerment District (EED)** is intended to create a master planned, campus-like setting consisting of target industry uses as identified in the 2014 Economic Development Strategic Plan, as may be amended or updated, comprising corporate headquarters, high technology offices, research and/or light assembly centers, or master planned employment centers. It can be used to transition existing industrial/office campuses to accommodate the expansion or re-use of target industries with streamlined reviews. No land is

⁶ The cluster development option was a development option under the Former Code (New Castle County Zoning and Subdivision Code immediately prior to the Adoption of the Unified Development Code) that provided alternative zoning regulations permitting residential development to take a more compact form in order to preserve and maintain substantial portions of the county's existing open areas.

⁷ Performance zoning, also called impact zoning or flexible zoning, is an alternative technique to conventional zoning. Rather than establishing specific area and bulk standards within zoning districts to govern development, performance zoning regulates the design and location of a use based on the characteristics of a particular site to support development. Under performance zoning, municipalities replace conventional zoning districts with performance criteria to guide development. The result can be an increase in the range of uses that may be permitted and additional control over the effects of the land use. Landowners and developers are provided greater flexibility on how to meet performance zoning standards.

⁸ Former Code Section 40-80, page II-9



The 1997 and subsequent updates to the New Castle County Comprehensive Development Plan have sought to bring predictability to future development of the county for residents as well as developers.

currently zoned as an Economic Empowerment District.

- The **Neighborhood Preservation Overlay District** intended for residential communities that are dealing with issues of infill and proximate nonresidential development or redevelopment that could have a deleterious impact on the residential areas, while encouraging economic development, placemaking, and healthy communities in a way that protects the character of existing neighborhoods. No land is currently zoned as a Neighborhood Preservation Overlay District.

Other Key Implementation Strategies

Predictability

The 1997 and subsequent updates to the New Castle County Comprehensive Development Plan have sought to bring predictability to future development of the county for residents as well as developers. One important implementation tool for this was the adoption of the Unified Development Code, which consolidated the zoning and subdivision codes into one cohesive volume. The establishment of the suburban zoning districts (Suburban Reserve, Suburban Estate,

Suburban and Suburban Transition) to replace largely undeveloped residential land (Formerly R-1 – R-4) provides a character description for future development understandable to residents.

- Suburban Reserve land is former R-2 land not currently planned for sewer designed to preserve the countryside character of the area. Developments within this district are designed so that each residential dwelling unit generally consumes between about 3.34 and 5.89 acres (including lot and open space acreage).
- Suburban Estate land is primarily land zoned R-1-A and R-2 land that is not intended to receive sewer service in the future. Developments within this district are designed so that each residential dwelling unit generally consumes between about 2.44 and 2.28 acres (including lot and open space acreage).
- Suburban land is that which is designated as growth areas in the Comprehensive Development Plan. Developments within this district are designed so that each residential dwelling unit generally consumes between about 1.50 and 0.65 acres (including lot and open space acreage).
- Suburban Transition is land is largely former R-3 & R-4 zoned land as well as land seen as a transition from higher density or intensity residential or nonresidential uses to a lower density suburban character. Developments within this district are designed so that each residential dwelling unit generally consumes between about 0.27 and 0.125 acres (including lot and open space acreage).

The County also replaced cluster development option⁶ with performance zoning.⁷ Prior to the adoption of the Unified Development Code (December 31, 1997), most of the County was zoned a variation of R-1 or R-2 (SNCC residential land was exclusively zoned R-2). R-2 land was permitted to develop as a cluster development, provided infrastructure was present, and that the property was not encumbered by protected resources at a density of 1.60 du/acre.⁸ Cluster developments, regardless of size could develop using any or all the following housing types:

- Single family detached homes,
- One-family semidetached dwelling located on its own individual lot,
- One-family attached dwelling (row or townhouse) located on its own individual lot within a building group.⁹

The Suburban District

- Reduced maximum density for developments, without a bonus, to 1.30 dwelling units/acre (1.56 for Age Restricted Open Space Planned Developments).
- Set a threshold of 50 acres to develop single family attached dwelling units or apartments (Open Space Planned). These developments require a mix of single family detached and attached units.
- Established provisions for Smart Code development (Hamlets and Villages) allowing for a mix of uses and increased density in appropriate areas.

While the principles described above are easy for a planner or engineer to understand, the concepts and jargon are not accessible for folks who have occupations outside of the planning profession. Moving forward we should seek out opportunities to educate the public as to the density and intensity of uses permitted in districts throughout the county. Two efforts that we initiated in the past few years are the Planning 101 Course¹⁰ and New Castle County Resident Toolbox.¹¹

Additionally, changes to the zone should be explored



that make the best use of open space requirements, review allowable uses and densities, and expand Hamlet and Village type developments where

appropriate.

Flexibility, Form Based Code

The 2022 Future Land Use Map/Element was constructed with the knowledge that the Unified Development Code will need to be amended to meet the needs of the county moving forward. To achieve the vision of this plan we need to seek to expand the

utilization of Smart Code provisions, evaluate the potential for Form Based Zoning (where appropriate) and employ innovative planning approaches to addressing land use challenges. These tools as well as others such as DRACs and other community based opportunities for residents to impact and guide future development especially in the Community Development Areas Districts will be essential for responsible redevelopment. While we see the need for these tools, we will seek consultation and coordination New Castle County residents, experts in the field and consideration of parking, market and housing studies.

To achieve the vision of this plan we need to seek to expand the utilization of Smart Code provisions, and evaluate the potential for Form Based Zoning.

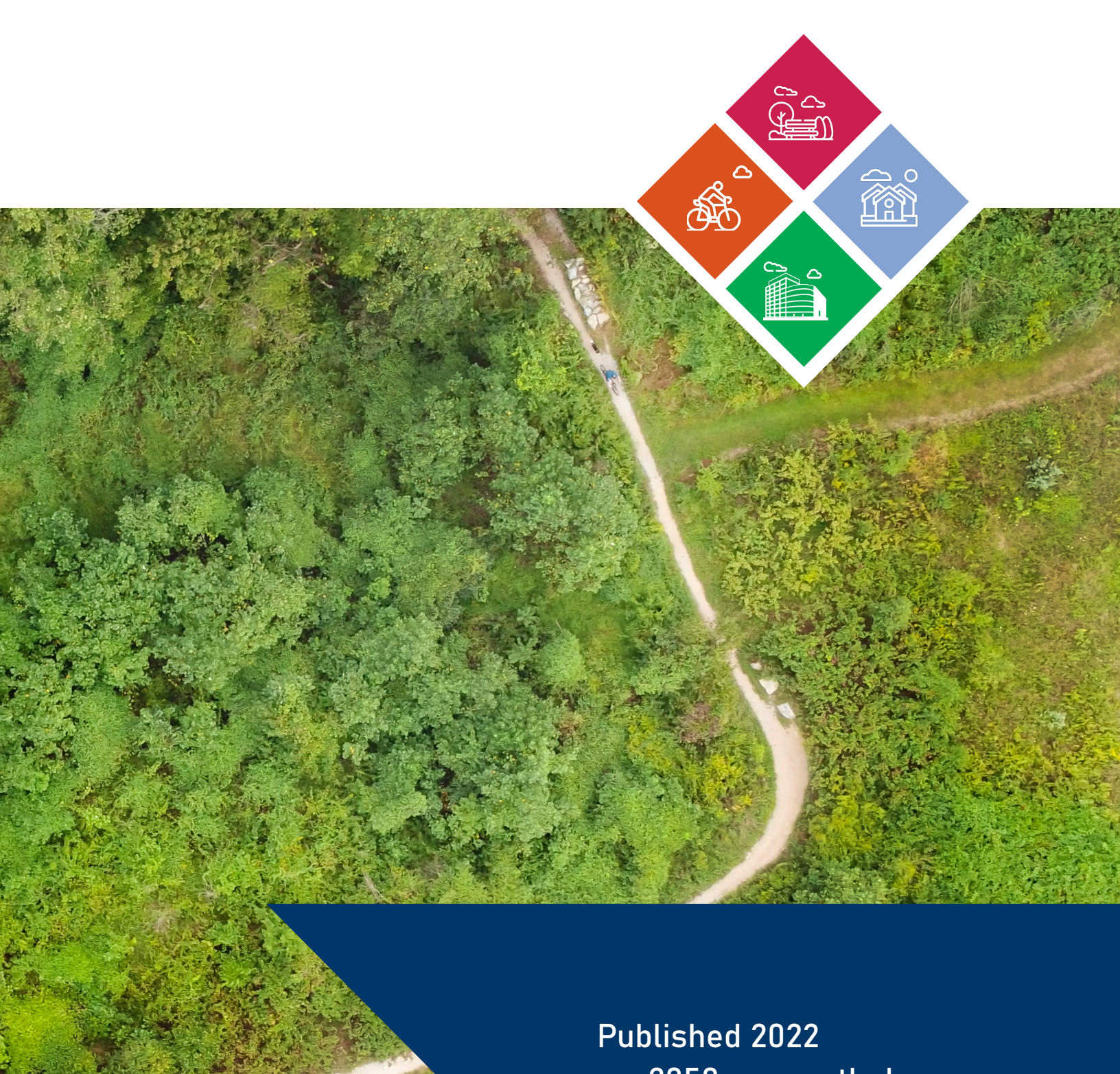
Changing our Current Practices

As discussed earlier in this element, 37 properties, roughly 565 acres of land, have had their future land use designation changed since the adoption of the 2012 Update to the New Castle County Comprehensive Development Plan. While the Future Land Use Map as proposed has been designed to minimize such occurrences, inevitably there will instances where a change or an amendment is merited. This should not be a common practice, but one that in rare instances permits the County to be nimble, adjusting to unforeseen economic and housing conditions. The Future Land Use Map, as conceived by Delaware State Code, drives zoning and any change to the future land map should be the product of careful consideration.

⁹ Ibid., page II-13

¹⁰ Free course designed in collaboration with the University of Delaware. <https://canvas.instructure.com/enroll/999BFE>





Published 2022
ncc2050.newcastlede.gov



An aerial photograph of a lush green landscape, likely a park or natural area. A winding road or path is visible, cutting through the terrain. The hills and valleys are covered in dense vegetation. The overall scene is serene and natural.

ELEMENT D

Conservation

D. Conservation Element

Element Defined

The natural environment is a distinguishing characteristic of the county, and our natural resources (air, water, land, plants, and ecosystems) should be protected for the use of current and future generations. A healthy ecosystem will support biodiversity, which is key to maintaining critical environmental features, but there are many potential threats, including climate change and the increased loss of natural habitat. Increased development for housing, retail, industrial, and other uses threaten or remove valuable space necessary for plants and animals to flourish and maintain our ecosystem. Farmland, which contributes to New Castle County's economy, is another critical resource that is under threat, especially in the areas south of the Chesapeake and Delaware (C&D) Canal. This element incorporates the natural world into NCC2050: wetlands and watersheds; coastal zones, sea level rise, and floodplains; erosion prone soils; forest cover, and farmland. The elements of our natural world combine to form the ecosystems in which we live. From urban treescapes to rural pastures, the Conservation element works to provide integration and enhancement to the ecosystems that comprise New Castle County. Recognizing the codependency of our natural systems, NCC2050 strives to holistically approach the element Conservation.

What We Heard

Conservation was one of the top priorities throughout the NCC2050 public process. Here is what we heard:

"There are many factors when looking at open space: creating green space and nature for humans is important but also important for biodiversity. So, there are times when you need to preserve land to create access for people but sometimes you also need to preserve land just to create habitat, not for humans. Biodiversity enhances resilience, which is important for humans too; we need to utilize land for both."

-- Panelist Jeff Downing, Mt. Cuba Center, Deep Dive Session 1: Open Space, Conservation, Recreation, Environment

"Standard practices include regenerative farming, native landscaping, pollinator gardens, community composting, creative stormwater management, equal access to healthy foods/produce, increased tree canopy, species diversity, AND integration of innovations in Fantastic Fungi/mycelial systems resources."

– Participant, Our Places and Spaces Let's Talk Workshop

"Climate change, environmental protection, hazard mitigation, stormwater runoff, [and] water pollution"

– Stakeholder Challenge Top Priorities Respondent

"The Sierra Club has recently launched a national campaign to preserve 30% of land by 2030. Seems like a good goal and challenging but achievable."

– Public Participant, Deep Dive Session 1: Open Space, Conservation, Recreation, Environment

New Castle County Today

According to New Castle County's spatial data, approximately 27% of the approximately 250,000 acres of land (including incorporated municipalities) within New Castle County is preserved.¹ This percentage was comprised of land classified public lands (including parks and other public land) (15%), private open space (4%), agricultural easements (5%), and conservation easements (3%), as seen in **Figure D-1. Map D-1** shows the locations of these lands in the County. New Castle County hopes to continue to increase the number of acres preserved in the County.

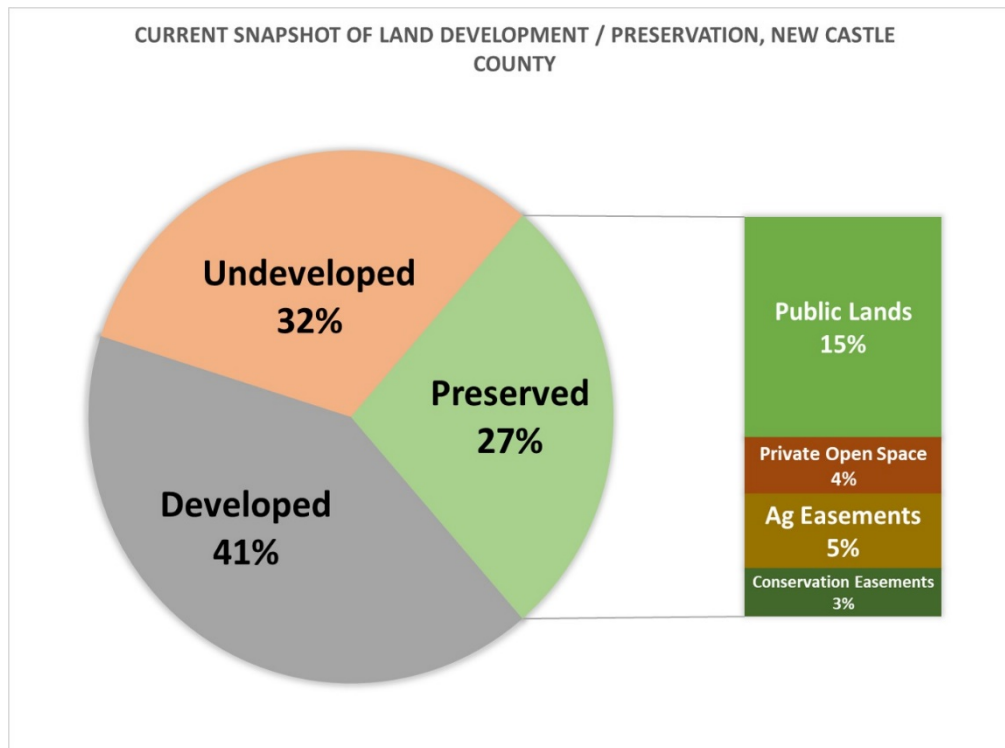
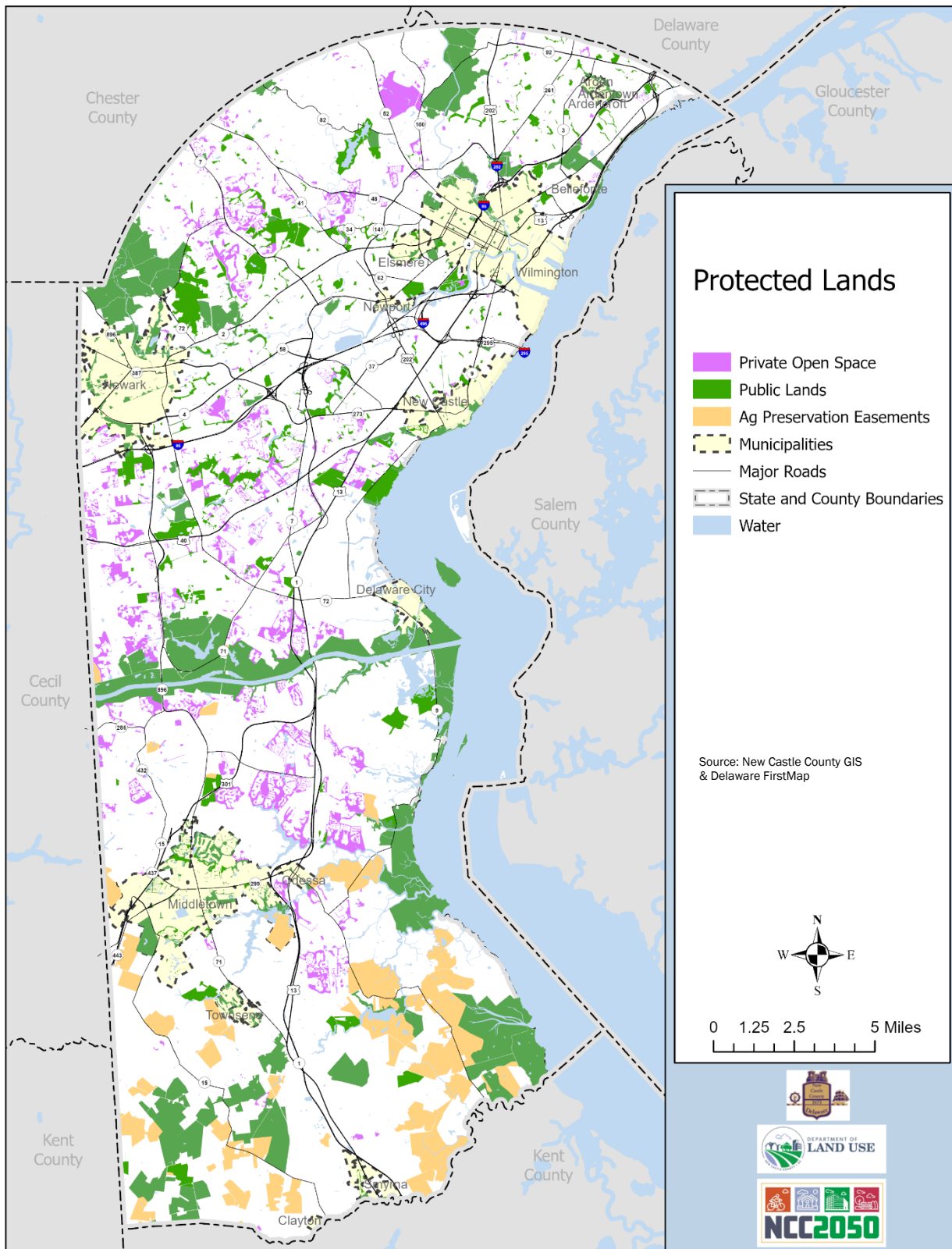


Figure D-1: Distribution of Land Use and Preserved Lands (Source: New Castle County November 2021)

¹ The Land Preservation Task Force, in its 2020 report, analyzed protected lands. This analysis, produced in 2019, reported that 25% of unincorporated New Castle County was protected. Since 2019, New Castle County has updated this analysis methodology and data inputs. Several new protected lands have also been acquired within the County, specifically in the agricultural preservation and private open space categories.

Map D-1: Protected Lands



Wetlands and Watersheds

Wetlands provide critical habitat to many plant and animal species. Any area that has wetland plants, soils, and water at or near the land surface, particularly during the growing season, is considered a wetland. As more frequent extreme weather events occur due to climate change, wetlands play a vital role in protecting community members from flooding and improving water quality through water retention and wave attenuation. New Castle County currently protects all State and Federal wetlands so that these ecosystems are preserved and continue to offer many valuable ecosystem services to wildlife and the community.

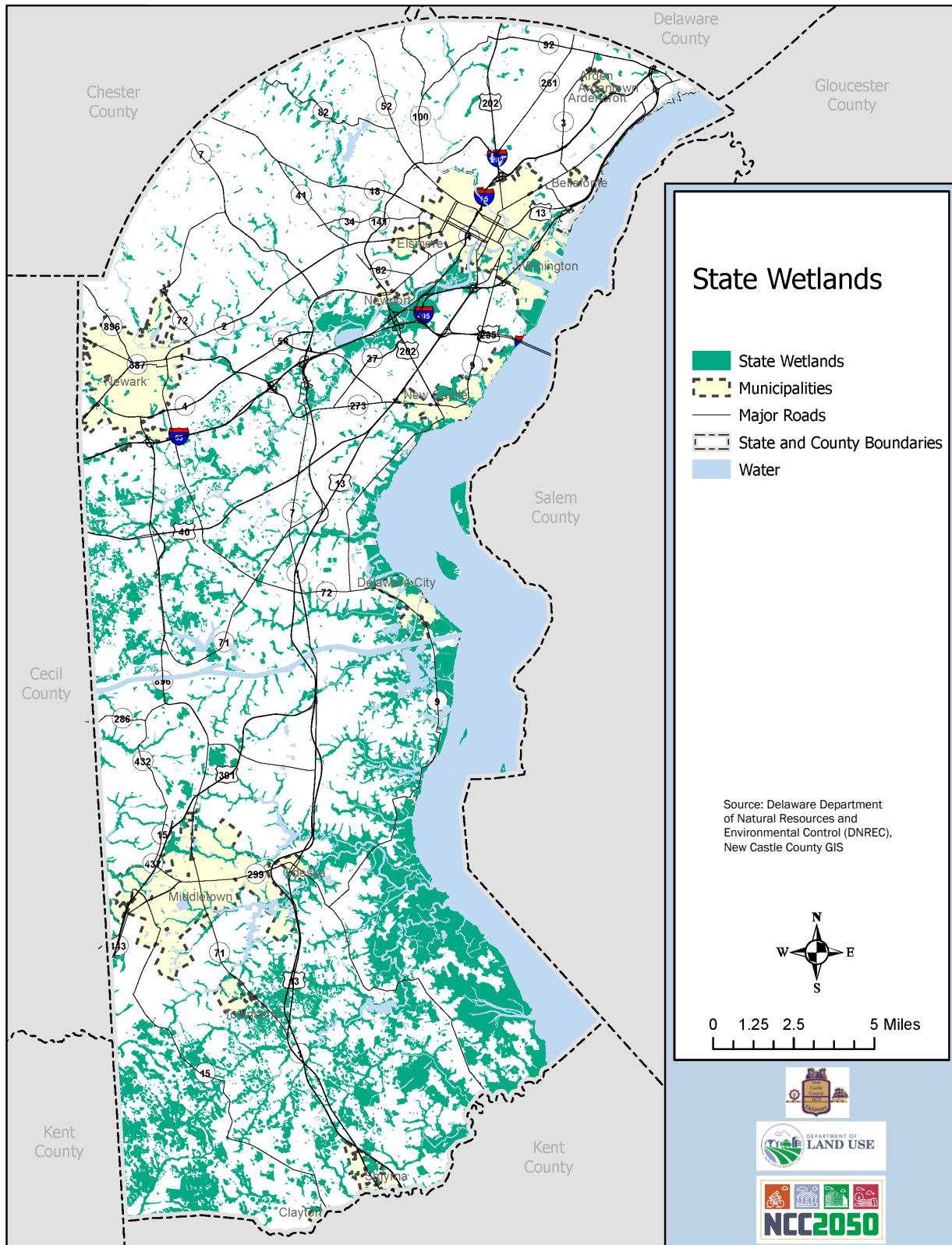
The resiliency of tidal and coastal wetlands is threatened by mainly two factors: 1) low sediment loads to build marsh elevation and 2) Sea Level Rise. As these two threats continue, tidal and coastal wetlands will naturally migrate inland. Preservation of inland open space and agricultural lands help provide buffering for wetland migration and help reduce flooding vulnerability of coastal communities. Therefore, it is not only important to protect existing tidal wetlands but also the land surrounding them from development.

New Castle County wetlands are most densely concentrated along the eastern edge of the county and in the southern part of the county, as mapped by the state and shown in *Map D-2*. Today, wetlands comprise 53,504 acres, or 17%, of land in New Castle County. In the southern portion of the county (south of the C & D Canal), wetlands account for 27% of the land area. This percentage has remained unchanged since the *2012 Comprehensive Plan*.

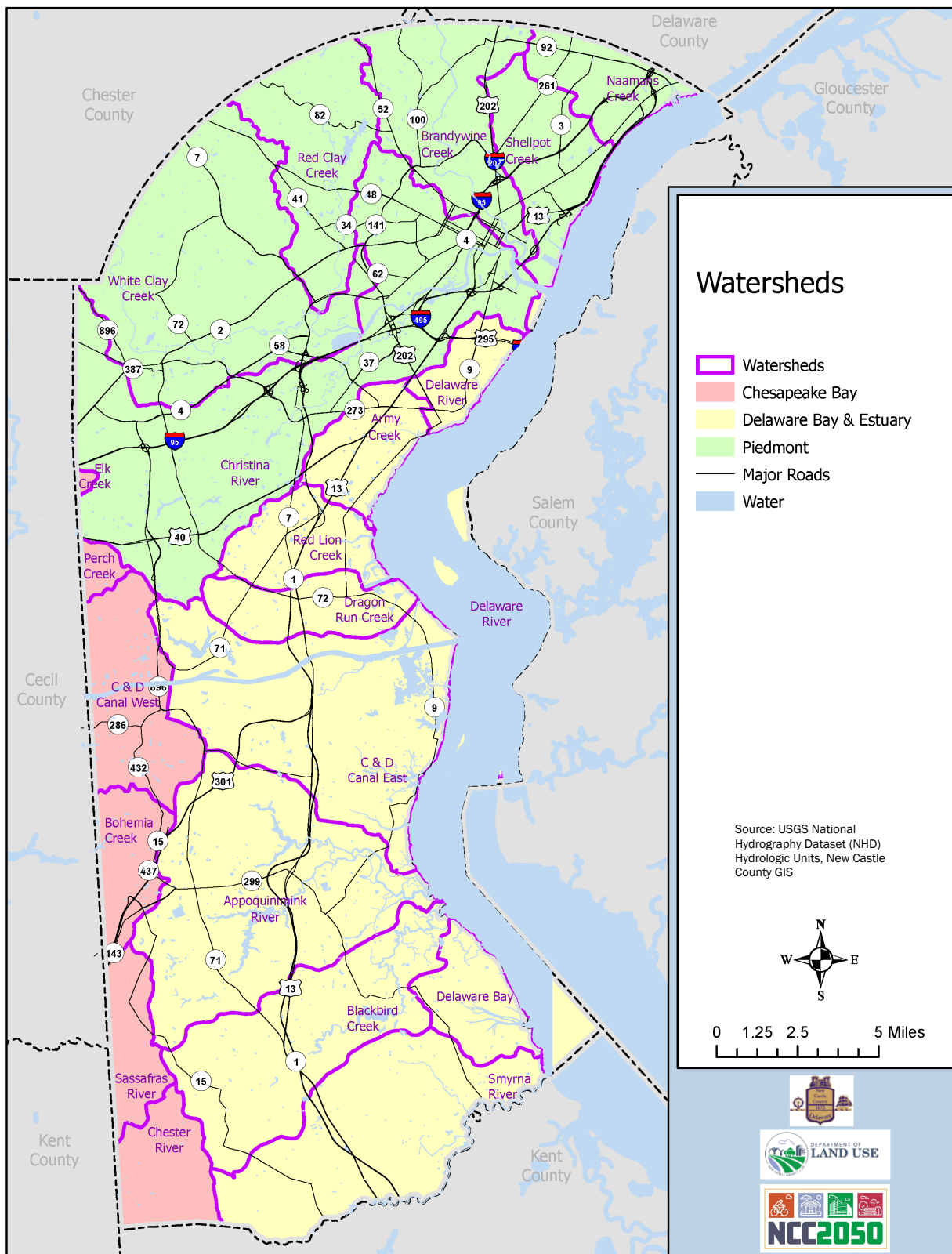
Wetlands play a key role in watershed health, as do many of the other elements of conservation, like tree coverage, responsible agricultural practices, and stormwater management. There are 20 watersheds in New Castle County, with three major drainage basins, as shown in *Map D-3*. The Piedmont Basin (green) is in the northern part of the county, the Delaware Bay and Estuary (yellow) drains the eastern half of the county, and the Chesapeake Bay (red) drains western New Castle County. New Castle County has one federally designated Wild and Scenic River: White Clay Creek in northwest New Castle County. All land cover including plants, structures, infrastructure, and natural habitat within a watershed play an important role in the overall system. Today, the state of Delaware, New Castle County, and other community partners are working hard to create awareness around watershed protection and restoration.

When monitoring reveals that waterways do not meet Delaware's water quality standards, the Federal Clean Water Act (CWA) requires states to develop [Total Maximum Daily Loads](#) (TMDL) for the pollutants of concern. These pollutants could be chemicals, bacteria, sediments, or heat that could injure a waterway's natural health. Delaware has been establishing TMDLs since 1998 using monitoring and other types of data to develop models that predict how water quality will change under a variety of pollutant loading scenarios. TMDLs are just one step in improving water quality in Delaware. DNREC identifies voluntary and regulatory actions, or pollution control strategies, for these waterways and other types of watershed plans are developed to achieve water quality standards.

Map D-2: State Wetlands



Map D-3: Watersheds



Coastal Zones, Sea Level Rise, and Floodplains

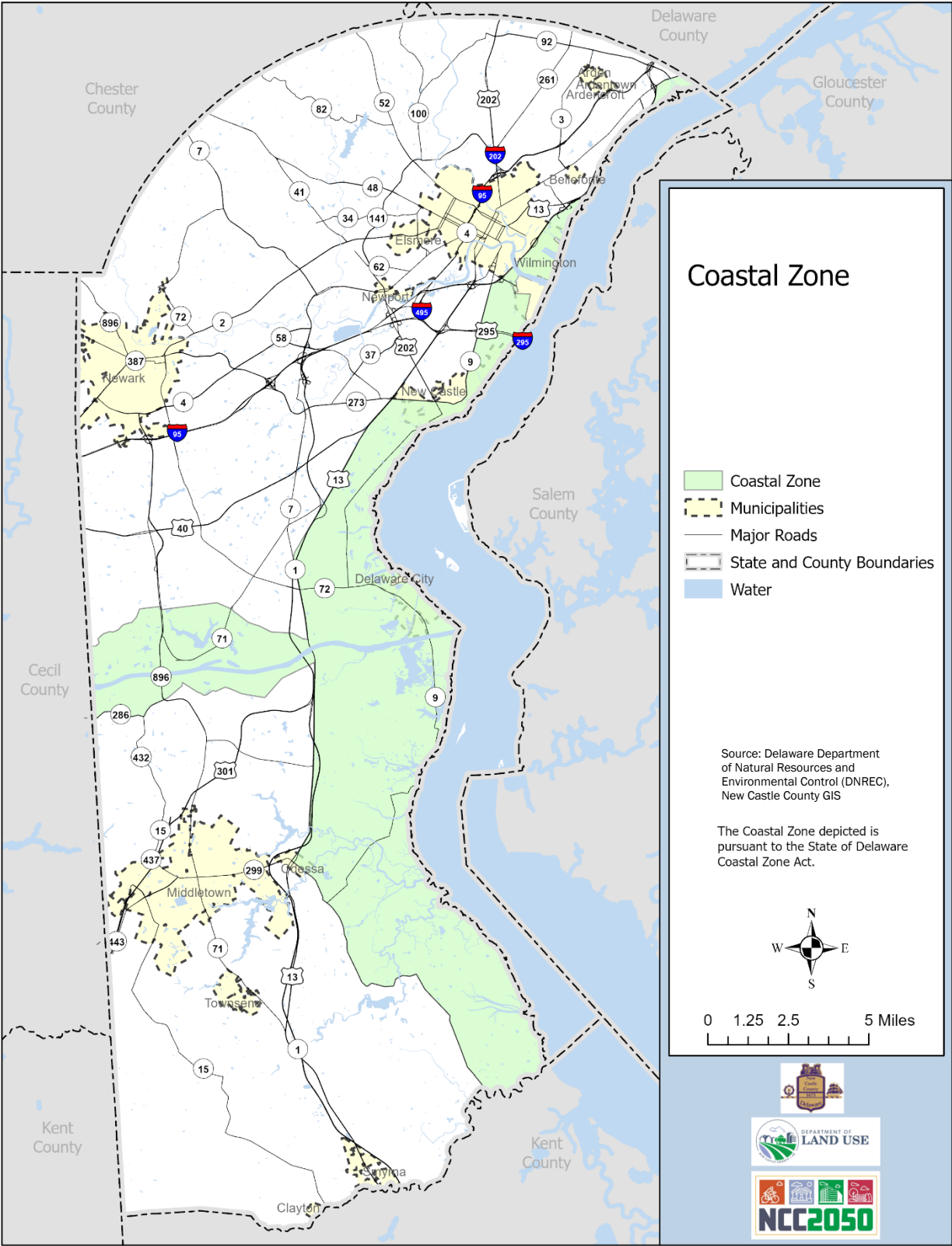
New Castle County is found on the edge of the Delaware River, which flows into the Atlantic Ocean. As such, the entire eastern edge of the County is comprised of coastal habitats, as is much of the land found along the C & D Canal. *Map D-4* highlights the Coastal Zones within New Castle County.

The State of Delaware passed the Title 7, Chapter 70 [Coastal Zone Act](#) (CZA) of 1971 to control development within coastal zones and promote restoration. The act identifies legally defined areas called Coastal Zones as “the most critical areas for the future of the State in terms of the quality of life in the State” and therefore, the act enables State control over industrial development and uses within the Coastal Zones. The New Castle County Unified Development Code allows Heavy Industrial districts in coastal zones so long as they were previously zoned M-3 under former New Castle County zoning maps and uses prohibited by the Coastal Zone Act shall remain prohibited. No new Heavy Industrial districts shall be created in coastal zones. New Castle County, having a significant amount of coastline, works directly with the State in maintaining the vitality of its coast.

These critical habitats that feature unique wildlife and plants must continue to be protected; they also serve as a barrier between the Delaware Bay and inland development. Proper management and restoration of coastal land will be a strong force against continued sea level rise, particularly in the large coastal areas found in southern New Castle County. Coastal zones provide for economic viability as well, though some industries are regulated or prohibited in coastal zones as regulated by the Delaware Department of Natural Resources and Environmental Control. The *Coastal Zone Act* controls the location, extent, and type of industrial development in the State's coastal zone, including lands contiguous to the Delaware River and Bay and Delaware Canal. This act prohibits the construction of new heavy industries in the coastal zone, such as oil refineries and steel manufacturing plants. New bulk product transfer facilities for the movement of materials from vessel to shore or vessel to vessel are also prohibited. New non-manufacturing business uses, such as commercial, residential, warehouse, and distribution facilities, are not covered by the Act. ²

² While the Delaware State Coastal Zone identifies and limits Heavy Industrial (HI) uses, it does not list nor define HI uses. Heavy Industrial uses are defined in the New Castle County Code, Chapter 40, Article 33.

Map D-4: Coastal Zone



The Delaware Bay shoreline, an important and ecologically significant coastal area, extends from Pea Patch Island in New Castle County to the City of Lewes in Sussex County. DNREC's [Delaware Bayshore Initiative](#) collaboratively helps to improve the shoreline economy by encouraging recreational activities like fishing, hunting, boating, and ecotourism. The initiative focuses on three major areas for improvement: land conservation, recreation and education, and community engagement.

In July 2012, DNREC performed a sea level vulnerability assessment. The published document, *Preparing for Tomorrow's High Tide*, revealed that there would be a significant amount of acreage affected by sea level rise in New Castle County:

- 0.5 meters (~1.6 feet) of sea level rise (25,179 acres would be inundated)
- 1.0 meters (~3.2 feet) of sea level rise

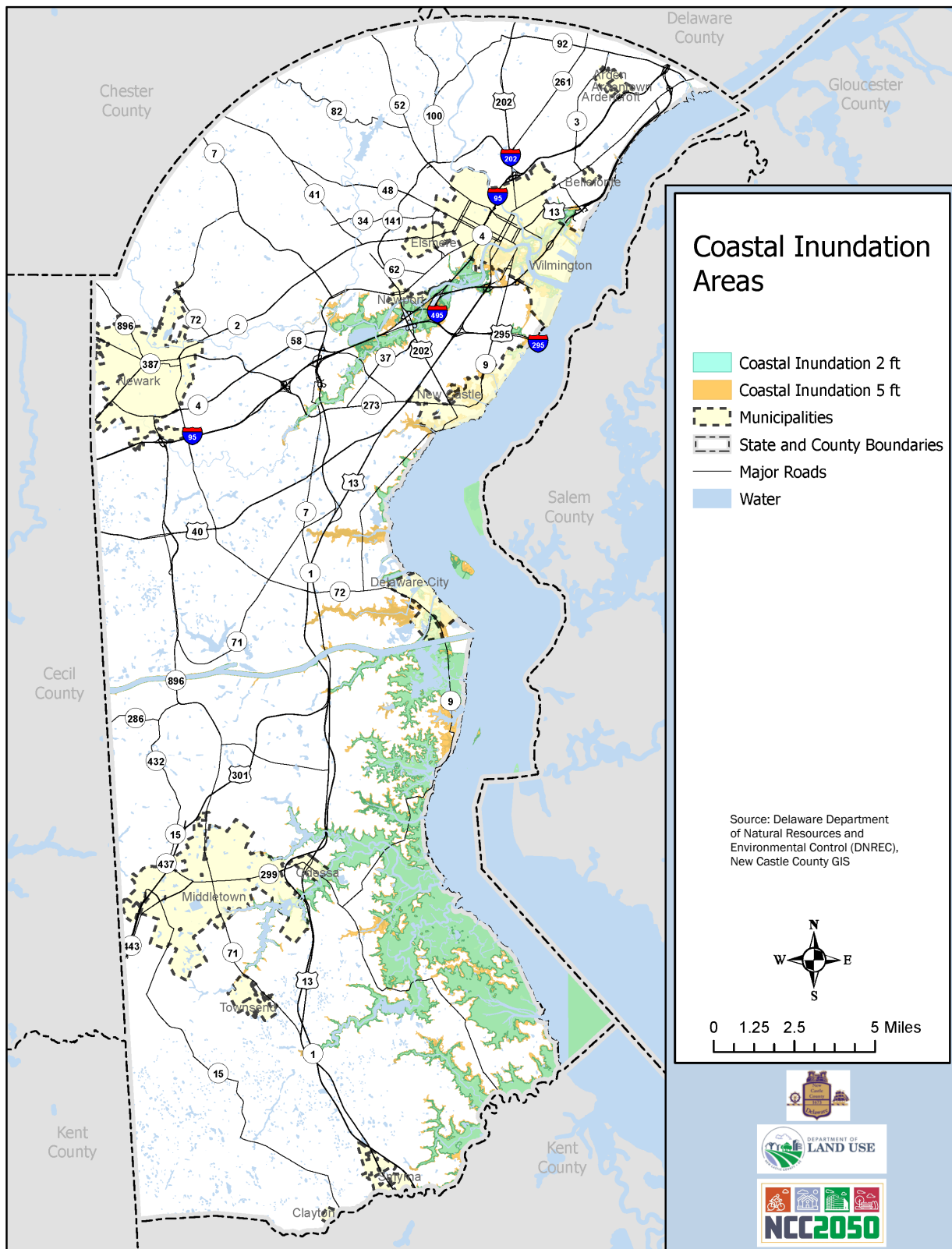
Particularly concerning is that a large portion of Delaware's heavy industry and railroad system are found within New Castle County's coastal zones (See **Map D-5** for updated Coastal Inundation Areas at 2- and 5-foot levels).³ Equally concerning, the report notes that many of the dikes in the County are protecting people and property so should they fail, the results will negatively affect New Castle County residents.⁴ As effects of sea level rise will continue to worsen, coastal restoration and smart development is at the forefront of coastal planning in New Castle County and the State today.

In addition to rising sea levels along New Castle County's coastline, there is an observed increase in flooding events. **Map D-6** shows the existing floodplains within New Castle County. Floodplains are expected to be impacted more frequently along with an increase in storm events. New Castle County regulates development in these flood-prone areas to protect people from flooding. Many of the flood zones are located along the coast, however, there are significant flood zones in southern New Castle County. Also of note are the floodplains found in the northernmost region of New Castle County, where almost all of the County's erosion prone soils are found. Understanding the effects of climate change and increasing frequency of large storm events in relation to current and future development in New Castle County should be a prime focus to ensure safe and healthy communities and ecosystems.

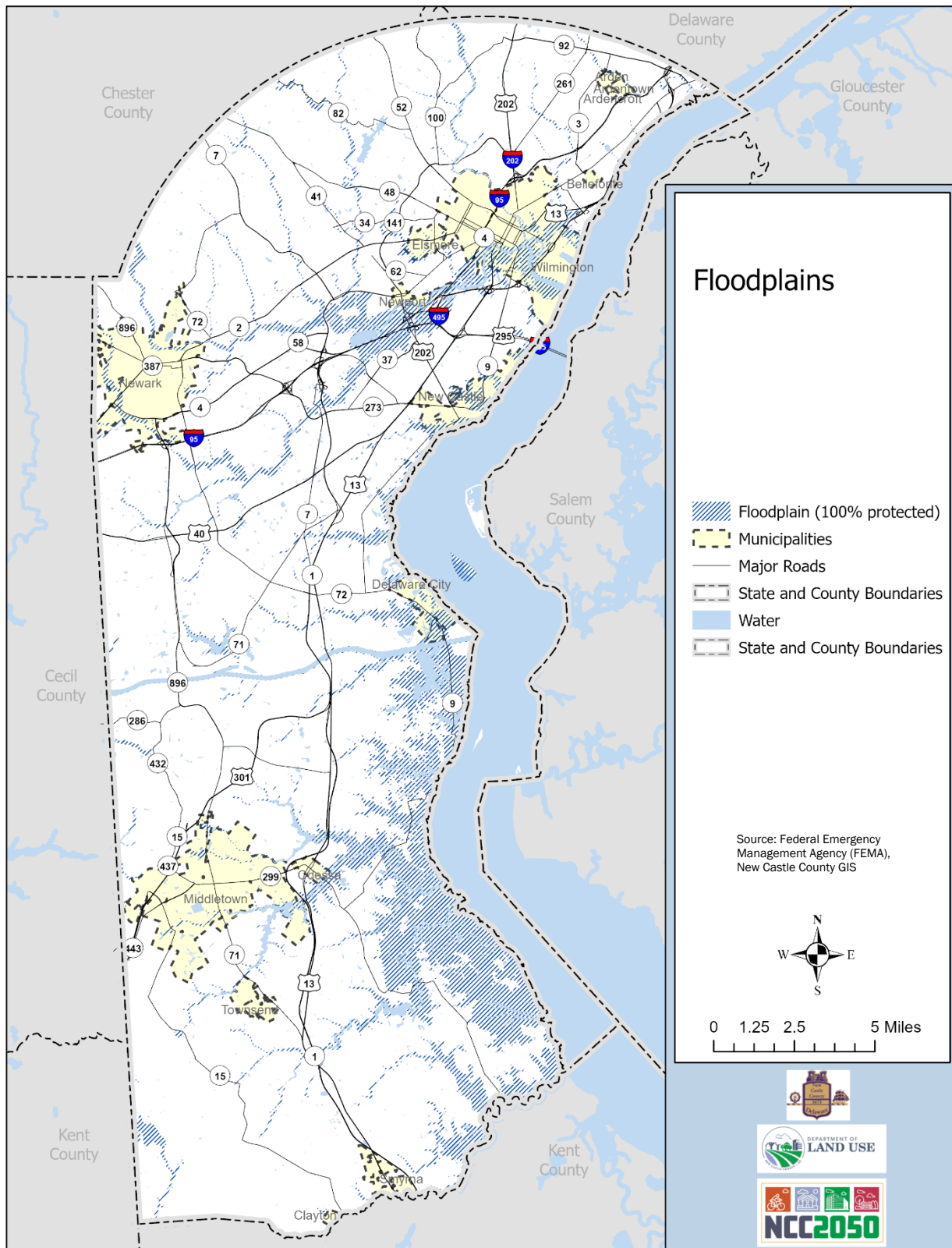
³ The Coastal Inundation Areas Map (Map D-5) is presented in feet but represents the State's current SLR modeling.

⁴ [Preparing for Tomorrow's High Tide Sea Level Rise Vulnerability Assessment for the State of Delaware](#), Delaware Department of Natural Resources and Environmental Control, July 2012

Map D-5: Coastal Inundation Areas



Map D-6: Floodplains



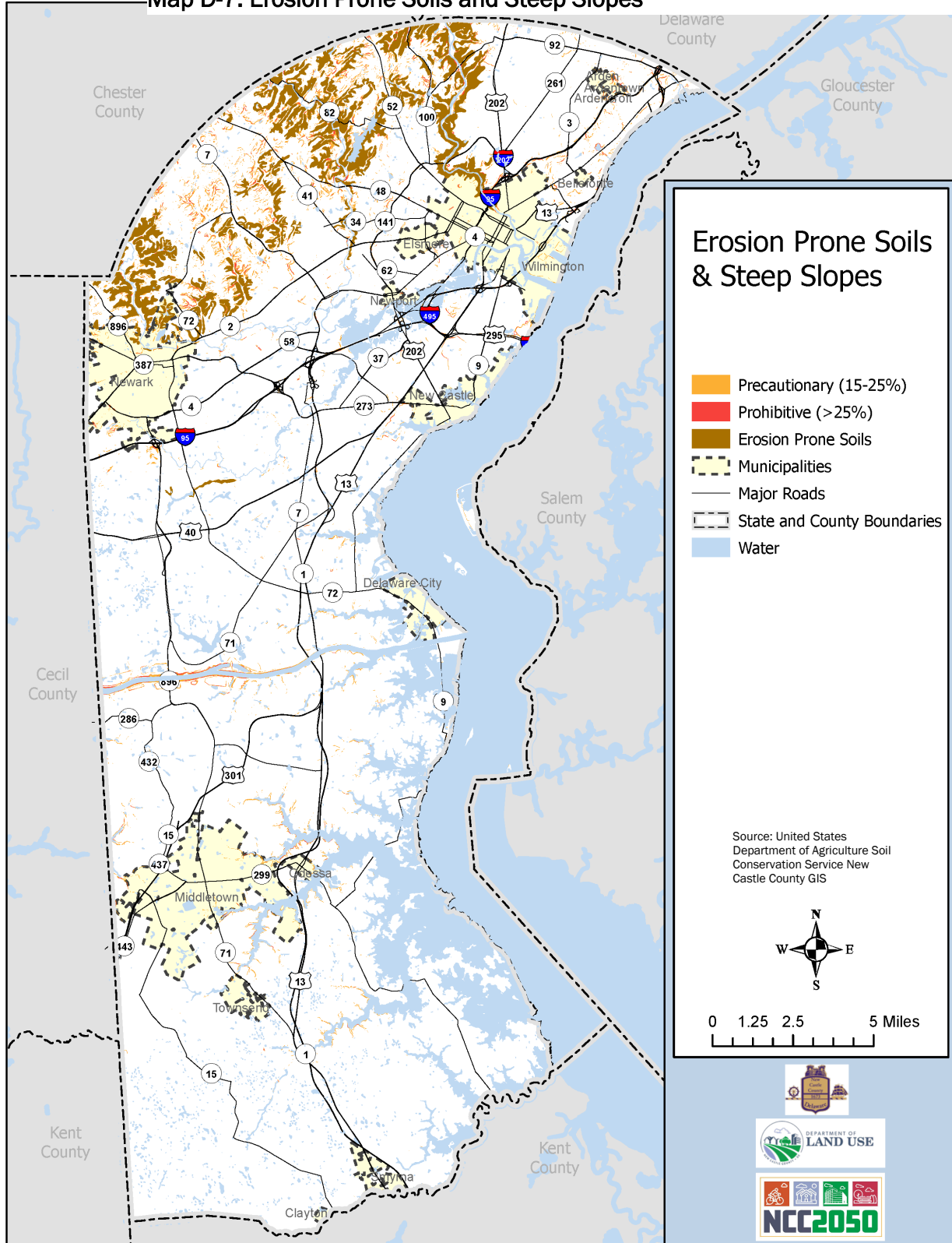
Erosion Prone Soils and Steep Slopes

Soil erosion generally takes place any time the ground is disturbed. In New Castle County, a majority of erosion prone soils⁵ are found in the Piedmont Region. According to the National Resource Defense Council, when erosion prone soils are disturbed and washed away, nearly half of the time it ends up in a body of water.⁶ Climate change has accelerated erosion with heavier storm events washing away more topsoil. This not only threatens the health of wetlands and watersheds, it may also interfere with drinking water and impact water quality. Understanding where the County's soil is most vulnerable to erosion is the first step in preventing it. Identifying the locations of erosion-prone soil, the County should take measures to slow erosion significantly in those areas, shown in *Map D-7*. One of those measures is preventing development in areas with high deposits of erosion-prone soil through which New Castle County is not only planning for the safety of residents but also avoiding disturbances that could increase the chance of erosion. The County's publication of [GreeNCC](#) points to the *Delaware Erosion and Sediment Control Handbook* as a guide for controlling erosion for various planting, grading, drainage conveyance, and other development activities.

⁵ Erosion-prone slopes: Slopes that consist of land with soils of United States Department of Agriculture Soil Conservation Service capability classifications IVe, VIe, VI and VIIe as mapped by the soil survey of the County dated October 1970 or as later revised.

⁶ <https://www.nrdc.org/stories/soil-erosion-101>

Map D-7: Erosion Prone Soils and Steep Slopes

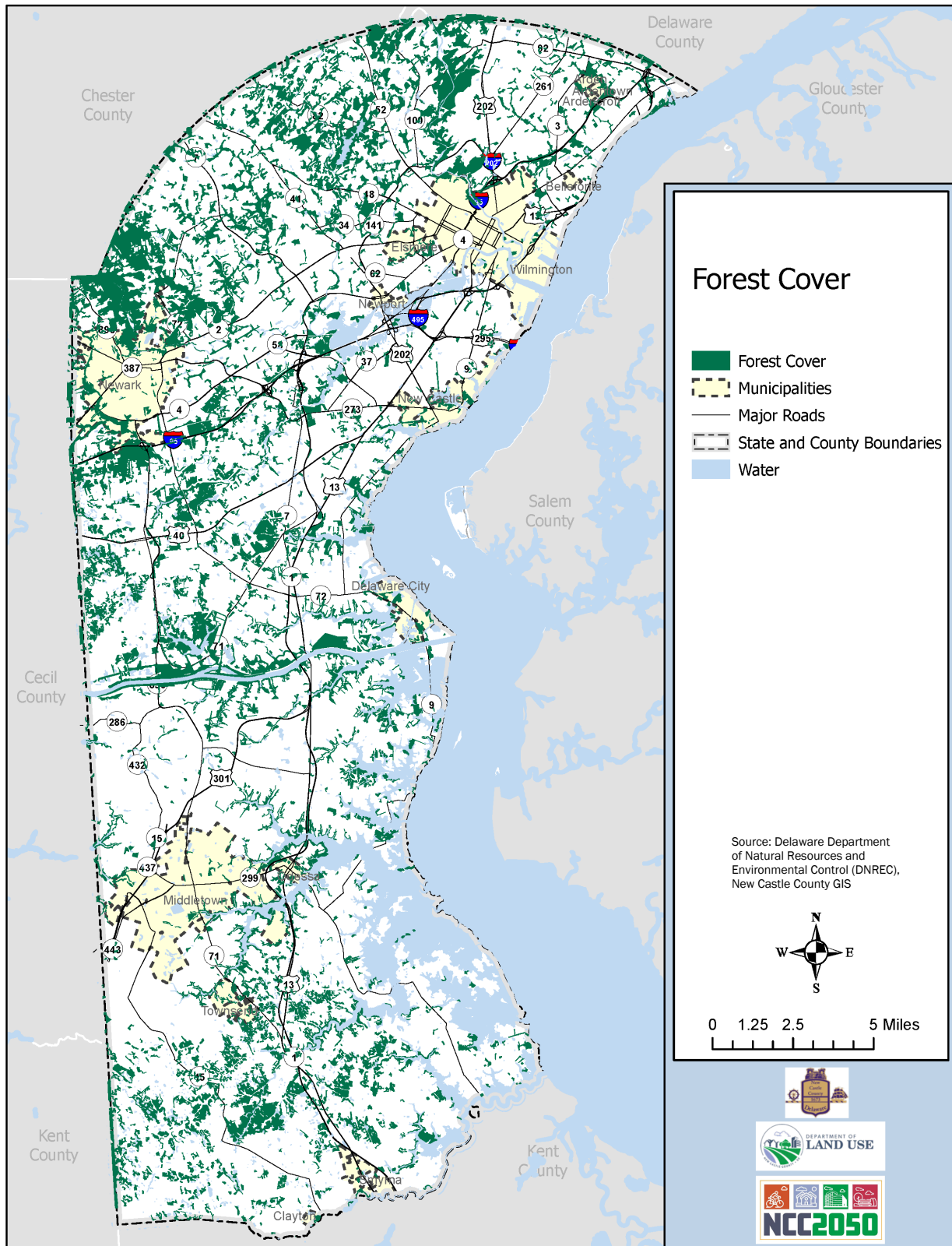


Tree Canopy and Forest Cover

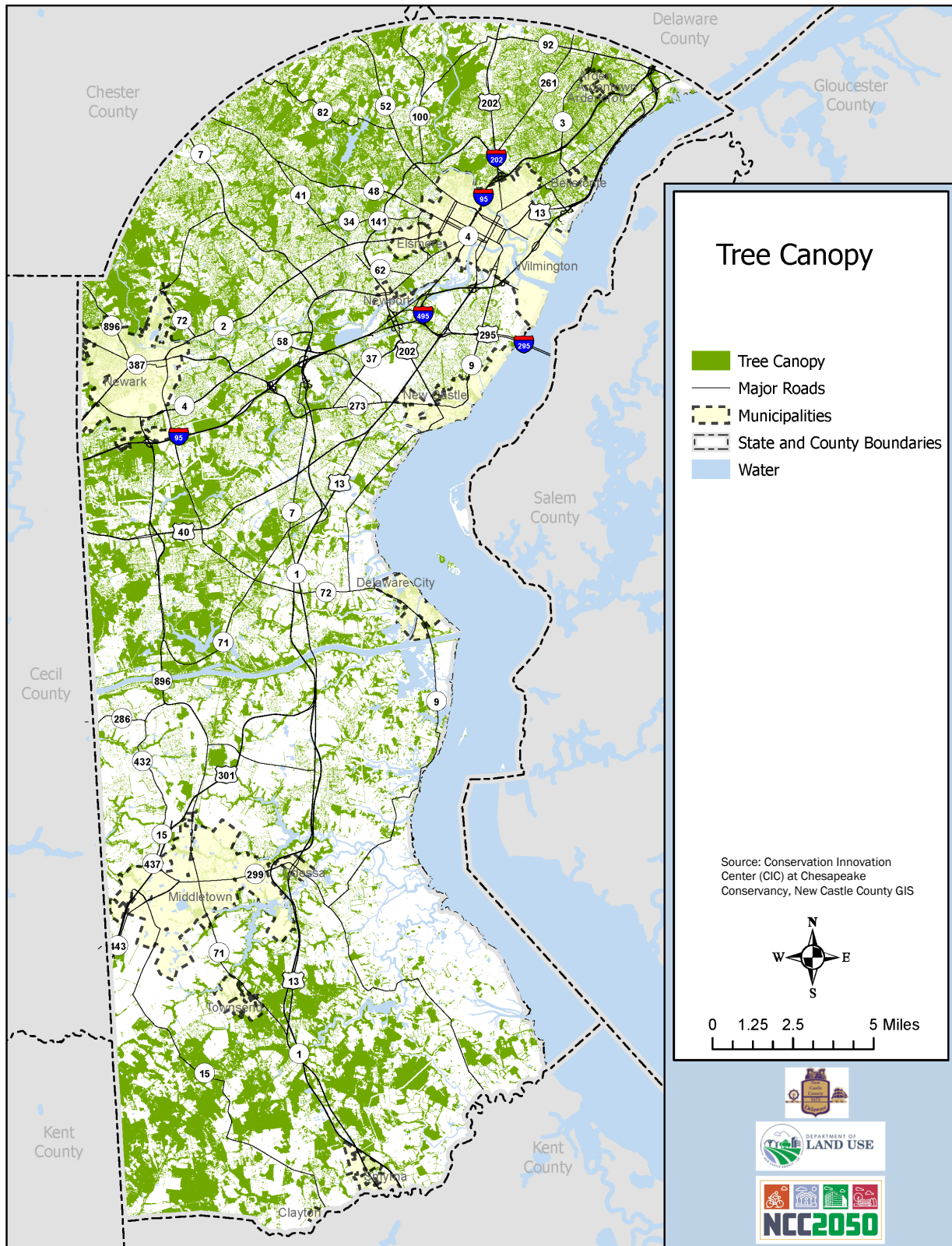
Forest cover is found throughout the New Castle County though most notably in preserved areas, such as local, state, and federally owned lands or land that has been preserved through development-based protections. Tree canopy covers 33.96% of New Castle County's total land area. This percentage was calculated by the Delaware Department of Agriculture using the Chesapeake Conservancy Innovation Center's 2013/2014 data with a 1-meter resolution. Forest Cover is mapped by the State of Delaware where the predominate land use is forest in *Map D-8*. Tree canopy includes trees that are within forested areas and developed land uses.

Tree coverage provides much needed cooling effects, creates riparian buffers along water bodies, and prevents potential erosion. Forests provide habitat for a wide variety of native species and are generally areas of recreation for residents and visitors. The disparity of coverage throughout the county today is the result of development and other land uses. It is important for the County to prioritize the protection and conservation of forests to promote native species habitats and improve groundwater infiltration with a focus in areas of environmental justice (See *Map D-9*).

Map D-8: Forest Cover



Map D-9: Tree Canopy



Forest Habitat Preservation and Integration

Forest fragmentation is a critical issue for forest habitats. Promoting and reforesting areas to create contiguous forest cover not only provides a better habitat for wildlife but better opportunities for greenway access and trails for recreation. Forest preservation and integration is a piece of DNREC's [Landscape-Scale Green Infrastructure](#) efforts, linking large ecologically significant natural areas with natural corridors that protect water quality, provide habitat for resident and migratory species, and increase landscape resilience to storms and flooding.

Areas protected for forest cover and other natural habitats helps provide alternative transportation and recreational activities through trail connectivity. In December 2021, County Ordinance 21-009 was adopted, which updated standards for increased forest resource preservation, conservation design standards, subdivision standards, site design, and resource protection definitions.

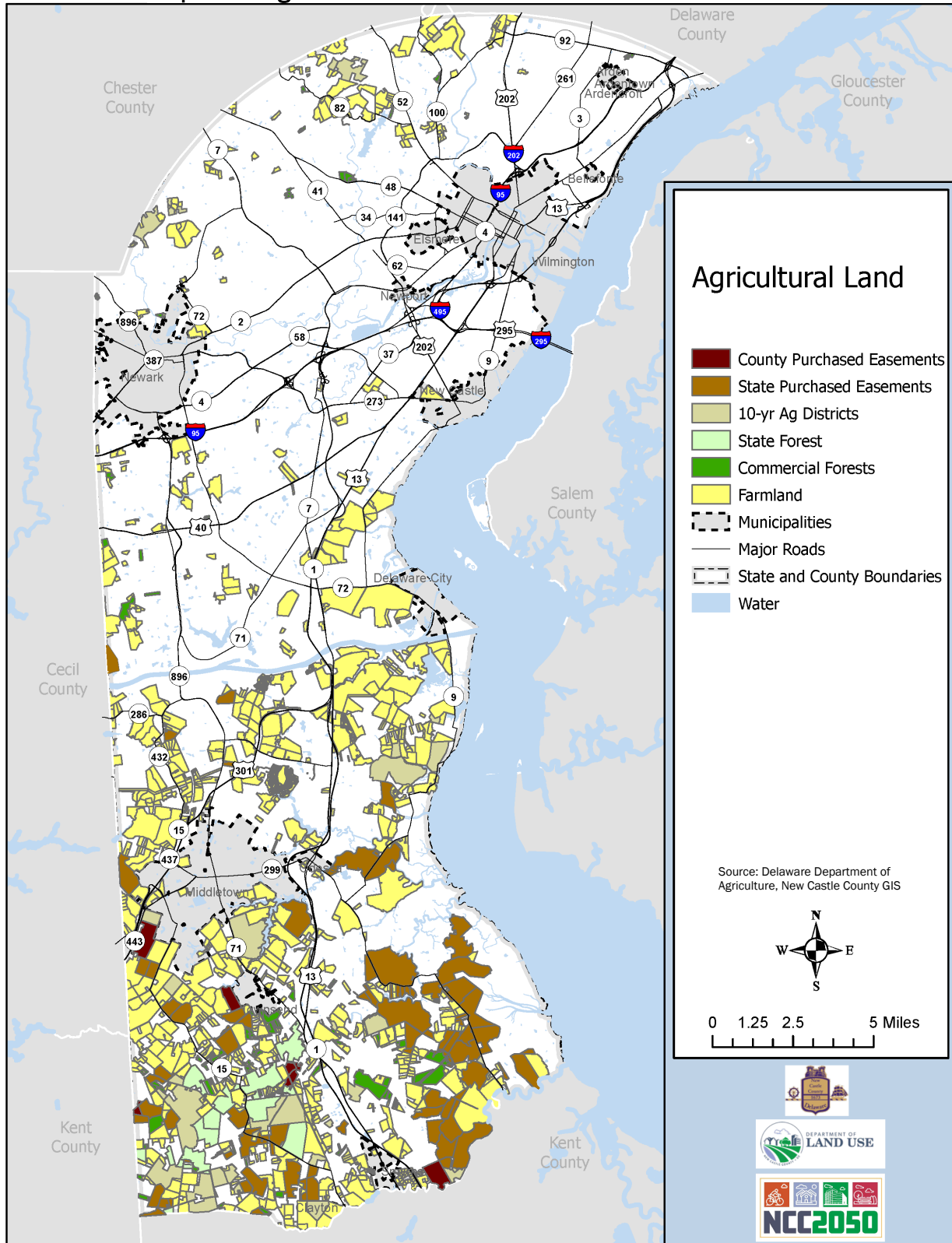
Farmland and Agriculture

Agriculture in New Castle County provides economic benefits, fresh food and food security, historic connections, and a current way of life for many New Castle County residents, especially in southern New Castle County. In 1991, the Delaware State Department of Agriculture began the Agricultural Lands Preservation Program (Aglands). This program allowed property to be placed in two types agreements: an *agricultural preservation district* where landowners agree to use the land for agricultural purposes only or an *agricultural conservation easement* where the owner sells the land development rights and preserves the property permanently.⁷ New Castle County established a volunteer farmland preservation program in 2003 to purchase easements that restrict subdivision of the land, and in 2006 began a partnership with Aglands by donating County funds for farmland preservation on a one-to-one matching basis. All interested landowners apply to the Aglands program, and if not chosen, are then eligible for the County/State match program. Today, New Castle County has approximately 14,100 acres of land in agricultural easements in unincorporated New Castle County, which includes State and County easements.

There are approximately 97,000 acres of prime agricultural soils in unincorporated New Castle County. Per the 2017 United States Agricultural Census, there are 361 farms in New Castle County, which represent about 16% of all farms found in the State. In the same Census, 67,455 acres of land were used for farming, which is about 13% of all farmland in the state of Delaware. Farmland distribution in New Castle County is shown in **Map D-10**. Notably, the majority is located in the southern part of the county. However, numerous sizeable farms also continue to operate in the northern part of the county, including some smaller scale urban farms and gardens. The farms in the northern part of the county tend to be smaller and oriented toward local produce and value-added food products. Many also include community-oriented activities.

⁷ Additional information regarding the Delaware Agricultural Land Preservation Program and Foundation is found at: <https://agriculture.delaware.gov/agland-preservation-planning/the-preservation-program/>

Map D-10: Agricultural Land

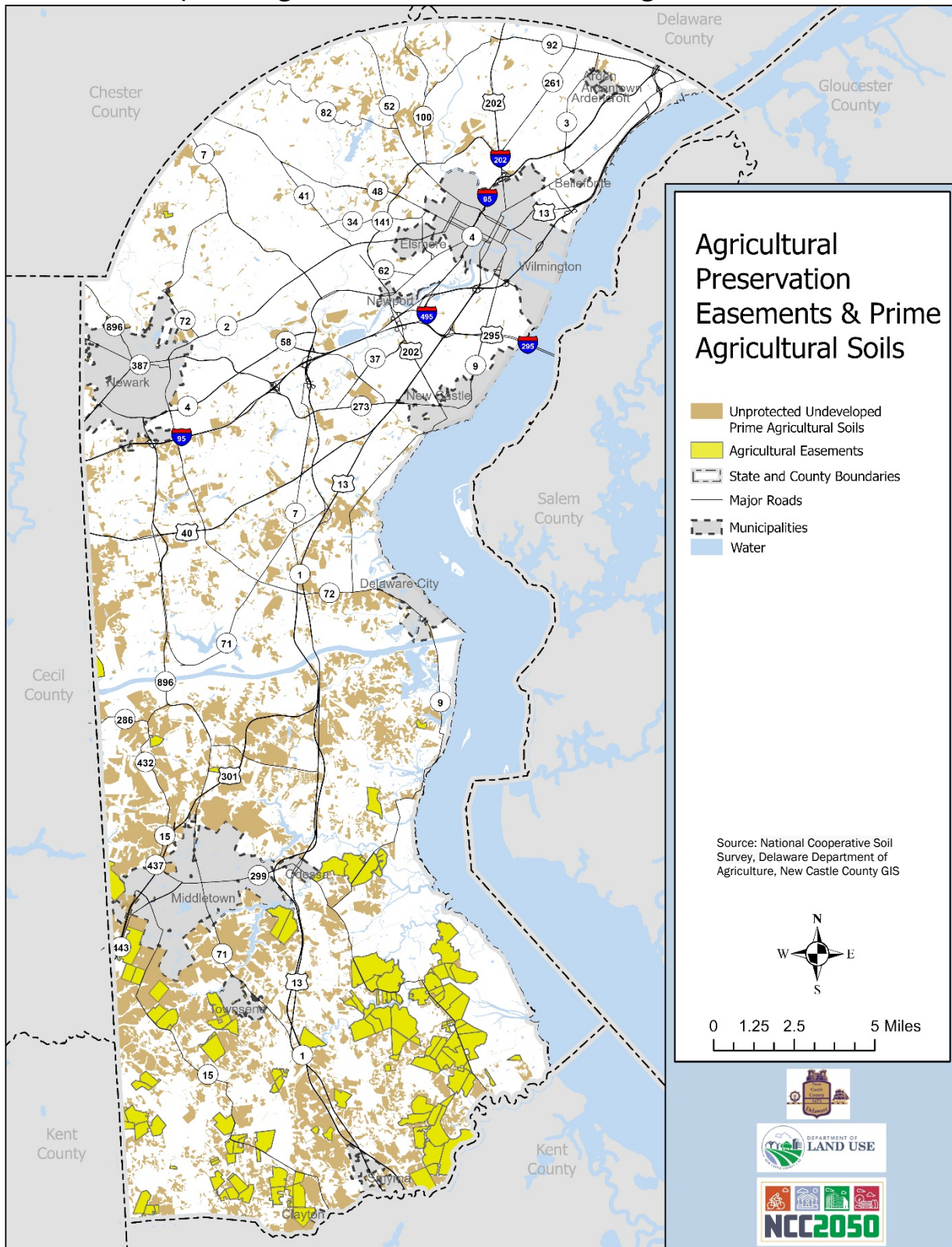


The average farm size is 187 acres and median farm size is 22 acres, meaning most are small, likely family-owned farms, rather than large-scale corporate crop productions. The total income from farm-related sources in New Castle County was \$2,677,000, making farming a valuable part of the economy.

The number of acres in farmland has decreased since 1987, though there was a small increase between 2010 and 2017. **Map D-11** shows the current easements and prime agricultural soils within New Castle County. Of the total acreage of prime agricultural soils, eight percent of prime agricultural soils are protected by Agricultural Easements, 19% fall under Other Protected Land, 30% of prime agricultural soils have been developed, and 43% of prime agricultural soils remain undeveloped and unprotected. The remaining undeveloped and unprotected prime agricultural soil areas should be a core focus for future protections.

As New Castle County moves into the future, our agricultural land will face challenges such as development pressure and sea level rise, among others, and efforts are being made to mitigate those challenges. The land development process should continue to encourage development that does not further diminish agricultural lands, especially in the southern part of the county. Continuing to evaluate and place highly valuable farmland into agricultural easements, protecting it from development in the future, should be a tool the County uses continuously. A second tool to achieve agricultural land preservation is to continue to incentivize growth and higher-density development to areas north of the canal, which may slow demand for housing south of the canal.

Map D-11: Agricultural Easements and Prime Agricultural Soils



Protected/Non-developable Land

The [UDC](#) sets regulations regarding where and what kind of development is permitted and where it cannot occur in New Castle County. Article 5 of the UDC requires developers conduct various analyses to determine the maximum intensity of development of a site, based on existing infrastructure and natural resources within the property. These analyses are designed to ensure that the public health, safety, welfare, and quality of life are protected. One calculation that must be conducted is related to “site resource capacity,” which requires measuring the important natural resources on the site to determine how much of a property is developable. Any development must comply with the protection standards as established in Article 10 of the UDC including those for floodplains, wetlands, steep slopes, rare species, forests, Critical Natural Areas (CNA), Water Resource Protection Areas (WRPA), etc. as described in **Table D-1**.

Table D-2: Existing Resource Protection Levels (Source: New Castle County Unified Development Code, Article 10)

Resource Protection Levels		
Natural Resource	Resource Protection Levels	
	CN, CR, ON, OR, BP, I, HI Zoning Districts ⁸	All Other Zoning Districts
Floodplain/floodway	100%	100%
Wetland	100%	100%
Riparian Buffer	100%	100%
Drainageways	0%	40%
Cockeysville Formation - WRPA	50%	50%
Cockeysville Formation Drainage Area - WRPA	50%	50%
Sinkhole	100%	100%
Wellhead - WRPA Class A	100%	100%
Wellhead – WRPA Class B & C	50%	50%
Recharge Areas - WRPA	50%	50%
Slope or Geologic Sites - CNA	90%	100%
Steep Slopes (< 25%)	100%	100%
Steep Slopes (15-25%)	25%	50%
Rare Species Site – CNA	100%	100%
Forests, Tier 1 - CNA	75%	90%
Forests, Tier 1	60%	80%
Forests, Tier 2 - CNA	50%	70%
Forests, Tier 2	40%	60%
Forests, Tier 3 - CNA	30%	40%
Forests, Tier 3	10%	30%
Other CNA	25%	25%

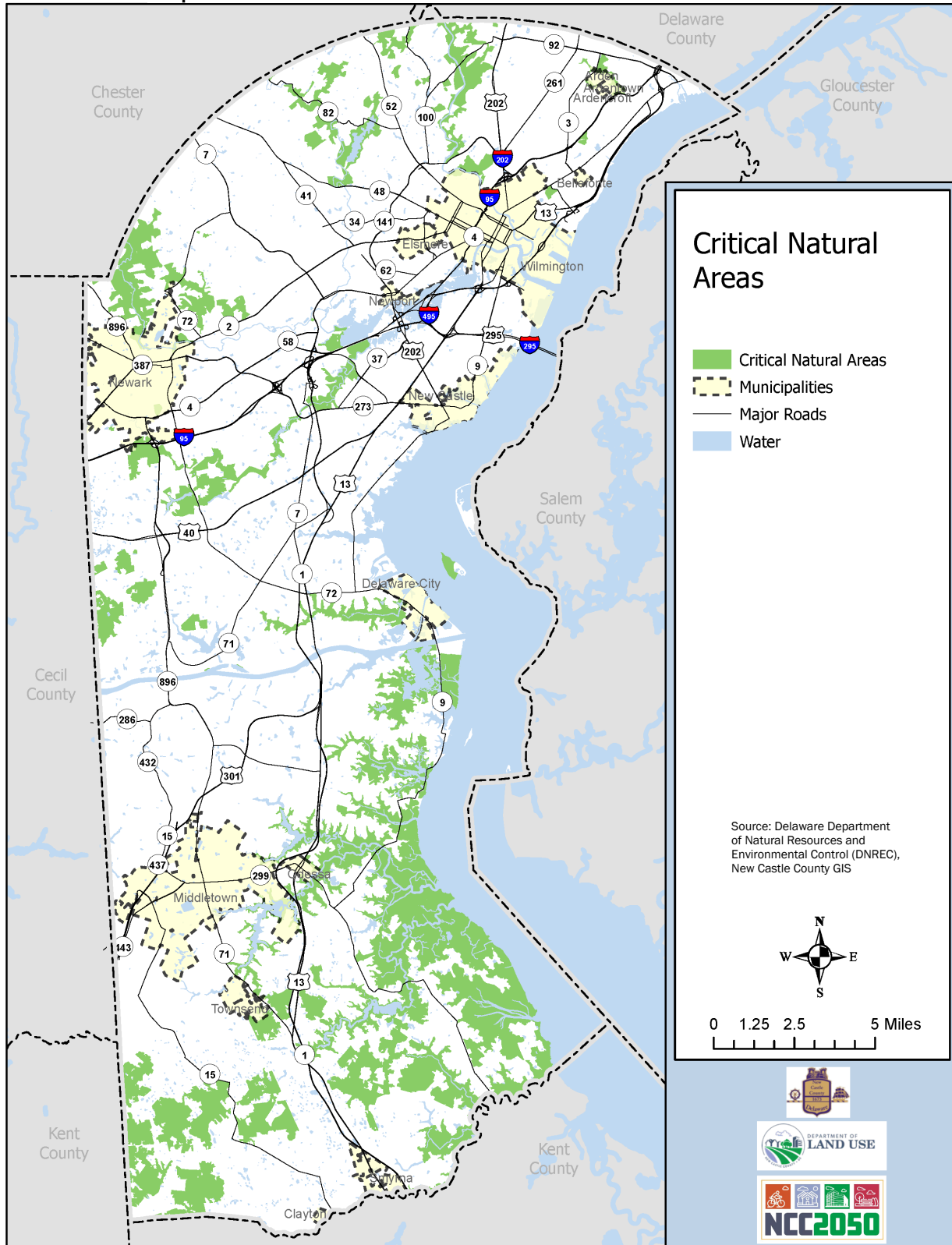
⁸ The UDC Zoning Districts can be found on page 89 “Existing Zoning Districts”

As part of the development plan process, protected resources are protected by a conservation easement to ensure their future viability.

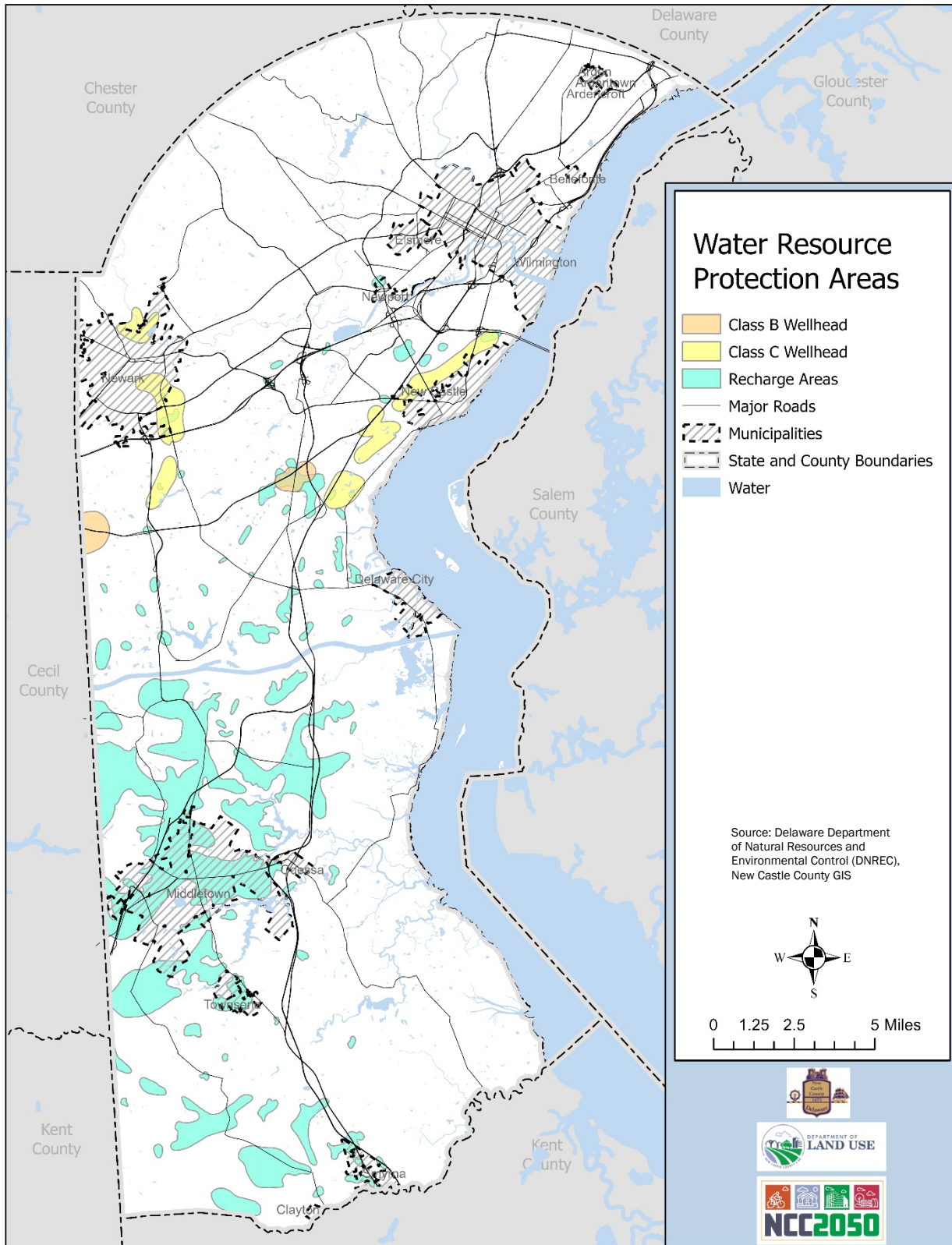
New Castle County established a Land Preservation Task Force in August 2019, to study open space conservation strategies and make planning recommendations to the county. The [Land Preservation Task Force report](#) vision specifically cites critical natural areas as a piece of the unique combination of natural resources found in our region that require conservation and preservation. New Castle County contains several types of natural resources that contribute to the County's environmental health, sustainability, and biodiversity. The protection of these resources is vital to the health and wellbeing of the environment and wellbeing of New Castle County⁹ residents. The UDC offers protections of natural resources such as wetlands, floodplain, Water Resource Protection areas, forests, and critical natural areas. **Map D-12** shows critical natural areas identified in New Castle County and **Map D-13** shows Water Resource Protection areas in New Castle County.

⁹ Critical Natural Areas (CNA) is a term defined in the UDC. CNAs are any site that was listed in the former State natural areas (SRA) inventory, as administered by the State Office of Nature Preserves, Division of Parks, and Recreation, of DNREC.

Map D-12: Critical Natural Areas



Map D-13: Water Resource Protection Areas



Conserving and preserving our natural environment is a key theme for NCC2050. Strategies in this plan will help us to ensure that our environment continues to be a distinguishing feature of our county. It is imperative that we protect our natural resources and ensure that all New Castle County residents have access to clean air and water by coordinating with environmental agencies and other partners to protect water sources and maintain and extend effective sanitary sewer service. Efforts to conserve and protect our natural environment should include consideration of climate change mitigation, resiliency, and adaptation to protect both the natural and built environment from impacts of climate change.

Related Goals, Objectives, and Strategies

2. Goal: The natural environment of the county continues to be a distinguishing characteristic of our community, and the quality of our natural resources—air, water, land, ecosystems (plants and animals)—are continually improving and meeting the needs of present and future generations. Development/redevelopment patterns that consume less unbuilt “greenfields” and resource lands support conservation of our important natural resources.
 - 2.1. Objective: The County shall set an example and evaluate ways to address the impact of development on micro- (e.g. local air quality) and macro-climate conditions (e.g. greenhouse gases) and achievement of State/Federal air quality standards.
 - 2.1.1. Strategy: Engage the full breadth of sectors and communities across the county in a sustainability action agenda/working group. (Refer to Environmental Justice, Climate Change, and Emergency Preparedness/Hazard Mitigation/Resiliency goals and objectives)
 - 2.2. Objective: Improve surface water quality and reduce stormwater runoff from developed lands, with recognition that community revitalization and stream/ecosystem restoration are linked.
 - 2.2.1. Strategy: Eliminate parking minimums for certain smaller buildings and in town centers; establish parking caps.
 - 2.2.2. Strategy: Discourage development in areas that lack water and/or sewer service
 - 2.2.3. Strategy: Conduct watershed-based planning with associated policies and programs, including incentives that focus on improved stormwater management facilities on existing sites, application of ecosystem services, and retrofitting with green stormwater infrastructure.
 - 2.2.4. Strategy: Establish a stormwater utility to fund and optimize stormwater BMP implementation and ongoing maintenance.
 - 2.3. Objective: Improve ecosystem health by reducing sprawl and fragmentation, reconnecting open space, enhancing ecosystems, and applying green stormwater infrastructure strategies (while our economy and population continues to grow).
 - 2.3.1. Strategy: Encourage more compact growth patterns, focusing development in areas that are already served by infrastructure (water, sewer service, road network, etc.)
 - 2.3.2. Strategy: Continue to review and update development and property management code requirements to ensure flexibility in landscaping materials (e.g. native vegetation, pollinator gardens, and ecologically friendly landscaping).
 - 2.3.3. Strategy: Encourage/incentivize use of native species and habitat-oriented landscapes through innovative conservation strategies, including homeowner education and incentive programs (e.g. cost-share program to convert lawn or non-natives to native pollinator gardens and meadows). Consider evaluation of County owned properties for existing native and invasive species.

- 2.3.4. Strategy: Collaborate with DNREC and other organization to further protect Critical Natural Areas and Key Wildlife Habitats (See Appendix I). Offer full support to DNREC in reevaluation of natural areas.
- 2.3.5. Strategy: Promote farming practices that protect the natural environment
- 2.3.6. Strategy: Continue to partner with the State, Federal government, and other nonprofit agencies on agricultural preservation with a targeted approach to select land to be preserved
- 2.3.7. Strategy: Support youth agriculture education programs
- 2.3.8. Strategy: Consider an amendment to the Unified Development Code to address forest fragmentation placing an emphasis on contiguous forest habitats.
- 2.3.9. Strategy: Promote and encourage the participation in the Natural Areas Preservation Program with the DNREC Division of Parks and Recreation, Office of Nature Preserves.
- 2.3.10 Strategy: Work with New Castle County Department of Public Works and DNREC Division of Parks and Recreation's Office of Nature Preserves to assess habitat conditions in public parks for wildlife, invasive species, and signs of degraded habitat such as litter, water pollution, and loss of ecosystem function, then develop strategies to restore or enhance public natural resources.
- 2.4. Objective: Increase tree-canopy to 40%, prioritizing areas with the lowest canopy cover and greatest potential benefits (e.g. urban heat island, flooding, etc.)
 - 2.4.1. Strategy: Establish an incentive-based program with private and non-profit partners to support property owners planting and maintaining healthy tree cover (e.g. subsidize cost of trees for property owners, Pennsylvania Horticultural Society's TreeTender program)
 - 2.4.2 Strategy: Implement effective reforestation regulations that ensure trees are planted with new development and redevelopment and are sustained over the long term. Evaluate effectiveness and opportunities to increase effectiveness, such as through incentives. Consider including a tree-bank/fee-in-lieu of program.
 - 2.4.3. Strategy: Evaluate and incentivize forest protection standards to maximize tree canopies for heat abatement and ensure that high-quality forest habitat is preserved, particularly mature forests and "heritage" trees.
 - 2.4.4. Strategy: Work to advance the Delaware Forest Service's 1 million Trees initiative, Urban and Community Forestry Program, and Tree for Every Delawarean Initiative (TEDI) by coordinating with national, state, and local partners.
- 7. Goal: Farming continues to be a viable way of life and contributes to economic resiliency and healthy communities (for its provision of food access and security, its preservation of farmland, and contribution toward community character).
 - 7.1. Objective: Increase the amount of preserved contiguous farmland and amount of prime soil protected from development.
 - 7.1.1. Strategy: Establish the New Castle County Agricultural Preservation Committee and develop methodology and criteria to prioritize County funding for agricultural land preservation based on best practices and implement the 2020 Land Preservation Task Force Report recommendations.
 - 7.1.2. Strategy: Support agricultural economic development opportunities such as farm to table and urban agriculture connecting local customers to farmers directly.

- 7.1.3 Strategy: Establish/revise land use regulations to permit farmers to not only develop their property but retain a portion required for passive open space as farmland under an agricultural preservation easement.

See Also:

Recreation and Open Space Element, Goal 1

Climate Change and Hazard Mitigation Element, Goal 13

Utilities, Water, and Sewer, Goal 3

An aerial photograph of a park area, showing a winding path, trees, and open spaces. The image is overlaid with a semi-transparent green filter.

ELEMENT E

Open Space & Recreation

E. Open Space and Recreation Element

Element Defined

When residents hear the term open space it conjures up different meanings for each individual. Open space encompasses undeveloped land or land with very limited infrastructure/development. Open space may include parks, greenways and natural places such as forests, upland habitat, soils, streams, floodplains, and/or wetlands This land is targeted for preservation to accomplish a number of important goals including agricultural, historical and environmental preservation as well as for recreational opportunities.

In the context of this Comprehensive Plan, the term Protected Open Space refers to privately or publicly held land protected from future development. This land has been targeted for preservation to accomplish several important goals including agricultural, historical and environmental preservation as well as for recreational opportunities. Important tools in open space preservation include conservation/preservation easements (agricultural & environmental) as well as open space areas associated with residential development plans (environmental, historical, and recreational).



Figure E-1: Delcastle Recreational Park

“Conservation of open space is critical to preserving biodiversity and healthy, resilient ecosystems. It provides habitat for a wide range of plants, animals, fungi, and beneficial microorganisms in the soil. Open space also influences human health and well-being, contributing to clean waterways, healthy air quality, and carbon sequestration that helps mitigate climate change. Once open space is developed into shopping centers, parking lots, highways, and subdivisions, it is generally gone for good. The U.S. Forest Service estimates that approximately 6,000 acres of open space are converted to other uses every day.¹ Therefore, the actions we take (or don’t take) now in terms of valuing and protecting open space are destined to have long-lasting implications far into the future.”

Open space protects a community's natural green infrastructure, providing places for recreation, preserving important environmental and ecological functions, and enhancing quality of life. It also benefits public health by reducing exposure to pollution and improving quality of life by greening urban areas, planting trees, and converting appropriate land to greenfields. Protecting buffer areas and wetlands have numerous benefits and access to healthy waters/clean waters (rivers, streams) vibrant economy is important to the vibrancy of the community.

Having access to natural lands, for active recreation like ballfields and kayaking as well as passive recreation, such as trails and birdwatching, are key to a robust and thriving community. Many of the uses are low or no cost to community members, like walking, jogging, or utilizing playground equipment, and provide numerous health benefits by promoting healthy lifestyles and encouraging a love of nature. Ensuring that all communities have equal access to open space and recreation is key, especially in more urbanized areas where there are fewer trees and parks. Equity and environmental justice are important

¹ U.S. Forestry Service <https://www.fs.usda.gov/science-technology/open-space-conservation>

components of open space and recreation. Open space and parkland also provide opportunities toward overall sustainability for the community. Effective planning and design support stormwater management, heat island mitigation, habitat protection and expansion, and other resiliency strategies.

What We Heard

During NCC2050's development, a public survey was released asking a variety of questions regarding priorities. The survey asked respondents "What are the top three (3) areas you see the greatest potential or opportunity for New Castle County?" The question was answered by 242 people and "Access to Parks, Trails, & Open Space" was selected as the greatest potential or opportunity within the county. Similarly, New Castle County residents frequently mentioned open space and recreation during the NCC2050 process. Here is what we heard:

"Open spaces mean a lot of different things depending on what kind of community you live in. We have to have conversations around open spaces in our smaller communities because for communities in Greenville or other places, open spaces are going to be different for that area than maybe between Rogers Road and Cherry Lane. So, in some of our communities, we have open spaces, but I think they need to be cleaned up and enhanced, and I would hope that is part of the conversation as well. Sometimes when we look at the bigger picture, we do not see the details so I would think with smaller communities this would be the detail of open space."

—Dora Williams; Community Representative, Route 9 Monitoring

"Utilize existing open spaces (city and state parks, vacant lots) in urban and suburban locations as a place to engage youth and teenagers, in the form of green schoolyards and outdoor learning environments to combat plant blindness/ nature deficit disorder."

– Deep Dive Session 1: Open Space, Conservation, Recreation, Environment Public Participant

"Promote a convenient, but active lifestyle by increasing park accessibility."

– Goal established by the New Castle County Youth Planning Board (YPB)

New Castle County Today

Existing Open Space and Recreation Analysis

Within the unincorporated and incorporated areas of New Castle County, there is a wide dispersion of recreational facilities and open space. **Map E-1** shows the total distribution of public lands and open space within the County today. County public land (shown in light green) is significantly concentrated above the canal, while Federal, State and Private conservation-oriented land is more abundant in the southern part of the county. South of the C&D Canal, the majority of open space is referred to as "private open space" due to its association with subdivisions and the fact that it may not be readily accessible for use by the public.

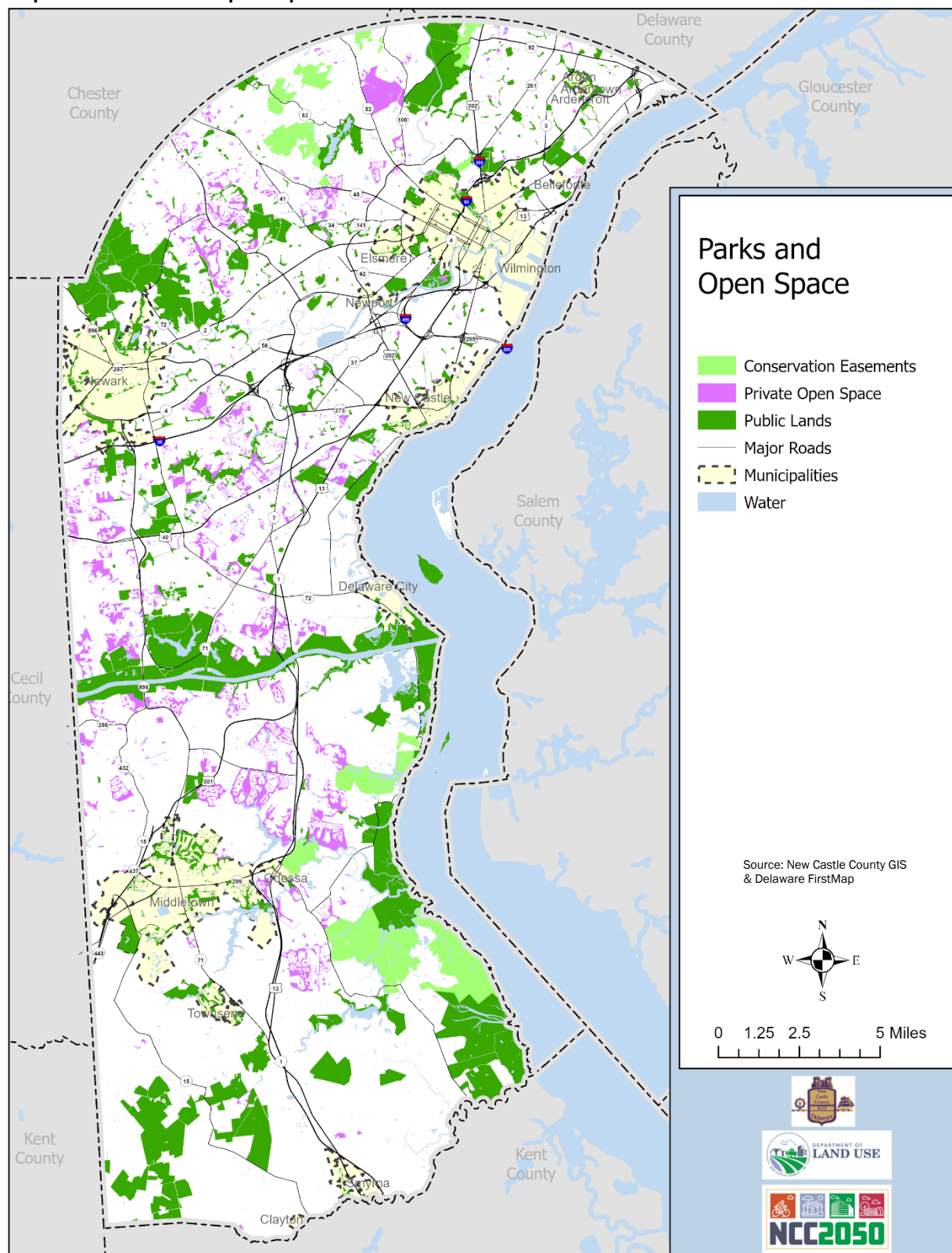
There are approximately 52,000 acres of parks and open space in New Castle County (approximately 48,000 acres in unincorporated New Castle County). Parks and open space include public lands (owned by federal, state, county or municipalities) and private open space (open space associated with development). The type of open space by percentage is shown in **Table E-1**. Over the last two decades, New Castle County has averaged approximately 170 acres of open space being added to preserved status per year because of new subdivisions. Open space created through the land development is provisioned for passive or active recreation (useable open space).² The Unified Development Code requires environmental resources be protected under conservation easements during the land development process.³ This does not include agricultural or private conservation easements, are also important when looking at land preservation goals, however not examined the context of recreation and active open space. Based on these numbers, there are 0.09 acres per person (3,920.4 ft²) in New Castle County. The World Health Organization recommends that there be at least 50m² of green space per person, which is one of many service standards defined in the literature. The County does not have an official policy for quantitative service standard for open space, but for purposes of general benchmarking, green space available countywide is well ahead of the WHO recommendation. A more localized evaluation of green space availability is recommended to better understand accessibility and level of service to local communities and sub-populations.

Expanding our public parkland, private open space, conservation easement, and other creative mechanisms and partnerships will continue to help attain the NCC2050 future goal of 7,100 acres of protected open space. It is critical that ensuring the quality of the existing protected open space and parks is also maintained and enhanced to realize the full benefits to the community.

² In subdivisions of thirty (30) dwelling units or more, an area or areas of useable open space shall be provided at a rate of one (1) acre per one hundred (100) dwellings units. (Unified Development Code Section 40.20.225.B.5)

³ Unified Development Code 40.05.050.E

Map E-1: Parks and Open Space



Map E-2: Parks and Trails

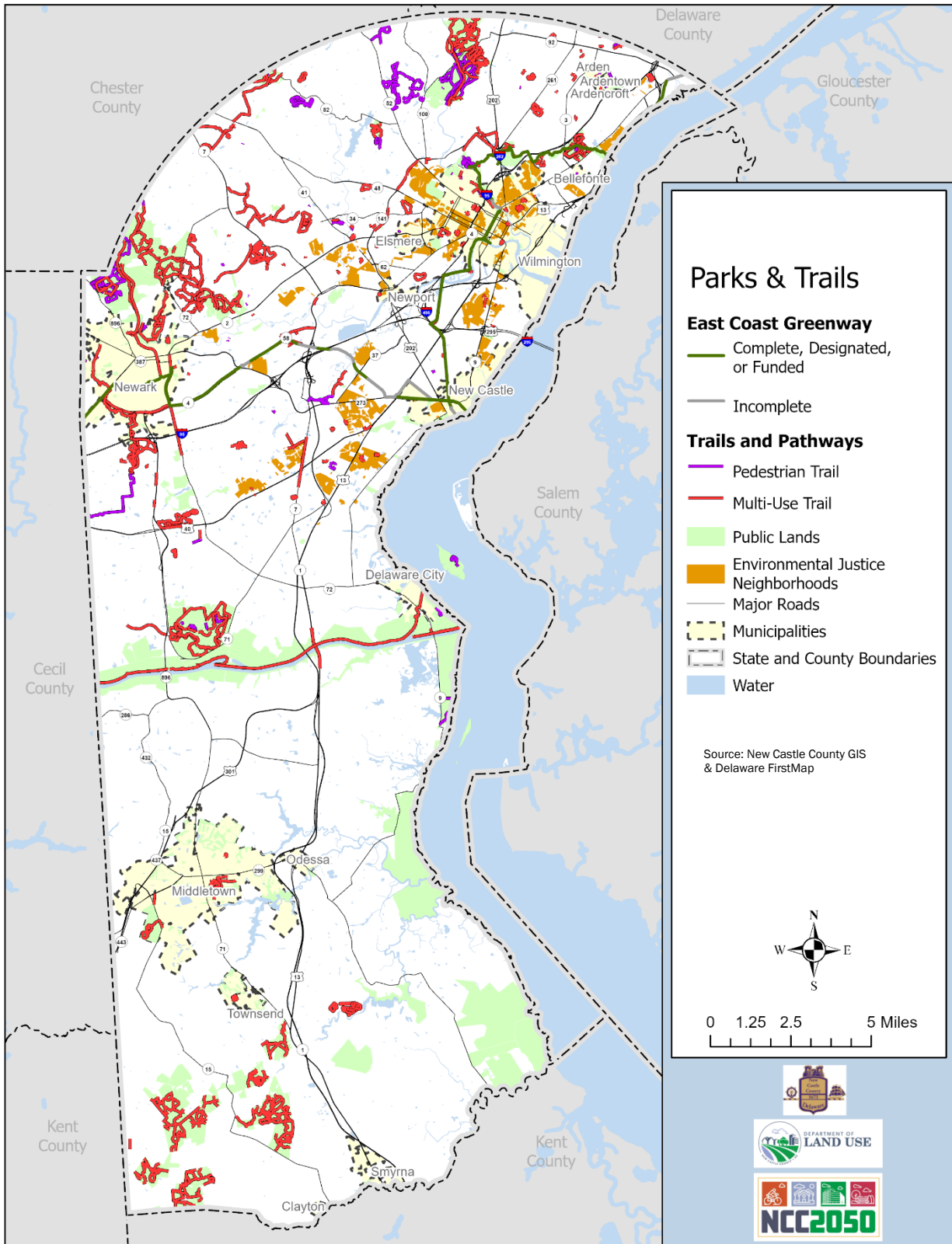


Table E-1: Open Space by Type in New Castle County (includes incorporated and unincorporated areas)

Type	Acres	Percentage
Federal	6,298	12%
State	23,543	46%
County	6,959	13%
Municipal	4,366	8%
Private Open Space	10,570	20%
Source: New Castle County GIS		

Looking specifically at active and passive recreation distribution throughout the County, New Castle County estimates that approximately 30% of the acreage in County owned parks is active recreation and 70% of the acreage is passive recreation. **Map E-2** shows County parks and trails, including the East Coast Greenway—a 3,000-mile rail trail linking the major cities of the Atlantic coast from Calais, Maine, to Key West, Florida—that traverses the County both via trails and on-road facilities. Again, this map demonstrates that there are areas with a good distribution of parks and outdoor amenities, and these features are found throughout the County; however, continuing to make sure that there are County-provided open space and recreation opportunities for all residents will be a key strategy moving forward.

The Delaware Division of Parks and Recreation published the most recent [Statewide Comprehensive Outdoor Recreation Plan](#) (SCORP) in 2018 which included an inventory of outdoor recreation facilities throughout the state. (Regions 1 and 2 cover New Castle County.) Resulting from the previous SCORP, the Division maintains an [interactive web application](#) which should be used to locate outdoor recreation facilities throughout the state.

Increasing the percentage of residents that have access to recreation and open spaces without a car is an objective of NCC2050. Access to parks and open space is an important part of overall community health and wellness. New Castle County has many parks that are available to the public. Development patterns and the transportation network impacts a community's ability to safely and easily access parks and open space. Based on an analysis developed by the Delaware Department of Transportation, approximately 55% of households within the County currently have easy and safe access to parks and open space (one mile or less with a low level of traffic stress). Approximately 75% of housing units within New Castle County are located within one mile of parks and open space. A portion of these households do not have safe access to these parks and open spaces (higher level of traffic stress). See **Figure E-2** to view how this was mapped.

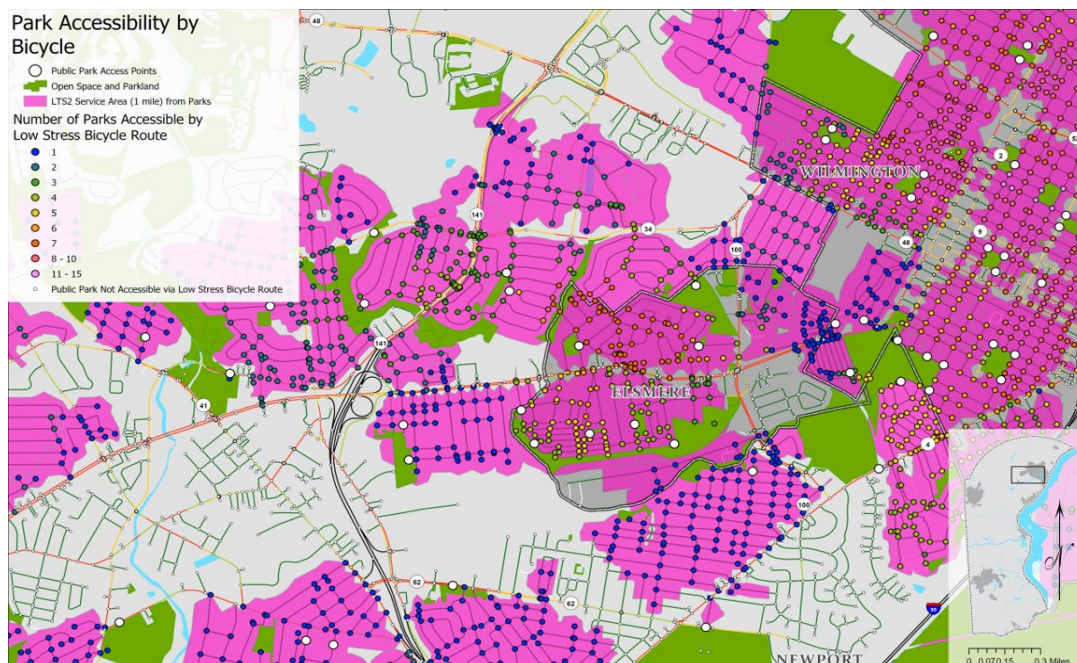


Figure E-2: Park Accessibility by Bicycle

Parks and Recreation in Unincorporated New Castle County

Park Planning, Acquisition, and Development

Over the life of the 2012 Comprehensive Plan, New Castle County has been very proactive in planning for both open space and recreation uses. In 2017, the New Castle County Department of Public Works completed an update to its 1984 *Long-Range Park Acquisition and Development Plan*. Within the plan, NCC analyzed the status of parks and recreation facilities and future need. Utilizing the National Recreational and Park Association (NRPA) definitions for recreational facilities and parks, the study identified four types of parks within New Castle County and utilized the NRPA's standards for number of facilities per population and travel time. See **Table E-1** for the existing conditions of County-owned parks and recreation facilities. The NRPA defined each of these facility types, as shown in **Table E-2**.

Table E-2: NRPA Facility Type Definitions

Facility Type	Acreage per Person	Distance from Home	Acreage Size	Facility Types
Neighborhood Parks	at least 3.2 acres per 1,000 persons	within a 1/4–1/2 mile radius	1/2 acre minimum to 30 acres in size (average: 15.25 acres)	Vary based on neighborhood need and available space
District Parks	2.3 acres per 1,000 persons	within a 1–2-mile radius	25 – 75 acres in size (average: 50 acres)	Active and passive recreation resources with diversified recreation
Regional Parks	3.8 acres per 1,000 persons	within a 1/2-hour drive	75-200 acres in size (average: 137.5 acres)	Meet the recreational needs of all County residents including specialized facilities and/or the preservation of lands of unique environmental quality
Reservation Parks	4.2 acres per 1,000 persons	within a 1/2-hour drive	200-800 acres in size (average: 500 acres)	Picnicking, bicycling, trails, and other passive recreational uses along with athletic fields and court games for organized and free-play youth and adult sports activities
Source: 2017 Long-Range Park Acquisition and Development Plan, pages 8-10				

The national standards were used to analyze existing conditions within the plan. New Castle County’s Department of Public Works found that there is a need for new parks, particularly smaller parks with neighborhood access. An updated plan containing more robust and nuanced analysis, factoring in non-motorized access, equity, and other measures of need and opportunities is recommended.

Most significantly, there is the need for smaller, community facilities with 14 new neighborhood parks and three new district parks recommended. Specifically, the plan identifies the following Planning Districts (PD), as shown in the Map in Section A of this plan, as needing additional facilities:

- **Piedmont PD:** About 1 1/2 additional Neighborhood Parks and about 1/3 of an additional District Park.
- **New Castle PD:** About 2 additional Neighborhood Parks and about 1/2 of an additional District Park.
- **Red Lion PD:** About 1/2 of an additional Neighborhood Park.
- **Central Pencader PD:** About 2 1/2 additional Neighborhood Parks and about 1/2 of an additional District Park.
- **MOT PD:** About 8 additional Neighborhood Parks and about 1 3/4 additional District Parks.

As defined, both facility types should be located within a 2-mile radius from the home. As heard in many of the public meetings, creating safe, walkable linkages between neighborhoods and neighborhood/district parks is a critical need within NCC.

Concurrently, the County assembled a New Castle County Parks Task Force comprised of community members and stakeholders. From this taskforce, the *Final Report of the New Castle County Parks Task Force* was produced. Found within the report are 15 priority recommendations. The recommendations were prioritized by a timeline ranging from immediate to long-term. The recommendations included organizational structure suggestions for the County, specific park projects to commence, key developments that should include recreation and open space facilities, and key equitable community identification to keep an open and ongoing dialogue.

Map E-3: New Castle County Planning Districts

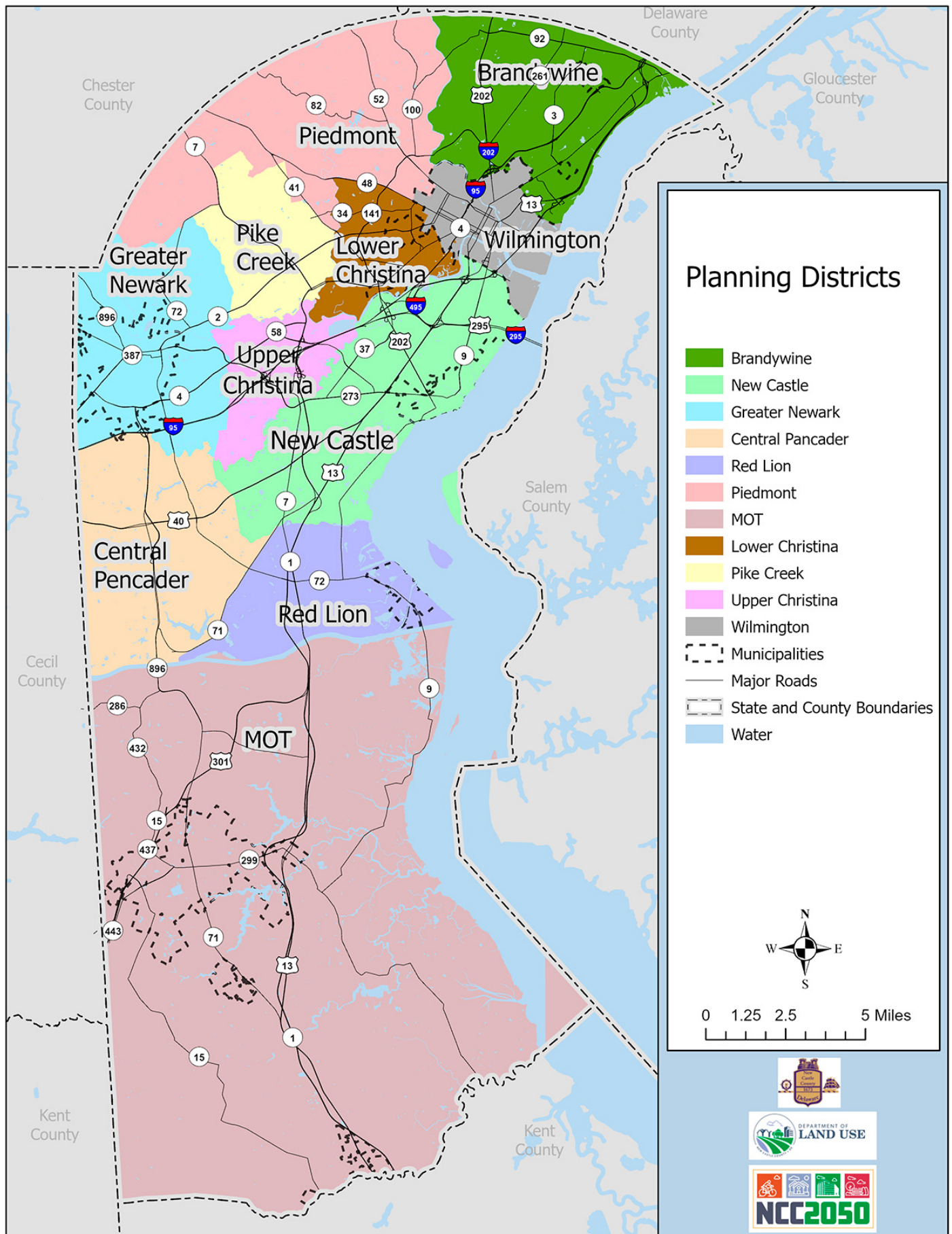




Figure E-3 Aerial View of Woodshaven Kruse Park

Currently, New Castle County has a priority pathways list, created in 2019, for key linkages between communities. Many of these priorities are planned to connect major trail networks and transportation facilities. Improving smaller neighborhood paths to link communities is an extension of environmental justice for communities that are underrepresented, or where facilities are inadequate for the needs of the community. While pedestrian and bicycle linkages are discussed in the [Mobility Element](#), the following priority pathway gaps specifically address linkages to open space and recreation:

1. **Commons Boulevard**

Provides a connection from the Markel Trail at the I-295 tunnel to the Churchmans Road Pathway, thereby providing direct pathway access for the numerous residential, commercial, office, and institutional uses in-between.

2. **Augustine Cut Off**

Provides a connection from the greater Blue Ball/US 202 Pathway system, located in the County, to the east side of the Trolley Square neighborhood, as well as the Brandywine Park trail network, both located in the City of Wilmington. Links the two largest population centers in the State, Wilmington and Brandywine Hundred, with a pathway.

3. Newport Connector

A connection from the Wilmington to New Castle Pathway near the north side of the Christina River Bridge, routing beneath I-95 and along Amtrak right-of-way, to the Town of Newport's industrial park. This potential pathway alignment was identified on DelDOT's 2014 Newark-to-Wilmington Pathway Study.

4. Newark to Castle Trail

Connects the City of Newark and the Castle Trail along the C&D Canal. It was identified in DelDOT's 2014 Newark-to-Wilmington Pathway Study. Alternative alignments may also be feasible.

5. North St. Georges

Short connection through Army Corps' land from Castle Trail to DelDOT ROW that will provide direct access to North St. Georges' commercial area.

6. Mill Creek Greenway

Segment 1 – Mendenhall Village entrance to Stoney Batter Road and Segment 2 – Stoney Batter Road to Delcastle Park pathway system

7. Churchman's Crossing Pathway System

A plan to connect the Churchman's Crossing area of the County, which includes a train station, with a network of shared-use pathways. These potential pathway alignments were identified on DelDOT's 2014 Newark-to-Wilmington Pathway Study.

8. New Castle to Delaware City

A plan, originating from the Trustees of the New Castle Common and Public Works, to connect the City of New Castle to Delaware City with a pathway utilizing both SR 9 and alignments through privately-held parcels. When completed, this pathway would constitute an 8-mile portion of a 40-mile continuous series of pathways connecting the City of Newark and Chesapeake City to the City of Wilmington. May be presented to Delaware Bike Council (DBC) for future feasibility study grant funding.

9. Middletown to South St. Georges

This pathway, which leverages previous pathway implementation along its alignment, will connect the northside of Middletown at North Broad Street to South St. Georges at the St. Georges Bridge (US 13), which has the only dedicated bicycle/pedestrian crossing of the C&D Canal. It will generally serve as the main north-south pathway spine for the central part of southern New Castle County north of Middletown.

10. South Bank C&D Canal

This pathway would be placed generally along the Tier 1 road (lowest tier) directly along the South Bank of the C&D Canal from the Delaware/Maryland Stateline to South St. Georges. A western extension into Maryland could bring the pathway to South Chesapeake City, while an eastern extension beyond South St. Georges could bring the pathway to Biggs Lane and back to South St. George along Biggs Lane. Additional connections along the South Bank of the C&D Canal to various existing and planned neighborhoods, roadways, trailheads, and protected open space are also feasible.

11. Claymont and Governor Printz Pathway

A plan to implement the far northern portion of the East Coast Greenway in Delaware as a separated pathway and/or cycle-track facility. Governor Printz Boulevard is currently a 4-lane

divided highway that is paralleled by both Philadelphia Pike and I-495; hence its current configuration is well over-capacity for projected traffic volumes. A road diet resulting in a reallocation of space within the Governor Printz right-of-way to implement a shared-use pathway from Bellevue State Park at Cauffiel Parkway to the existing Claymont Train Station would be part of the conceptual plan. The existing Claymont Train Station is slated to move northward to a site formerly occupied by the Claymont Steel Mill. The conceptual plan will analyze pathway routing from the existing station location to the new station location and through to the Pennsylvania state line along Philadelphia Pike, which is where the Pennsylvania portion of the East Coast Greenway begins. Coordination with the North Claymont Area Master Plan and potential development activity will be necessary.

12. Pike Creek - Three Little Bakers Golf Course Area

Various pathways through future open space areas that may utilize, in part, existing golf cart pathways and other connecting alignments.

Many of these pathways will connect key community linkages but as priorities are identified, equity should continue to be at the forefront of these conversations not only for pathway linkages but for the entire Open Space and Recreation element.

Land Preservation

As development continues in New Castle County, there is a need for more intentional land preservation. Beginning in 2019, the County convened a Land Preservation Task Force to recommend goals and strategies to increase the County's role in identification, protection and management of certain land uses for the County and its residents. One goal of the [resulting plan](#) was: Establish a structured and sustainable open space preservation program. Recommendations to support this goal included development of an Open Space Preservation Council and Land Preservation Master Plan, updating the County Park Master Plan, evaluation of County regulations and possibly strengthen regulations to preserve passive open space, and hiring a land preservation specialist/planner. These efforts would formalize the preservation of open space within County land use planning and policies to work toward the overall goal to preserve a minimum of 7,100 acres of land as protected open space in the county for open space in 30 years. [Element D. Conservation](#), includes additional information and maps of areas important as part of a land preservation strategy including *Map D-12* Critical Natural Areas.⁴

Effective planning related to recreation and open space influences nearly all aspects of life in our county. Recreation facilities, whether active or passive, are key to mental and physical health. Open space and parkland facilities support environmental conservation efforts, stormwater management, heat island mitigation, habitat protection and expansion, and resiliency and adaptation strategies. Safe and comfortable access to natural lands and recreational resources should be available to all residents to encourage healthy lifestyles and an appreciation of nature.

Related Goals, Objectives, and Strategies

1. Goal: New Castle County has a connected, well-maintained and well-loved network of open space (natural lands and recreational resources) that benefits all residents.
 - 1.1. Objective: Preserve at least a minimum of 7,100 acres land as protected open space in the county, within 30 years.

⁴ Critical Natural Areas are included in the UDC with protections and are defined as any site listed in the State natural areas inventory as administered by the State Office of Nature Preserves, Division of Parks and Recreation, DNREC.

- 1.1.1. Strategy: Establish the New Castle County Open Space Advisory Board in partnership with the state Open Space Preservation Council and implement the 2020 Land Preservation Task Force Report recommendations, including funding sources and public private partnerships.
- 1.1.2. Strategy: Develop a Land Preservation and Stewardship Master Plan with weighted project selection criteria.
- 1.1.3. Strategy: Develop policies and initiatives that coordinate/integrate open space across adjacent developments.
- 1.1.4. Strategy: Strategically create open space in developed areas to equitably increase green infrastructure, resiliency, and access to open space/recreation, such as the south Wilmington wetland park. Place emphasis on greening in underserved areas and coordinate with regional planning initiatives, such as the Brandywine-Struble Greenway Plan, Delaware River Program, Christina and Brandywine River Remediation, Restoration and Resilience Plan, and Chesapeake Bay Program.
- 1.1.5. Strategy: Link agricultural land preservation, open space, and land use strategies, including strategic programs that leverage diverse partnerships to preserve open space, resource and agricultural lands. For example: Where appropriate, permit passive open space, which is required by residential land development plans, to be preserved by a permanent agricultural land preservation easement and leased for agricultural use.
- 1.1.6. Strategy: Consider adding a preservation zoning category (greater than 5 acre minimum lot size).
- 1.2. Objective: Increase the percentage of residents that have safe, comfortable access (within 1 mile using a low-stress, accessible route) to a variety of recreational opportunities and natural spaces without the requirement of a personal automobile.
 - 1.2.1. Strategy: Implement the NCC Bike Plan, track progress, and keep the plan up to date. Coordinate with local, regional and state initiatives, such as Blueprint for a Bicycle-friendly Delaware, the Brandywine-Struble Greenway Plan, East Coast Greenway Plan, Connecting Communities Plan, and Mill Creek Neighbors for Safer Pathways.
 - 1.2.2. Strategy: Ensure safe, comfortable non-motorized facilities, particularly key connections in the network, are included in development and redevelopment plans.
 - 1.2.3. Strategy: Develop a countywide long-range Parks Master Plan that includes assessment of multi-modal and equitable access to parks and clean water recreational opportunities, as well as monitoring and tracking progress.
 - 1.2.4. Strategy: Identify communities, especially in dense residential areas, that have inadequate access to open space and recreational opportunities and prioritize preservation and design of open space areas adjacent to these communities. The County should use the vacant property list to evaluate park expansions in Environmental Justice Communities.
 - 1.2.5. Strategy: Ensure that existing parks and open space are sufficient to serve the population through updating equipment, maintaining existing infrastructure, and ensuring a safe and clean park experience for all.

See Also:

Mobility, Goal 8 & 11

Community Planning and Design, Goal 10



ELEMENT F

Mobility

F. Mobility Element

Element Defined

The transportation system impacts the day-to-day life of residents in a variety of ways, from commuting to and from work to recreational opportunities. New Castle County residents, regardless of income, age, ability, or race, rightly expect safe and efficient access to a multimodal transportation system that supports existing forms of transportation including automotive, pedestrian, biking, and transit and is adaptable to accommodate future innovations, such as autonomous vehicles and renewable energy. The system should equitably and reliably connect residents to occupational, housing, shopping, healthcare, educational, and religious opportunities. Reducing single occupancy vehicle trips will help alleviate congestion while also reducing carbon emissions, resulting in an overall healthier New Castle County.

Transportation needs and demands are constantly changing. Transportation planning is looking forward and working to determine what transportation will look like decades from now. Funding priorities have been focused on roadway improvements, but projects related to other modes are gaining more attention. In recent years, e-commerce and the associated delivery needs have increased, putting more delivery vehicles on the roads and requiring more curb space for pickups and drop-offs. Related to e-commerce, warehousing has emerged as a new industry in our region, which will have implications on our transportation system and our land use policies. Additionally, technology in all aspects of transportation—from electric vehicles to smart traffic signals to automated and connected vehicles—will continue to change, and our transportation and land use policies will have to be adaptable to ensure we take advantage of the benefits of these technologies while being proactive to avoid negative impacts on New Castle County.

Transportation networks are complex, connected systems that require coordination among many governments, agencies, and organizations. While New Castle County is empowered to regulate land use, the Delaware Department of Transportation (DelDOT) regulates and maintains the transportation system. The federal government further charges the Wilmington Area Planning Council (WILMAPCO), the Metropolitan Planning Organization for New Castle County and Cecil County (MD), to coordinate transportation investments for the region based on federal policy, local input, technical analysis, and best practices. At various points within the planning and project development processes, the County, DelDOT, WILMAPCO and other regulatory agencies must be involved and collaborate. The planning documents and funding priorities at all levels must be coordinated to ensure that all stakeholders are working in the same direction to achieve the same goals.

What We Heard

New Castle County residents frequently mentioned transportation during the NCC2050 process, including comments such as:

“I’d like to see more sidewalks, bike paths/lanes, and walkable areas!” – Public Participant, NCC2050 Public Forum #1, 11/18/20

“There is a deep connection between density and transit. You can’t get transit without high density. Once you have density, it becomes financially practical for transit companies to provide services. If not, you have auto-dependent communities. This is the danger. If everything is low density, as we have mostly developed to date, transportation discussions are all about automobile traffic and congestion.”

– James Wilson, Bike Delaware Executive Director, 3/17/21 Deep Dive Session on Infrastructure

“There are many benefits to mixed-use design. Walkability and bikeability are important, but there are also safety and congestion components. Shortening trips and keeping trips to the interior of the development helps with these aspects. Interconnections are good, so that you have choices for pedestrians and bikes. Sometimes people might want to use transit but don’t have a good path to get to the station, so these connections are good since eliminating barriers opens up options to more people.” – Marc Cote, fmr. DelDOT Director of Planning, 3/17/21 Deep Dive Session on Infrastructure

New Castle County Today

The following maps and graphics illustrate the current conditions of New Castle County’s transportation and mobility network. They lay the foundation for demonstrating why mobility matters, and the evaluation of these current conditions helped to shape the Goals, Objectives, and Strategies of NCC2050.

Existing Modal Analysis

According to 2019 American Community Survey data, nearly 90% of New Castle County residents traveled to work by car: 79.7% drove alone and 8.5% carpooled. Nearly four percent used transit and 2.5% walked to work. Bike and other modes of travel made up just over 1% of trips, and 4.5% of people worked from home. (See **Figure F-1**; Please note: percentages are rounded to the nearest percent.)

The COVID-19 Pandemic has had a dramatic impact on New Castle County resulting in an increase in the number of residents working from home and a corresponding decrease in the number of people commuting to work. While more people are expected to either permanently work from home or in a hybrid work from home/in-person arrangement, thereby reducing other “travel modes to work,” we will not know the true impact of the pandemic for several years.

Travel Mode to Work (2019)

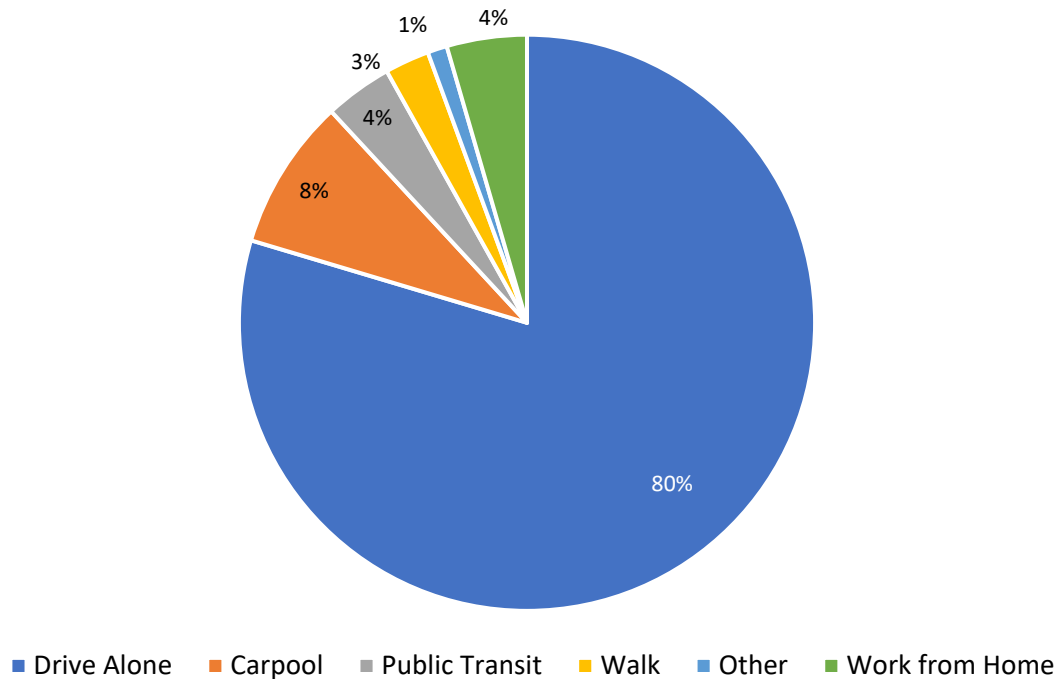


Figure F-1: Travel Mode to Work; Source: 2019 American Community Survey

Roadways

Roadways connect homes, workplaces, stores, recreation sites, and more in New Castle County. Ensuring that the infrastructure not only meets today's needs but also future needs is critical. Today, New Castle County contains approximately 5,700 lane miles of roadway, with 90% of those miles owned by the Delaware Department of Transportation (DelDOT). Knowing that DelDOT is the owner of many of the transportation routes available to residents and visitors, New Castle County continues to maintain a close relationship with DelDOT.

In addition to roads, there are 875 bridges and 850 traffic signals in the County. **Figure F-2** shows the percentage of each type of roadway by classification found in New Castle County. Interstates only make up 4% of the roadway network, but they represent almost 25% of vehicle miles traveled by people traveling within the County.

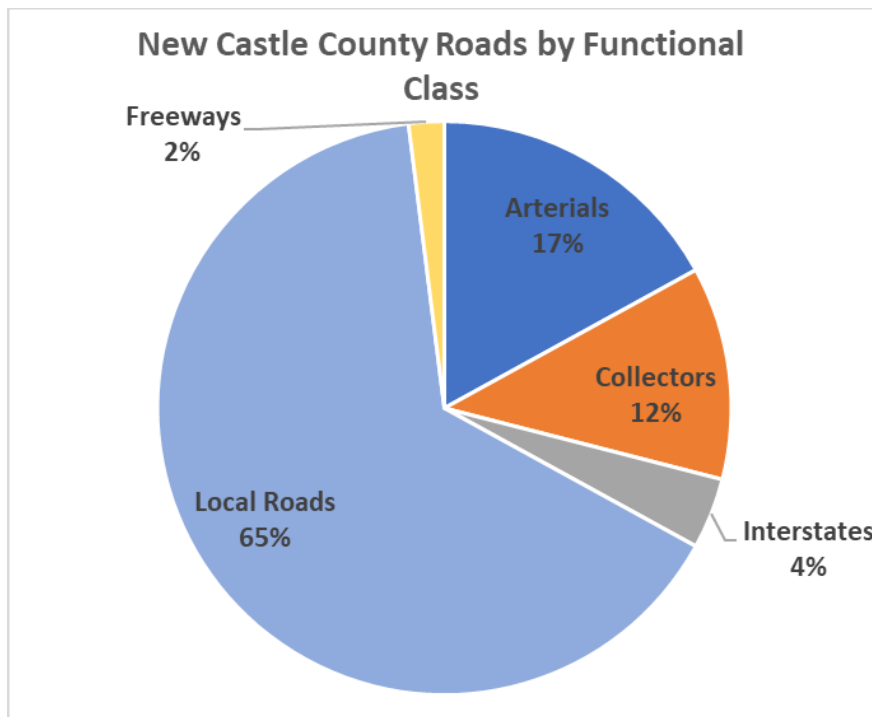
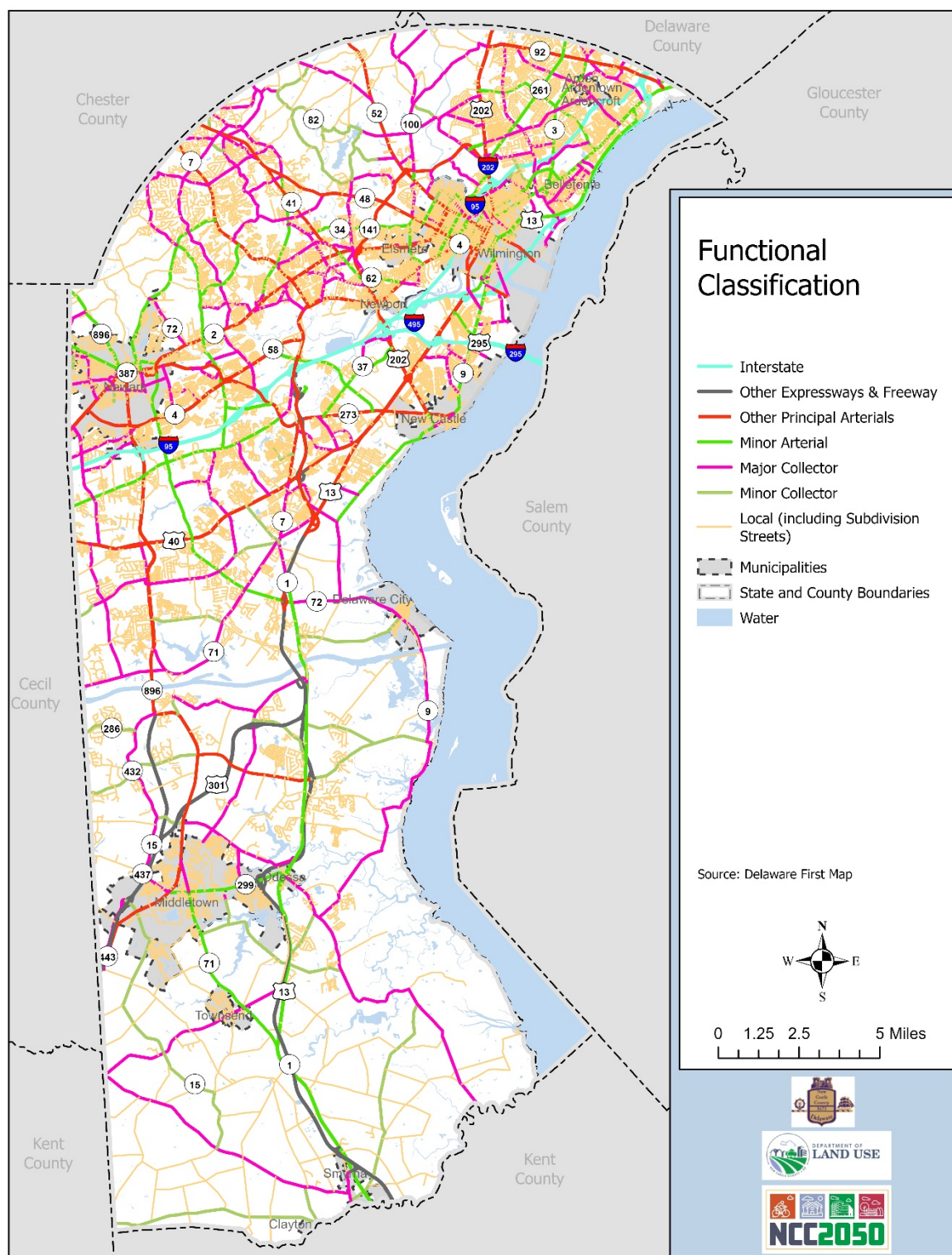


Figure F-2: New Castle County Roads by Functional Class, Source: Delaware First Map

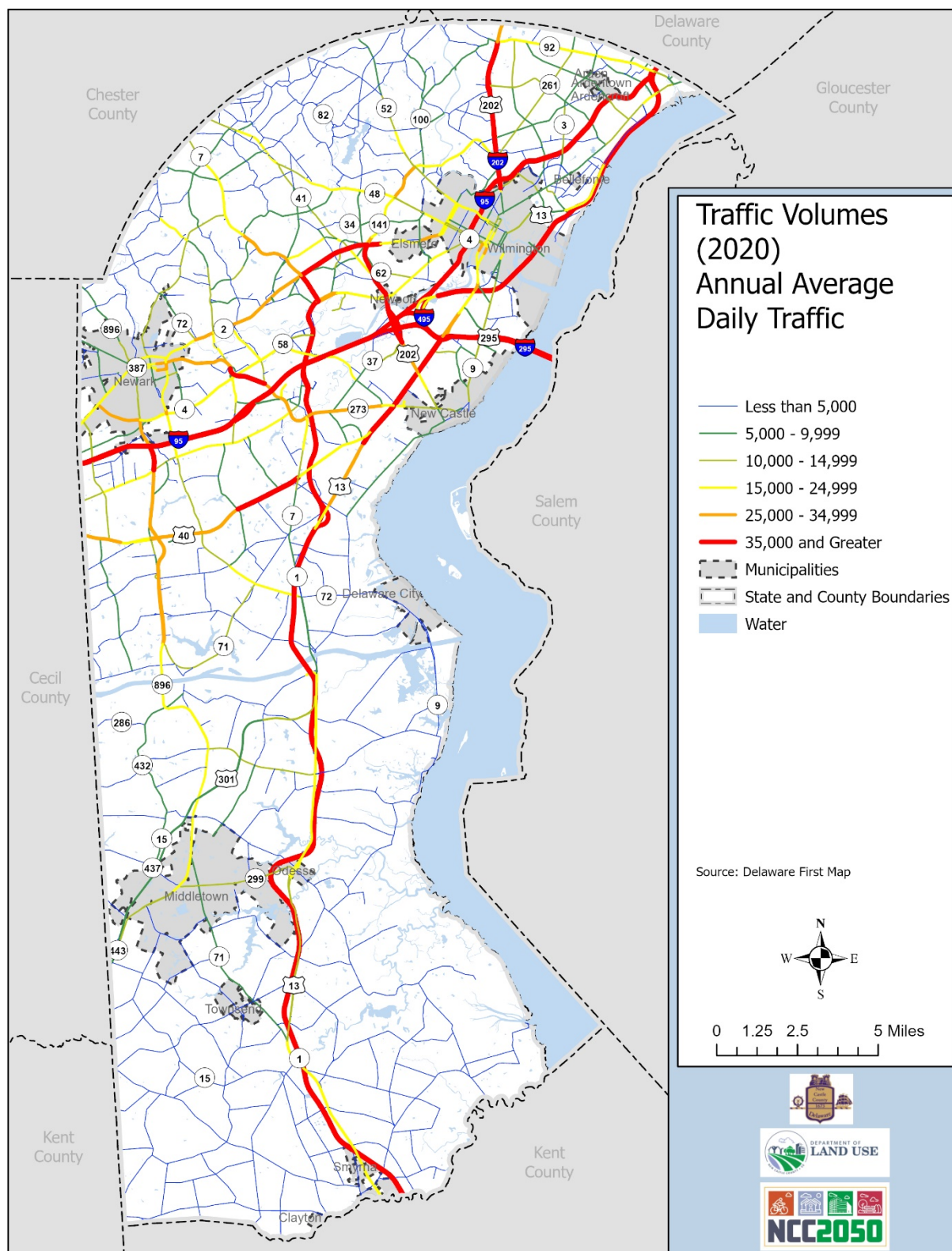
Map F-1 illustrates the functional classifications of roadways within the County. The functional classifications are the system for classifying roadways according to the character of service they are intended to provide. Higher class roads provide more mobility for through traffic (with little or no local access), while the lower-class roads provide less mobility and more access. On this map, the teal color shows Interstates I-95, I-295 and I-495. Dark red indicates Other Freeways, such as Route 1 and the 301 Bypass near Middletown. The brighter red is Other Principal Arterials like Kirkwood Highway, and Routes 4, 40, 13, and 202. Orange is for Local Roads, which is the most common type of road in the County, especially in older residential areas north of the Route 40 corridor.

Existing average daily traffic (ADT) volumes are a good indicator of future need for roadway maintenance and capacity assessment. **Map F-2** shows annual average daily traffic volumes on all roads in the County. Note that these are 2019 volumes, meaning they represent conditions before COVID-19. The highest-volume roads are shown in red, which—as expected—are the interstates along with Routes 1, 13, 202, and parts of Kirkwood Highway, Route 40, and a few other arterials. Generally, the highest volume roads are the ones that run between Newark and Wilmington, and there are not many high-volume roads south of the canal. Due to COVID-19, daily volumes did drop off in mid-2020 to about 40% of these levels but are now back up to about 90% of these levels, as of summer 2021.

Map F-1: Functional Classification



Map F-2: Annual Average Daily Traffic Volumes (2020)



ADT relates to roadway Level of Service (LOS). LOS is reported through a series of grades: “A” shows that existing roadways meet travel demand, while “F” represents roadways that are failing to meet traffic demand. *Map F-3* highlights existing grades E and F, the lowest scoring “failing” roads, in correlation to land use categories, and indicates the most congested corridors and intersections. The LOS calculated for this map was generated from data gathered during the afternoon peak hour (or “rush hour”) and identifies corridors where peak period travel times are much higher than off-peak with red and orange lines, as well as the highest-volume intersections with red and orange dots. It also shows Congestion Management System (CMS) corridors, as identified by WILMAPCO, in green. Not surprisingly, most of the congested areas are in the north-central part of the county, primarily between Newark and Wilmington.

The map also shows the color-coded Transportation Investment Area (TIA) boundaries, which have been established by WILMAPCO to help guide where funds for transportation improvements should be spent. The greatest transportation investments should be primarily targeted to the “Center” and “Core” areas to maintain and expand existing systems. Rural areas with less development should see more limited project funding, and the other TIA types should receive varying levels of funding as needed. The TIAs were developed by reviewing and consolidating state and local land use plans into a single map. This also provides for more efficient coordination between land use and transportation investments. Poor coordination in the past has led to a “Cycle of Sprawl,” which threatens lasting economic growth, leads to social inequity and poor health outcomes, and endangers our environment.

While ADT and LOS are the most prevalent methods for measuring roadway use and performance, other methods and metrics such as Quality/Level Of Service (Q/LOS) compliments these measurements by providing a qualitative measure of the roadway users’ (drivers, passengers, etc.) perception of how the roadway performs. As the letter grade associated with auto LOS is technically a qualitative measure (typically thought of as A=good and F=bad), it is determined quantitatively by the relationship between auto demand and roadway capacity. The concept of Q/LOS has emerged in part to recognize that the desirability of discretionary travel by non-auto modes is much more sensitive to the qualitative experience than auto travel (assuming that a discretionary user has access to both a car and other modes of travel). Pedestrians and bicyclists are often described as vulnerable roadway users based on the physics involved in crashes between motorized and non-motorized roadway users. The perception of safety is a key component of quality of service for these modes; physically separating vulnerable users from motor vehicle traffic is a common element in Q/LOS considerations for walking and bicycling. Quality of LOS came into consideration during the creation and adoption of the Southern New Castle County Master Plan. Review of intersections using a variety of factors resulted in the creation of project recommendations beyond what was currently programmed. Additionally, DelDOT has developed modeling regarding Bicycle LOS (which was used to evaluate connectivity of open space in Element E) and is developing modeling for Pedestrian LOS. These both evaluate key components of Q/LOS and will be instrumental in promoting multimodal transportation opportunities and achieving other goals in this plan. Considering the quality of service, beyond the quantitative LOS evaluation method, will enable us to ensure sound transportation and mobility enhancements are being provided to the County in its entirety.

An emerging metric in considering the relationship between land use and transportation system effectiveness is Vehicle Miles Traveled (VMT). VMT considers both the number of auto trips and their length, and is commonly expressed either as:

- VMT generated, which is the amount of auto mileage generated by all the land uses in each area (regardless of where the VMT accrues), or
- VMT accrued, which is the amount of auto mileage accrued on roadways in each area (regardless of where the VMT is generated).

VMT is often expressed as a “per capita” measure, such as is the total annual miles of vehicle travel generated within a community divided by the population of that community.

According to the U.S. Department of Transportation and Federal Highway Administration, per-capita VMT generation levels are lower in communities that are more walkable, more compact, with robust multimodal transportation systems and denser levels of both residential and commercial activities. Likewise, compact, and mixed-use development patterns, in addition to reducing VMT, also result in higher fiscal impact and accessed land values.¹ These elements define the planning context of a community, and these contexts help evaluate policies and strategies related to public transit expansion, active transportation infrastructure, and changes in parking requirements. Looking at data from FHWA on daily VMT for the state of Delaware in December 2019 – January 2020 and again in December 2020 – January 2021 there was a 38% decrease in miles driven between the two years. This decrease of 38% of mileage per driver will have implications in the future and will shape transportation by 2050.²

Currently, VMT correlates well with estimates of fuel consumption, emissions, and crashes; all environmental variables that are secondary to the objective of travel but exert societal costs. Moving forward, an evaluation of DMV vehicle age distribution data, by model year and engine type can provide more fine grain information regarding vehicular emissions and safety resulting from technological advances (alternative fuels and safety advancements). Vehicular trips could be reduced through a variety of methods, including compact development allowing for a greater proportion of trips to be made by walking or bicycling, and shorter trip lengths for trips made by motor vehicle. The [New Castle County Bicycle Plan](#) created by WILMAPCO and endorsed on May 9, 2020, discusses many ways to decrease VMT through creating safe, accessible, and interconnected bicycle routes throughout the County. Results from this plan are discussed later in this section.

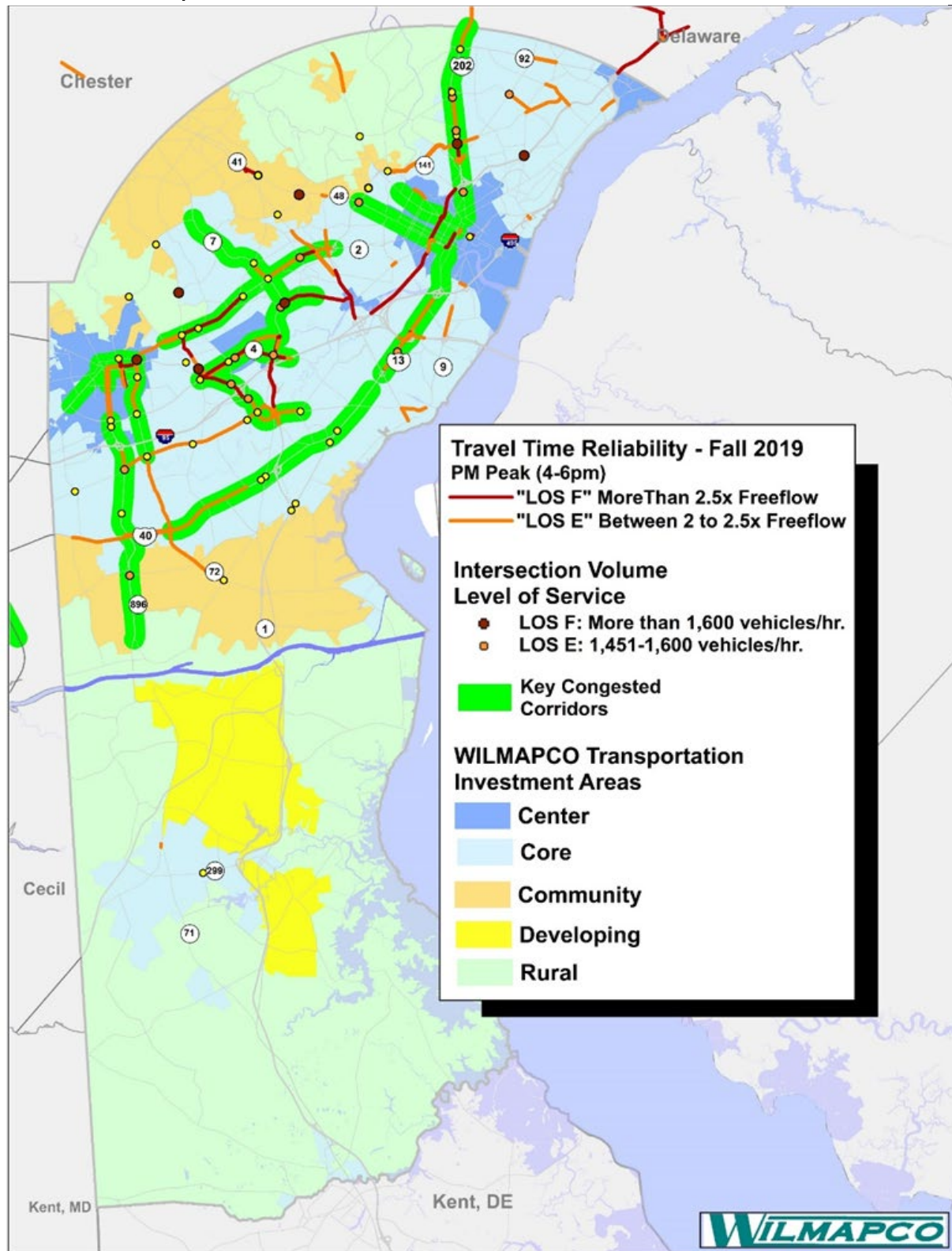
Transportation system approaches to reducing VMT are generally be grouped under the overarching term Transportation Demand Management (TDM). TDM describes a suite of policies, programs, and services designed to reduce reliance on single-occupant auto travel, particularly during peak commuting periods and are organized in three general categories

- *Policies* (e.g., financial incentives to live near your work, pricing for auto use via parking charges, tolls, or other fees/taxes)
- *Projects* (e.g., non-motorized facilities like sidewalks and bike paths, ensuring complete streets designs for new and reconstructed roadways, improving roadway safety through Vision Zero initiatives that focus on better quality of service for vulnerable users using non-motorized travel modes)
- *Services* (e.g., expanded transit services, access to information on transportation options, organized activities to promote ridesharing)

¹ New Castle County Cost of Land Use Study Completed by TischlerBise, Inc. August 18, 2017

² <https://quotewizard.com/auto-insurance/what-is-pay-per-mile-car-insurance-changes-in-mileage>https://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm

Map F-3: Travel Time Reliability, Intersection Volume, Key Congestion Corridors, and WILMAPCO Transportation Investment Areas



Source: WILMAPCO

Roadways like Route 202 (Concord Pike), Route 40 (Pulaski Highway), and Route 13 (DuPont Highway) with low LOS grades have been identified as Key Congested Corridors by WILMAPCO. However, LOS grades should not be the only criteria used to evaluate roadways; safety is also an important concern. The pandemic has shown that when traffic volumes drop, driver speed increases, which has led to a national spike in bicycle and pedestrian fatalities during the pandemic.

Figure F-3 shows that the number of reportable crashes has increased within the county over the last 17 years. **Map F-4** represents crash hotspots based on the reportable crashes on County roadways throughout the county. Armed with knowledge of the locations of roadway challenges, New Castle County must work with DelDOT to continue to enhance existing roadways and plan for strategic multimodal transportation choices in the future.

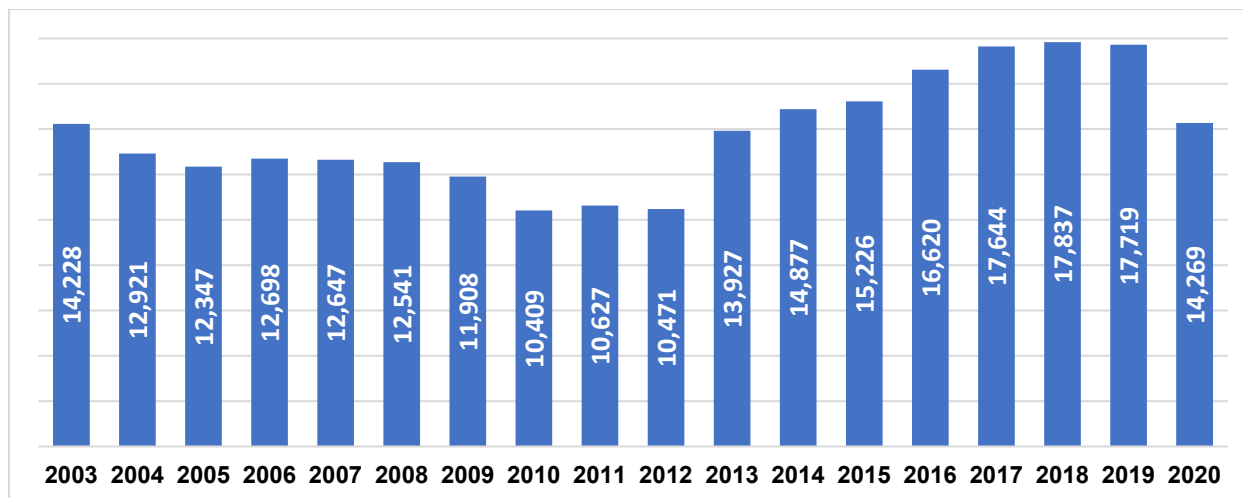
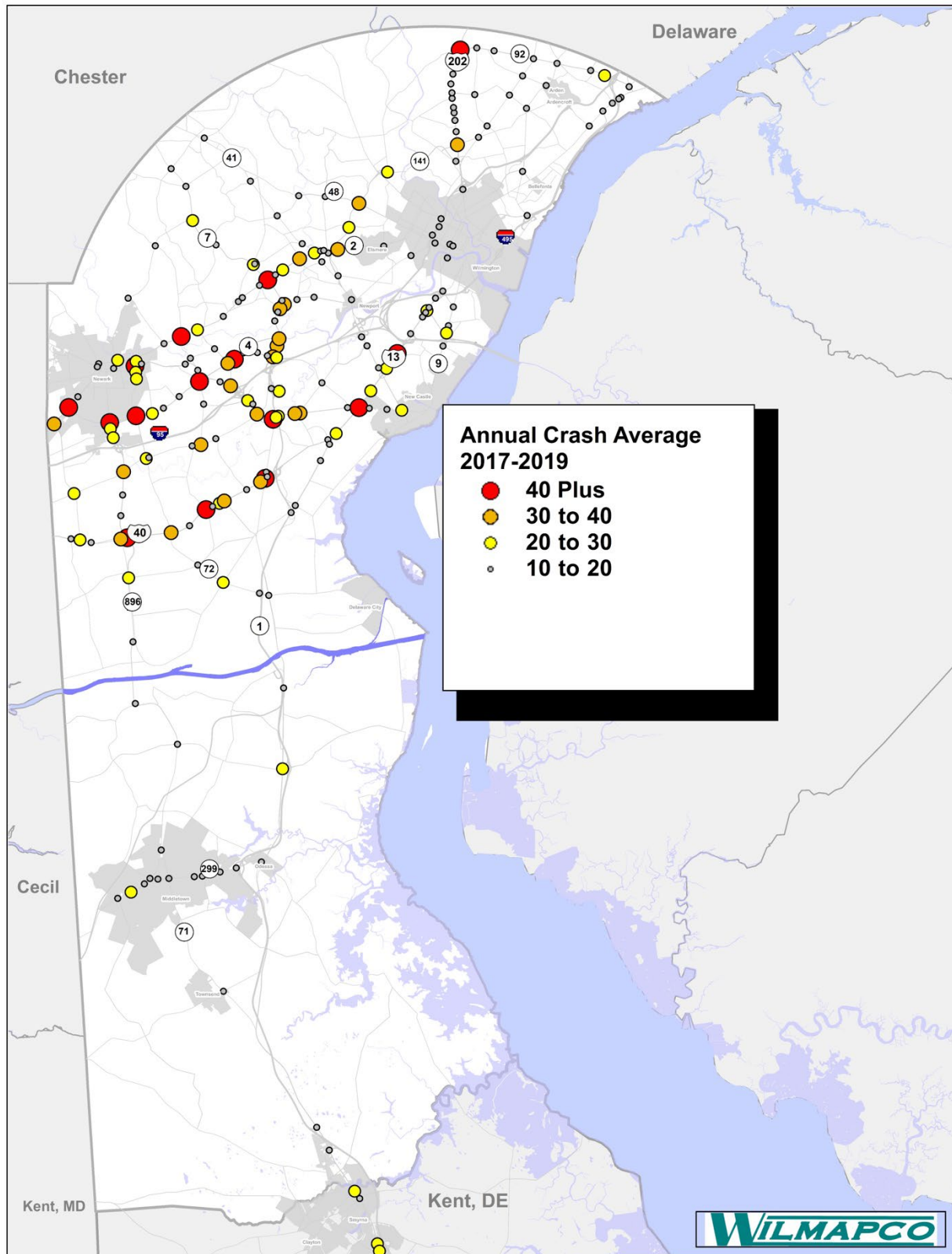


Figure F-3 Total Crashes in New Castle County by Year

Map F-4: Crash Hotspots

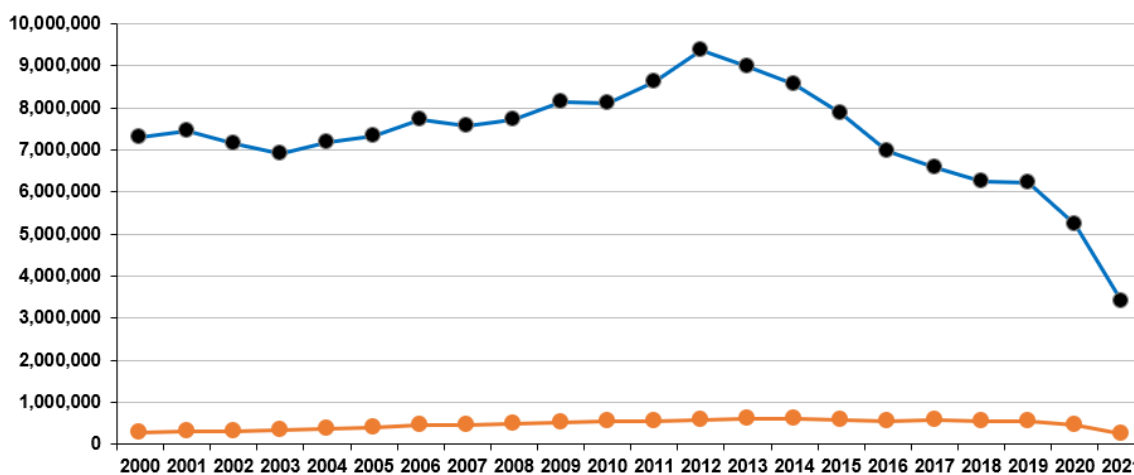


Source: WILMAPCO

Transit, Ride Share, and Train Service

New Castle County is home 39 DART bus routes, 30 park-and-ride locations, and four SEPTA rail stations (with the Wilmington and Newark stations also served by Amtrak). Along the 39 DART bus routes are more than 1,700 bus stops, 98% of which are located north of the C & D Canal. University of Delaware Transit operates 5 bus routes that provide services throughout its campus in Newark. Additionally, the City of Newark provides the Unicity public bus service. While the Delaware Transit Corporation (DTC) is the primary transit provider in the State, New Castle County is also served by Amtrak and SEPTA. **Figure F-4** shows the annual ridership numbers for Delaware Authority for Regional Transit (DART) fixed-route bus service³ and paratransit service⁴ (a Demand Response Service⁵). **Figure F-5** illustrates transit ridership by race, using means of transportation to work as a metric. It shows that, in New Castle County, a higher percentage of the Black/African American population uses transit to get to jobs than other races or ethnicities.

Figure F-4: Transit Ridership, 2000-2021



³ Fixed Route bus service is service provided on a repetitive, fixed-schedule basis along a specific route with vehicles stopping to pick up and deliver passengers to specific locations. Each fixed-route trip serves the same origins and destinations, unlike demand response and taxicabs. (<https://dartfirststate.com/RiderInfo/FAQs/>)

⁴ Paratransit, also known as demand response, serving disabled citizens as required by the Americans with Disabilities Act (ADA) of 1990 for individuals with disabilities who are unable to use fixed-route transportation systems. (<https://dartfirststate.com/RiderInfo/FAQs/>)

⁵ Demand response is any non-fixed route system of transporting individuals that requires advanced scheduling by the customer, including services provided by public entities, nonprofits, and private providers. (49 C.F.R Section 604.3(g)). (<https://www.ecfr.gov/current/title-49/subtitle-B/chapter-VI/part-604/subpart-A/section-604.3>)

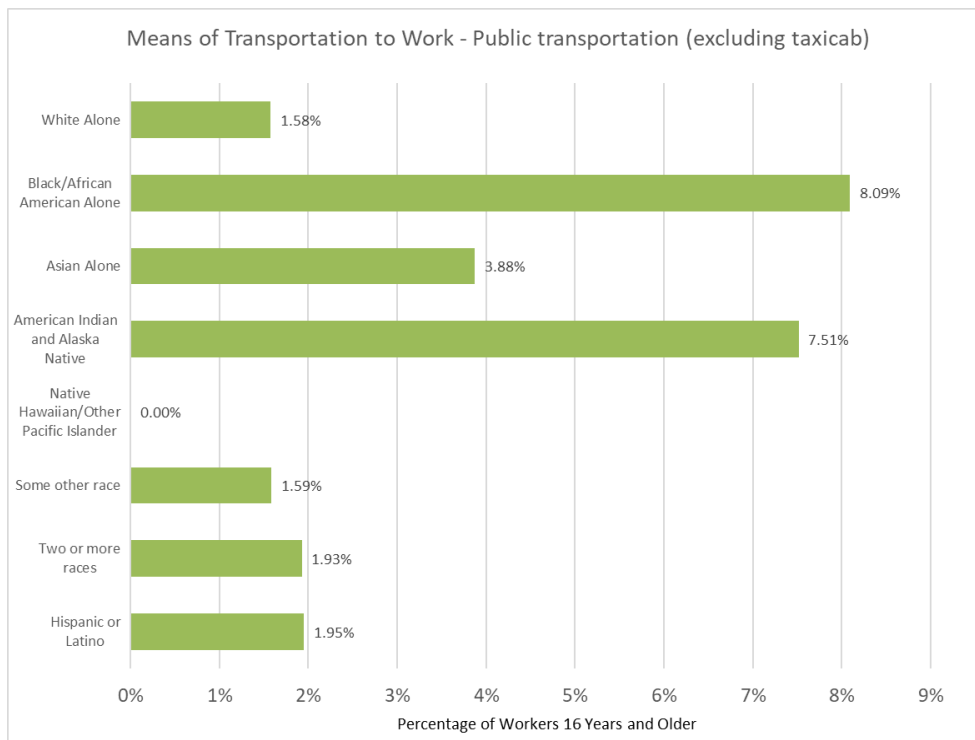
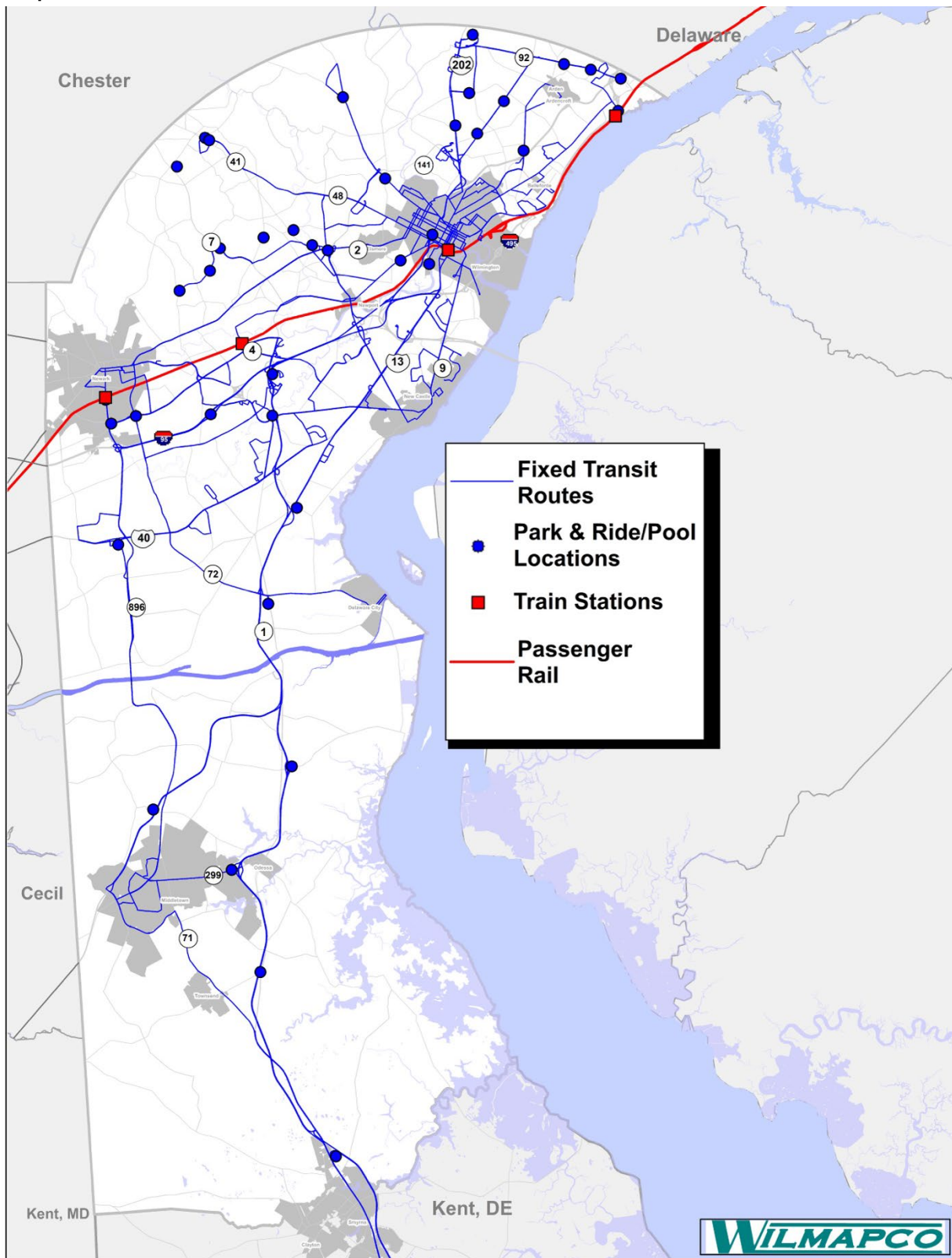


Figure F-5: Means of Transportation to Work – Public Transportation Source: Source: U.S. Census Bureau, 2016-2020 American Community Survey 5-Year Estimates

Park-and-ride facilities provide a convenient way for travelers heading to the same destination to connect to transit options or meet and travel together thus reducing the number of single-occupancy vehicles on the roadways. Today in New Castle County, there are 39 park-and-ride facilities totaling 4,329 individual parking spaces available in 2019 (*Map F-5*). New Castle County also has six “Park and Pool” locations which are available to individuals meeting up for a ride share or carpooling option. Park and Pool lots do not link users to other transit options like a bus route, differentiating this type of lot from a Park-and-Ride lot. In 2019 there were 1,022 spots available within the County. This was a decrease in the number of spots by 39 spaces from 2018. Combining both Park-and-Ride and Park and Pool totals, there were 5,351 spots available for residents to ride share. This number represented an overall increase in spots available by 414 spots, despite the slight decrease in Park and Pool spots between 2018 and 2019.

Map F-5: Transit and Park & Rides



Source: WILMAPCO

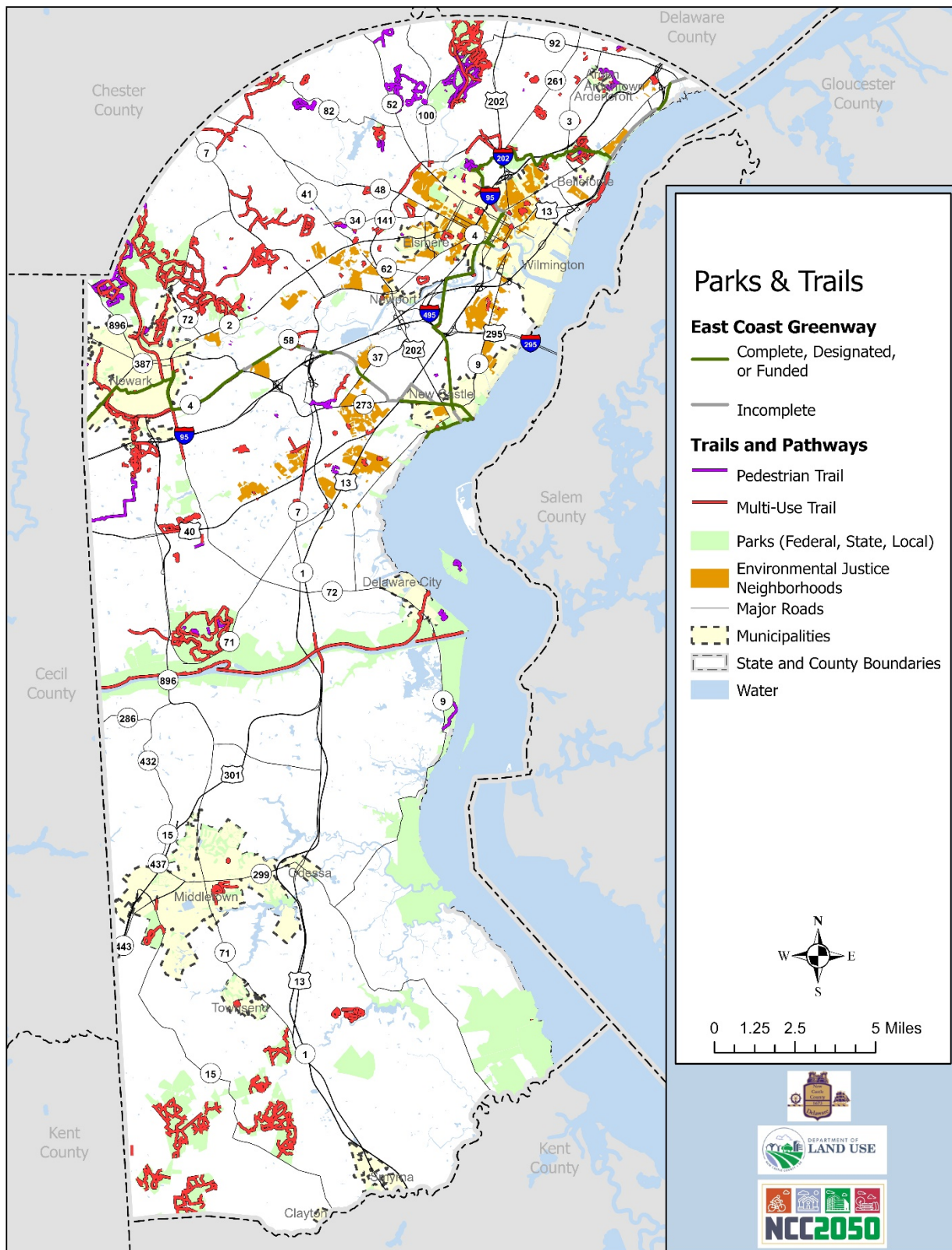
Much of the transit infrastructure is found in the northern part of the county. **Map F-5** depicts the locations of transportation alternatives for New Castle County residents and visitors. Delaware Authority for Regional Transit (DART) bus routes are indicated by the blue lines, and park-and-ride locations and passenger train stations are also shown. Adding transit opportunities to high-demand locations like town centers, employment hubs, and medical facilities will expand service to more communities in our County.

As these additional transit opportunities are developed, they present opportunities for associated Transit-Oriented Development (TOD). The Federal Transit Administration explains TOD as follows: “Transit-oriented development, or TOD, includes a mix of commercial, residential, office and entertainment centered around or located near a transit station. Dense, walkable, mixed-use development near transit attracts people and adds to vibrant, connected communities.” New and planned train stations, such as the prospective Newport Station, as well as existing transit stations, such as Churchman’s Crossing, are prime locations for this type of development to provide convenient access to both transit services and the housing, community resources and businesses nearby. When people live near transit, they are more likely to use transit, and when businesses and community facilities are near transit, people are more likely to patronize them when they get on and off transit.

Pedestrian and Bicycle Network

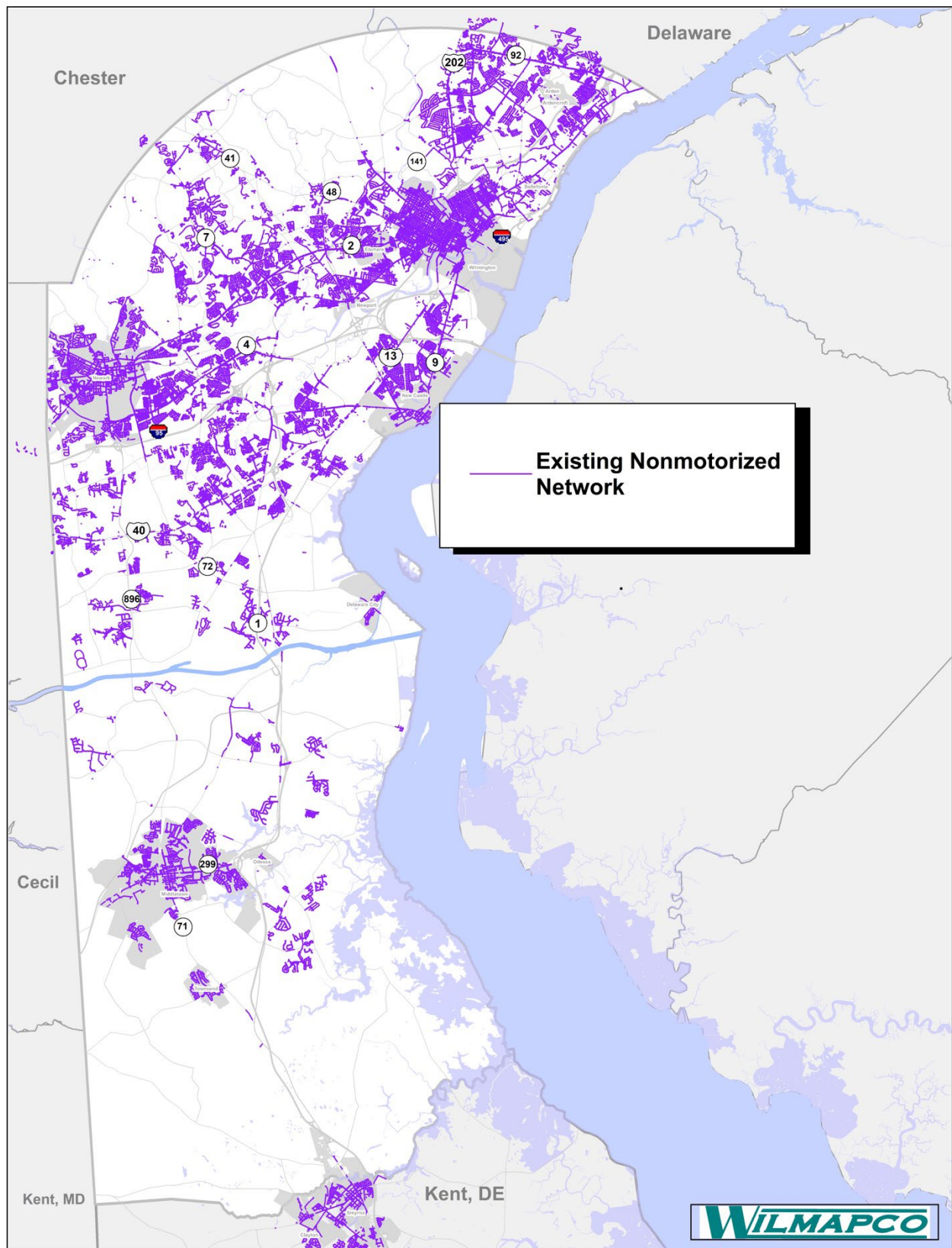
Currently, the county contains an extensive network of trails and pathways. However, many of the county’s trails are used primarily for recreation, as they are not well connected to transportation network making it not feasible to use for commuting. **Map F-6** depicts the current trail network within the county.

Map F-6: Parks and Trails



In addition to the parks and trails network, the larger non-motorized network, which includes sidewalks, crosswalks, and footpaths are located mostly in the northern part of the county, as shown on **Map F-7**. As expected, much of the network is clustered in areas with higher population. Additionally, the network is not always interconnected. Key aspects to address in the Comprehensive Plan include sidewalk connectivity and Americans with Disabilities Act (ADA) compliance. During the public outreach process, residents noted that sidewalks were built within developments, but they do not connect to amenities outside of developments, so residents can't safely walk to school, stores, work, or the nearest bus stop. This creates "islands" of disconnected walkways and disconnected communities. Establishing continuous sidewalks and pathways or encouraging affordable transit solutions from neighborhoods to outside destinations, along the corridors abutting these neighborhoods, and between the neighborhoods should help to reconnect these islands to resources and other communities. In addition, many older areas do not have ADA-compliant infrastructure so people with disabilities may be unable to safely reach their destination even if there is some form of sidewalk. Understanding the existing network will help inform connectivity decisions for the County's future.

Map F-7: Non-Motorized Network



Level of Traffic Stress (LTS) is a measurement used by DeIDOT to better understand how comfortable streets are for bicyclists. The LTS level is determined by looking at elements of the existing roadway network including, roadway lane width, traffic speed, traffic volume, the availability of shoulders and/or separate cycling facilities, etc.

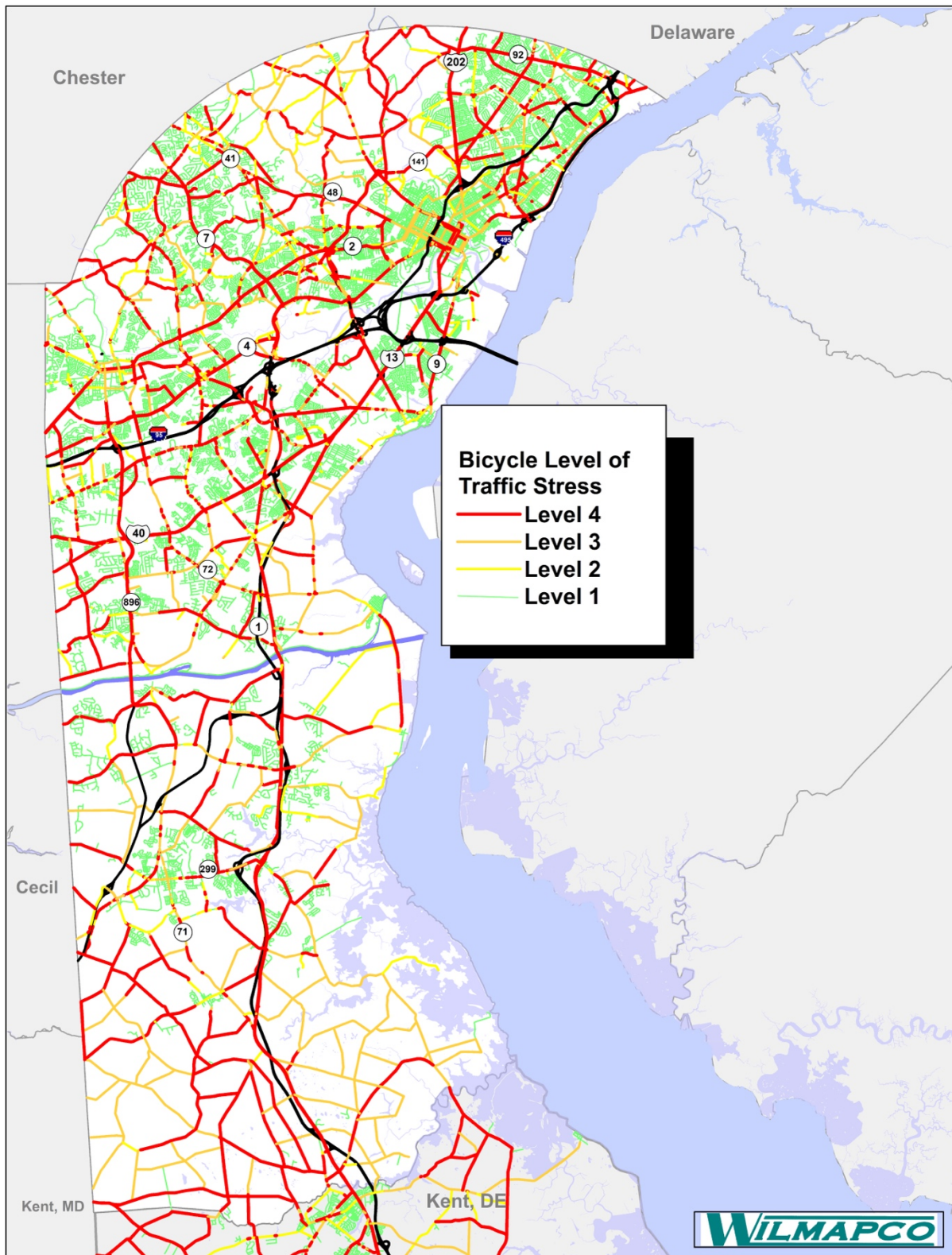
The system is defined in **Table F-1**. **Map F-8** shows New Castle County roads as ranked within the LTS system.

Table F-1: Level of Traffic Stress Definitions

LTS Level	Description
LTS Level 1	Most children can feel safe on these streets
LTS Level 2	The mainstream “interested but concerned” adult population will feel safe on these streets
LTS Level 3	Streets that are acceptable to the “enthused and confident” riders who still prefer having their own dedicated space
LTS Level 4	High-stress streets with high-speed limits, multiple travel lanes, limited or non-existent bikeways and long intersection crossing distances

Source: DeIDOT

Map F-8: Bicycle Level of Traffic Stress



Source: WILMAPCO, DeIDOT

In conjunction with LTS, **Figure F-6** shows the number of reportable crashes in the county involving vehicles and bicyclists or pedestrians over a 15-year period, according to the Delaware State Police. The crashes have generally decreased since 2012, but as of 2018 there were still nearly 300. The 2020 New Castle County Bicycle Plan states that only 0.3% of commute trips are by bicycle and 2.8% of trips are walking. Both mode shares are growing, but still account for very small portions of trips. In order for the County to achieve zero traffic fatalities (a policy known as “Vision Zero”), more work remains to be done.

Map F-9 represents existing bicycle infrastructure, as well as future improvements and expansions of the County bicycle network, which was carefully developed and presented in the recently completed New Castle County Bicycle Plan (endorsed May 7, 2020). This plan was written with the goal of encouraging safe, accessible, and connected bicycle routes. New Castle County currently has 93 miles of bicycle lanes and 85 miles of multi-use pathways. Many of these routes are on high stress roadways or do not connect in a meaningful way to allow for mode of transportation choice. The plan recommended 323 miles of new, low-stress bicycle paths to better connect New Castle County through bicycle usage, a major goal of the document.

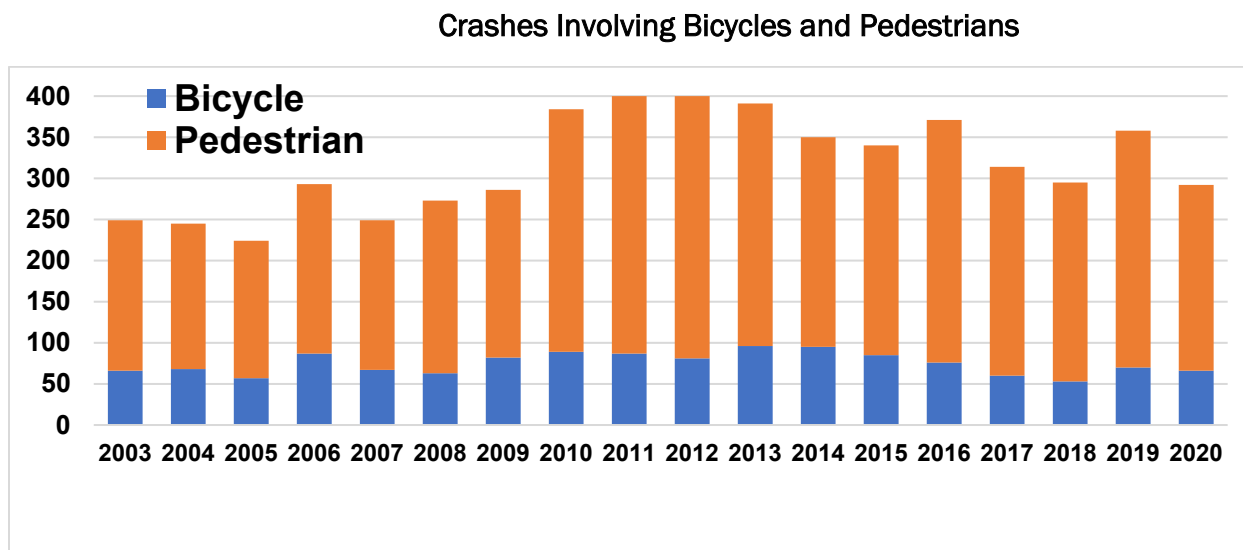
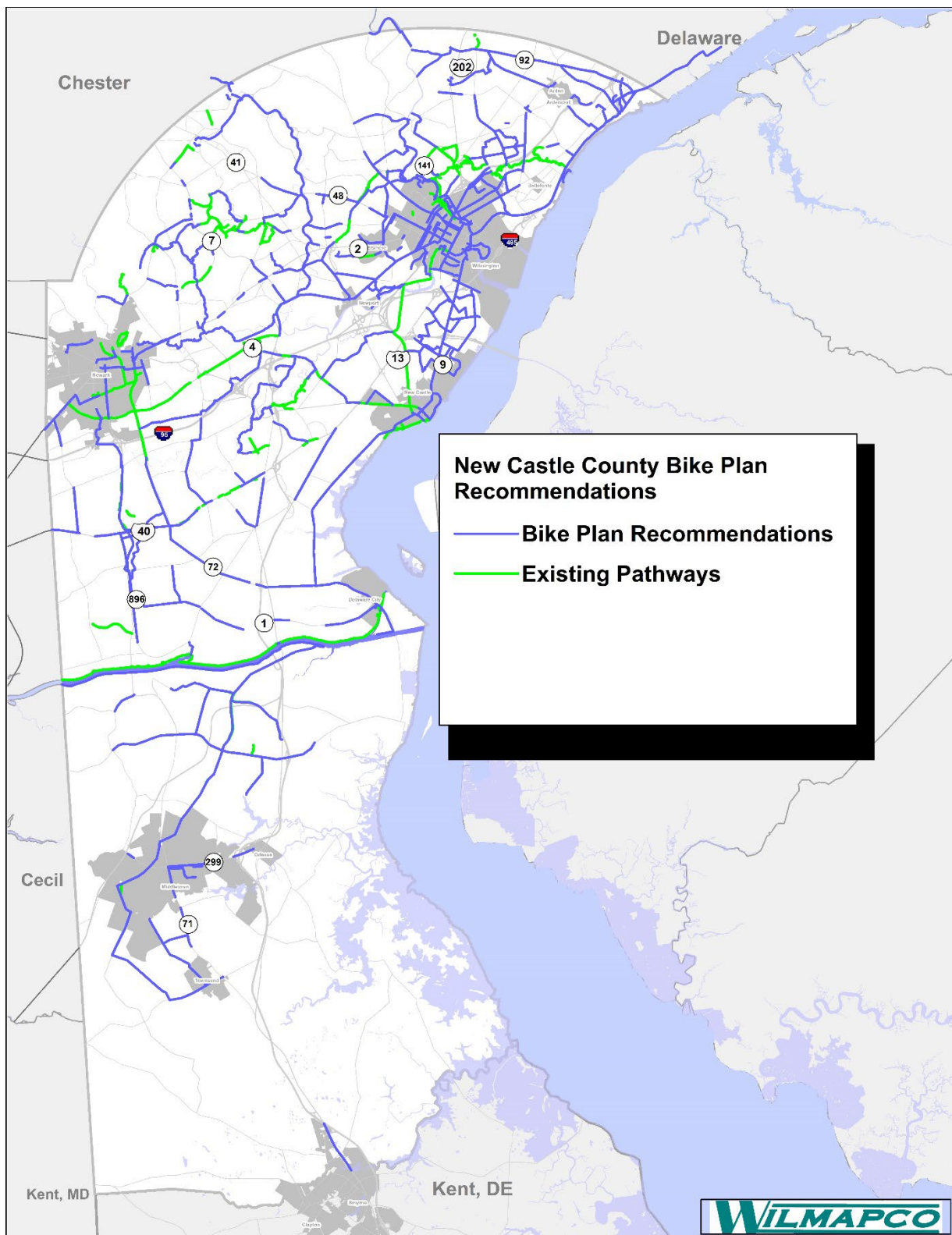


Figure F-6: Crashes Involving Pedestrians. Source: Delaware State Police

Map F-9: New Castle County Bike Plan Recommendations



Source: WILMAPCO

Transit Oriented Development

Transit Oriented Development (TOD) is an approach to planning with the focus on locating and developing compact walkable, pedestrian-oriented, mixed-use communities in conjunction with high quality public transit facilities. While the uses are important so too is careful consideration of the built form and its relationship with adjacent communities. TODs offer the potential to address important problems facing the county including traffic congestion, affordable housing, air pollution, and sprawl.⁶ Successful Transit Oriented Development takes a variety of different forms having a diversity of uses complimentary to its context.

Urban Center Plaza

Portland State University's Urban Center Plaza (See **Figure F-7**) incorporates an anchor institution, the university with Portland Streetcar stop, commercial uses and public art including 3 fountains, a clock tower, and sculptures near residential uses into the fabric of the city.⁷ Areas in New Castle County including Newark and Churchmans Crossing, while not the scale of downtown Portland, are home to large and important institutions (University of Delaware and Christiana Care Hospital) in proximity to existing train stations, which could benefit from an appropriately scaled TOD.

Figure F-7: Urban Center Plaza



⁶ *Transit-Oriented Development and Joint Development in the United States: A Literature Review*; Robert Cervero et al, (October 2002): https://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rrd_52.pdf

⁷ Additional Urban Center information can be found at www.pdx.edu

Metro Centre at Owings Mills

The Metro Center at Owings Mills (formerly Owings Mills Town Center, see *Figure F-8*) is a Transit Oriented Development that establishes a town center at the Owings Mills station and providing a logical connection to the former Owings Mills Mall area (demolished and redeveloped 2017). The TOD includes entertainments venues, retail, restaurants, office space, more than 1,700 residential units, public space, and art as well as a satellite campus of the Community College of Baltimore County, and the Largest Branch of Baltimore County Public Library.⁸ Locations such as North Claymont, with its new train station, and potentially downtown Newport (should a new train station be constructed) could benefit from including some of the elements at the Owings Mills TOD.

Figure F-8: Metro Center at Owings Mills



New Castle County has many of the essential pieces of the puzzle required to have successful Transit Oriented Developments, however assembling these to form a complete picture will require a public planning process in partnership with DelDOT as well as amendments to the County and State Codes to both provide needed incentives, while also requiring affordable housing opportunities.

Complete Streets

Streets should be designed with the needs of pedestrians, cyclists, and public transit, in addition to cars. This approach to street design is known as complete streets. The U.S. Department of Transportation defines complete streets as “streets designed and operated to enable safe use and support mobility for all users. Those include people of all ages and abilities, regardless of whether they are travelling as drivers, pedestrians, bicyclists, or public transportation riders.”⁹ There is no single approach to creating complete streets and should be informed by the context and needs of the surrounding of the area. While many roads in New Castle County may have sidewalks or bike lanes, the network is incomplete or designed in a way such that users may not feel safe using these facilities. Complete streets is an approach that better integrate these sometimes competing elements. Complete streets contain a variety of elements such as

⁸ Additional information regarding the Metro Center at Owings Mills can be found at: <http://metrocentreom.com> , the Metro Station Link Cornerstone Plan (https://s3.amazonaws.com/mta-website-staging/mta-website-staging/files/Transit%20Projects/Cornerstone/MSCP_MetroSubwayLink.pdf)

⁹ <https://www.transportation.gov/mission/health/complete-streets#:~:text=Complete%20Streets%20are%20streets%20designed,bicyclists%2C%20or%20public%20transportation%20riders.>

sidewalks, dedicated bike lanes, and bus lanes. Complete streets may also be designed in a way to calm traffic, which is not only safer for pedestrians and cyclists, but safer for drivers as well. Elements such as landscaping and street trees can improve the streetscape design and buffering of traffic lanes from sidewalks. These elements are not only aesthetic, they can also incorporate stormwater management. **Figure F-9** illustrates an example of a complete street design. The benefits of complete street also benefit the surrounding land uses. For example a commercial corridor where people feel safe to walk or bike can improve the local economy.



Figure F-9: Example of a complete street. Source: New York State Department of Transportation

Freight Movement

Freight is an important part of New Castle County's economy and transportation network. This includes the Port of Wilmington, where upwards of around 6.8 million tons of cargo is handled annually. The majority of this cargo is time-sensitive refrigerated food products and therefore departs the Port via truck. Multiple Amazon distribution centers are located in and near the county generate significant additional truck traffic, along interstates in the county each day.



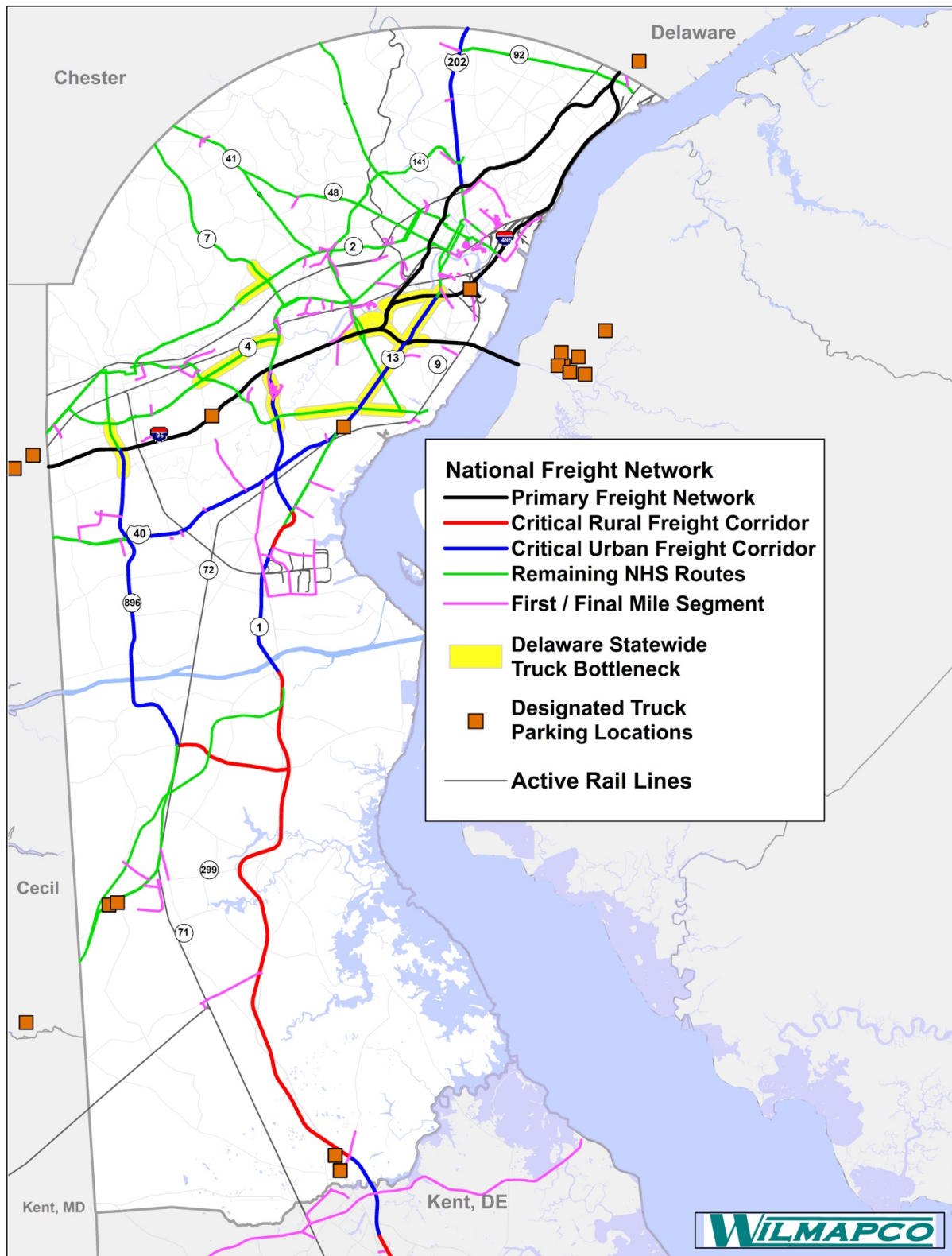
Figure F-10: Amazon Fulfillment Center in Middletown, DE

The rail freight system is also significant, with two major rail lines, CSX and Norfolk Southern notably serving the refinery and other industrial uses in the county. A significant amount of pass-through rail traffic occurs as well adding to the rail traffic that the County experiences. DelDOT's Shellpot Bridge Rehabilitation reopened the freight train bypass of the Wilmington Station in return for payment of tolls by the railroad.

Integrating the freight industry while also maintaining livable communities within the county is an important piece of the Comprehensive Plan. New Castle County is working to promote and support emerging industries such as warehousing, logistics, and startups with the growing market demand to complement traditional industries and businesses. The County will coordinate with partners to focus investment in ways that support and attract business and achieve a diverse business ecosystem that benefits all aspects of our communities, including corridor reinvestment, streetscape enhancement, and technology infrastructure. (See **Map F-10** and [Economic and Community Development element](#) for more details). From an economic standpoint, New Castle County has roughly 40% of its employment is comprised of "freight intensive" job sectors of Food Services, Trade Transportation and Utilities, Manufacturing, Construction & Mining and Natural Resources.

Modern supply chains rely on complex networks of warehouses and distribution centers (DCs) to support the efficient, fast, and affordable movement of freight. However, their operations and their corresponding traffic generation can also have negative impacts on adjacent land uses. As part of the planning process, added consideration for freight-related development will be explored. The Delaware Statewide Freight Plan is a comprehensive freight plan produced to provide updated, relevant information to assist DelDOT, WILMAPCO, and other local freight stakeholders to make informed decisions on freight investments and freight-related policies. The plan includes components from recently completed freight studies dealing with truck parking, first/final mile freight deliveries and better access of truck traffic in and around the Port of Wilmington. The Delaware Statewide Freight Plan is required by the federal government to be updated every four years and can be found at: <https://deldot.gov/Business/freight/index.shtml>.

Map F-10: National Freight Network



Additional Mobility Considerations:

One goal of this Comprehensive Plan is to establish safe, efficient access to employment, retail services, parks, and other resources with modes outside of a personal vehicle. Listed below are some ongoing initiatives to provide additional mobility opportunities to county residents:

- Passenger rail projects are underway to extend more SEPTA trains from Wilmington to Newark. Projects included renovating the Biden Train Station in Wilmington, and adding a third track south of Wilmington to increase capacity. A new train station was built at Newark, and construction is underway to build a new center platform, and to expand track capacity. Also, a new station and parking garage will replace a smaller rail station at Claymont. WILMAPCO has studied potential additional SEPTA rail stations at Newport and Edgemoor. (The Newport station was found to be feasible, while the Edgemoor was not.) These efforts require significant investment and coordination among many agencies and stakeholders but are important in providing connectivity to residents and the resources they need.
- Electric vehicles and autonomous vehicles will become more prevalent in the coming years. These technologies will have significant impacts on travel habits and transportation infrastructure. The County will study and plan to understand how to best design for emerging transportation technology and leverage the benefits while minimizing potential negative effects.
- The New Castle County Airport has had on-and-off passenger service over the years, and the Comprehensive Plan supports increased passenger air service.

State and Regional Transportation Planning

State, regional, and local transportation plans serve as guides to help the County shape future land development around planned and future transportation investments. WILMAPCO's [Regional Transportation Plan](#) (RTP) serves as the County's transportation plan. Additionally, the County partners with DelDOT to evaluate transportation facilities and ensure a safe, efficient, and environmentally sound transportation network to move people and goods throughout the county. DelDOT prepares both a Long-Range Transportation Plan (LRTP) and a six-year Capital Transportation Program (CTP) to implement the long-range plan and is responsible for road construction in line with the LRTP and the CTP.

State-level Transportation Planning

The DelDOT LRTP envisions a statewide transportation network that reflects the ideas and strategies outlined in the adopted [State Strategies for Policies and Spending](#). The purpose of Strategies for State Policies and Spending is to coordinate land use decision-making with the provision of infrastructure and services in a manner that makes the best use of natural and fiscal resources. It is DelDOT's intent to develop smart transportation systems, consistent with the State's smart growth strategies.

DelDOT's [current LRTP](#) was adopted in 2019 and looks out 20 years to outline ways that transportation should be used to enhance the economy, our communities, and the environment into the future. It evaluates several key challenges and opportunities affecting transportation decisions. These challenges are characteristic of both the State as well as New Castle County and include:

- Aging infrastructure requiring more maintenance
- Increasing population and Vehicle Miles Traveled (VMT)
- Decreasing public transit ridership
- Sprawling growth patterns resulting in longer commuting times to work and commercial centers
- Increasing aging population in need of costly specialized transportation services and facilities
- Changing economic conditions

- Impacts of extreme weather events and sea level rise
- Ensuring safe and efficient emergency evacuation routes
- Providing and maintaining safe and accessible routes for pedestrians and bicyclists
- Managing increasing traffic generated by special events and seasonal fluctuations
- Funding constraints

The LRTP planning process included the comparison of planning scenarios integrated with traditional travel demand modeling to help establish a framework for transportation policy development, objectives, and implementation strategies. DeIDOT's scenario planning for their LRTP considered projects outlined by Metropolitan Planning Organizations (MPO) from across Delaware, which provided additional highway and transit capacity and considered land use shifts to preserve natural landscape and reduce sprawl. Study analysis and scenario planning results suggested that DeIDOT will not successfully meet transportation needs to improve mobility applying any one scenario; instead, transportation needs will be best met applying a combination of highway, transit, and land use shifts to yield some relief to congestion within the transportation network.

DeIDOT's transportation priorities as listed in the LRTP are focused in the areas included below. Many of the topics and priorities are shared among this plan and others referenced within it.

- *LAND USE AND TRANSPORTATION PLANNING*
Collaborative planning between transportation and land use agencies is critical for sustainable patterns of development. DeIDOT's Transportation Improvement District (TID) mechanism focuses transportation investments in high priority growth areas identified as appropriate for development in local comprehensive plans.
- *TRANSPORTATION CORRIDOR STRATEGIES*
DeIDOT is developing a set of strategies to address the existing and future needs of transportation corridors throughout the state. These strategies will result in a comprehensive vision in the areas of safety, access, and multimodal mobility for each corridor. Plans developed through this new approach will prioritize investments and phasing of projects over time. The plans will support statewide economic growth objectives and will streamline project development and environmental review processes. Partnerships with local land use agencies and stakeholder input will be valuable components in this effort.
- *CRITICAL FREIGHT NETWORK INVESTMENTS*
Delaware's economic growth is dependent on a reliable freight network, which includes roads, railroads, ports, waterways, and airports. DeIDOT will continue to support operational efficiencies, investments in designated growth areas and infrastructure improvements that promote freight-related business growth. Maintaining reliable roadway connections to freight facilities and mitigating hazard impacts, such as increased roadway flooding, are important parts of DeIDOT's asset management program.
- *TECHNOLOGY INTEGRATION*
DeIDOT is continually looking for new ways to support and integrate new technology to improve our transportation system. Freight trucking and transit are ideal modes for testing and expanding new systems, such as autonomous vehicle technology that should improve the efficiency of moving goods and people. In anticipation of this new technology, innovative travel forecasting methods and traffic management techniques are being developed.
- *PUBLIC EDUCATION AND SAFETY CAMPAIGNS*

To improve driver, bicyclist, and pedestrian understanding of safety, DelDOT will continue to provide comprehensive education and outreach programs at the statewide and local levels.

- ***ADVANCED STREETSCAPE DESIGN***

Ongoing changes in technology and DelDOT's priorities in the areas of pedestrian and bicycle safety may change how we interact with our streetscape environment and may necessitate new roadway design guides. Connected Vehicle (CV) technology, for example, allows vehicles to communicate with other vehicles, connected devices and the world around them. This technology may require reallocation of space within the existing right-of-way to accommodate related infrastructure. The testing of new street designs, infrastructure elements, and programs in a Living Laboratory Research Program will enable DelDOT to balance advancing technology with the needs of all transportation modes.

- ***PEDESTRIAN NETWORK PLAN AND PRIORITY AREA PROGRAM***

Pedestrian safety improvements are a critical need in Delaware, and DelDOT is working towards a more comprehensive assessment of pedestrian routes, missing connections, barriers and priority connections. The goal of the Network Plan is to utilize existing and new facilities to improve network connectivity, enhance recreation, economic development and pedestrian safety. In support of Delaware's Complete Communities Initiative, DelDOT is establishing a Priority Area Program that will designate targeted areas where pedestrian safety and accessibility improvements are prioritized. Targeted areas would include those with high pedestrian activity, high accident locations and low income/at-risk neighborhoods. Complete Community Enterprise Districts (CCEDs) are a planning tool designed to facilitate development that prioritizes multimodal, walkability while discouraging automobile dominate transportation systems.

- ***BICYCLE NETWORK OF STATEWIDE IMPORTANCE AND BICYCLE DESIGN GUIDE***

A comprehensive plan for bicycle transportation would designate major bicycling corridors and connections. This plan would identify preferred routes and prioritize improvements for a regional, well-connected and low-stress bicycle network. Designated routes are typically at a regional scale and span multiple jurisdictions, and they may include trails as well as on-street facilities. A return-on-investment analysis will help to gauge the effectiveness of bicycle network funding in the areas of bicycle ridership, economic development and other public benefits. A bicycle design guide will provide guidance and recommendations using best practices for integrating bicycle facilities into the road network. The guide will include recommendations for various facility types, lighting, wayfinding and maintenance of traffic flow during construction.

- ***IMPROVED TRANSIT SERVICE***

A multifaceted approach to improving transit service and access will include providing additional transit centers and routes/express service, expanded service areas and increasing use of dedicated transit lanes. Geolocation technology in transit vehicles will improve the reliability of arrival times and other information for our customers. Automation technology will increase the efficiency of boarding and fare collection processes.

- ***HOMELAND SECURITY***

Some cargo moving through Delaware originates from international sources, and our freight network has nationally important connections. Interagency coordination is important for managing border security, cargo screening and tracking, protecting assets and developing contingency plans. Partnerships are needed to anticipate, screen, monitor and track movement of hazardous materials, and to have contingency plans in place for addressing emergency situations.

- **IMPROVED PUBLIC INPUT SYSTEM**

The public has a number of mechanisms to provide DeIDOT input for project ideas, maintenance needs and general inquiries or requests. To improve our interaction with the public, DeIDOT is exploring new outreach methods, including crowdsourcing technology and other communication techniques.

- **HAZARD MITIGATION AND FLOOD RESILIENCY PREPARATION**

DeIDOT has developed a Strategic Implementation Plan for Climate Change, Sustainability, and Resilience for Transportation to help prepare for emerging climate impacts and coordinate efforts across various state agencies. Further planning is needed to identify community-specific threats and a ranking program to identify which of DeIDOT's assets are most at-risk. These at-risk assets must either be upgraded to maintain transportation connectivity, relocated outside of flood prone areas, left in place with anticipated periodic closures and detours, or abandoned.

- **CONNECTED DATABASE MANAGEMENT SYSTEMS**

DeIDOT has a variety of systems to assess and manage the state's transportation network. DeIDOT is integrating many of the databases that support these systems in a connected manner that will increase efficiency in decision-making and project design. Continued investments in database technology will enhance our ability to leverage information for the benefit of our customers.

The DeIDOT Capital Transportation Program (CTP) is the [State Transportation Improvement Program \(STIP\)](#). It is a project scheduling and funding document to guide activities and identify transportation priorities. The projects listed in the document are also listed in adopted transportation plans involving local and regional governments, other agencies and the public. They have been reviewed for consistency with state and local land use plans and policies and to ensure that they meet special program eligibility and prioritization criteria, and they include only projects which have committed funding available.

Regional Transportation Planning

The Wilmington Area Planning Council (WILMAPCO) is the Metropolitan Planning Organization (MPO) for Cecil County, Maryland and New Castle County, Delaware. WILMAPCO plans and coordinates transportation investments in the region. One representative from New Castle County government sits on WILMAPCO's Council. The Council's responsibility is to adopt transportation plans and studies, set policy, and approve transportation funding in our region. WILMAPCO oversees the planning processes that help to prioritize and allocate the available funding. The general process begins with a planning study, which includes potential projects and recommendations which should be incorporated into the four-year Transportation Improvement Plan (TIP) and 20-year Regional Transportation Plan (RTP). WILMAPCO also develops the Unified Planning Work Program (UPWP) which outlines the planning activities for the coming year. As noted in the WILMAPCO [Planning Guide](#), "the RTP establishes regional transportation goals. Studies and initiatives at the regional and sub-regional level are pursued through the UPWP. Recommendations from these studies can then be included as part of the TIP for funding."

WILMAPCO's recently adopted [2050 Regional Transportation Plan](#) (RTP) identifies the long-term transportation needs in the region and outlines the projects and activities needed to address those needs. It contains a wide array of demographic and transportation data to describe both current and projected conditions. The plan identifies regional challenges, goals and transportation investments to meet mobility, accessibility and safety needs. The Key Challenges outlined in the 2050 RTP include continuing urban sprawl, high vehicle crash rates, and social inequities. The RTP goals are:

- Support sustainable economic development and goods movement
- Efficiently transport people

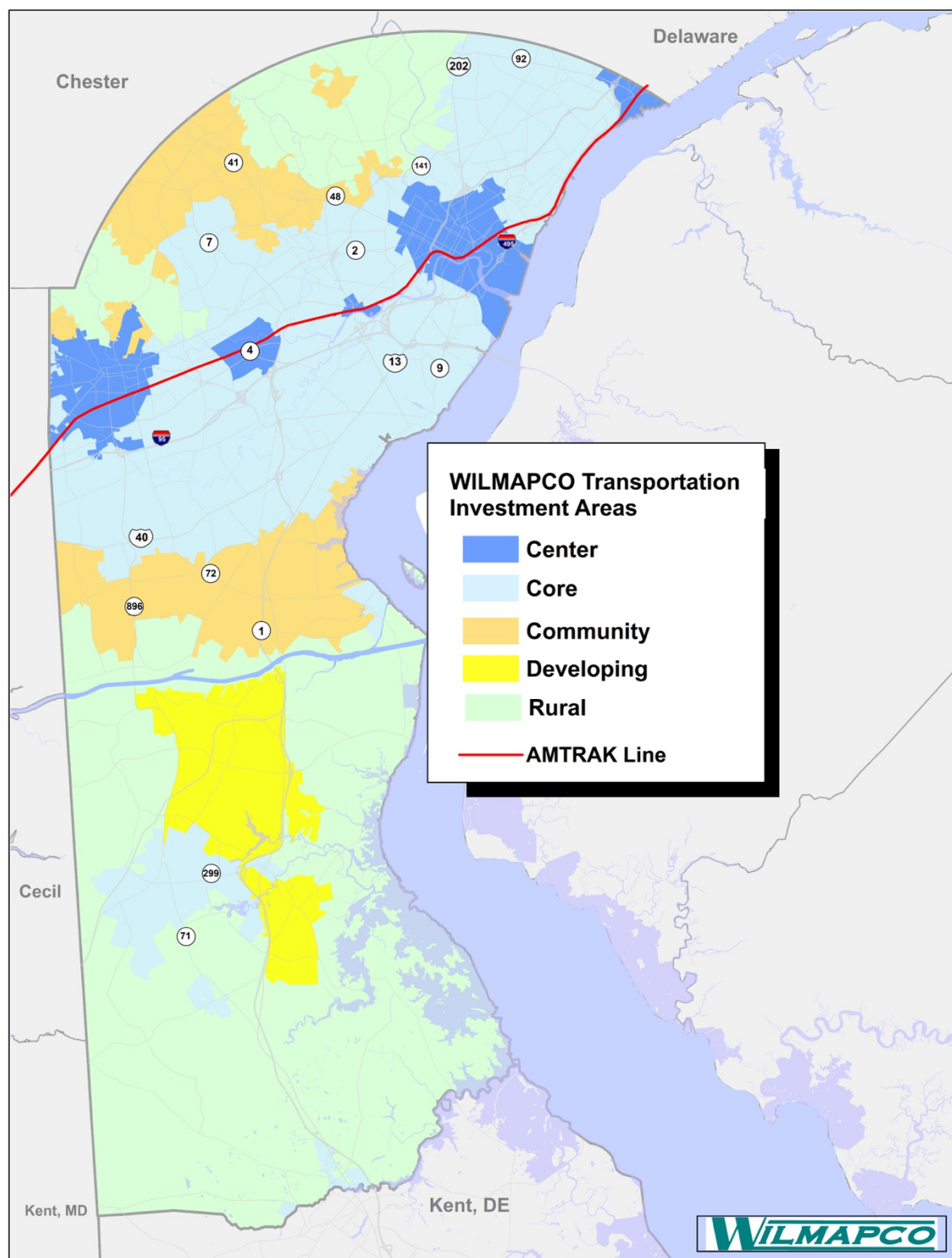
- Improve quality of life

Transportation Investment Areas

Transportation Investment Areas (TIAs) are used to track progress of the RTP and were developed by reviewing adopted state, county, and local land use plans. These areas are used to help make the decisions on where to focus transportation dollars, and which investments are appropriate for specific areas, in recognition of transportation's close relationship with land use and development. **Map F-11** shows the TIAs within New Castle County. The geographic boundaries of the TIAs are subject to change based upon this plan update. There are five types of TIAs. Descriptions of each and the associated transportation objectives are listed below:

- **Center:** High existing and planned concentrations of people and jobs with opportunities for significant re-development.
 - Transportation Objectives: Intensive transportation investment with an emphasis on public transportation (including rail and the most frequent bus service) and walking and bicycling improvements. New highway interchanges should be discouraged. High frequency bus service is appropriate.
- **Core:** Established places with a mixture of people and jobs, often along and nearby suburban highways.
 - Transportation Objectives: Maintain and manage the existing infrastructure while allowing for system expansion for all modes of transportation, except train stations and the addition of public transit centers. Moderate frequency bus service is appropriate here.
- **Developing:** Quickly developing places with unsettled land use and transportation patterns.
 - Transportation Objectives: Maintain and manage the existing and emerging infrastructure. Some system expansion will be necessary, but major capacity road expansions and interchanges should be discouraged. Infrequent bus service is appropriate.
- **Community:** Established places home to mostly single-family residential communities.
 - Transportation Objectives: Maintain and manage the existing infrastructure while allowing for some periodic system expansions. Infrequent bus service is appropriate.
- **Rural:** Agricultural and natural areas where urban development is not expected.
 - Transportation Objectives: preserve the existing infrastructure with an aim of protecting existing agriculture and natural resources. All system expansions apart from bicycling and walking paths should be actively discouraged. No fixed-route bus service is appropriate. Scenic byway easement purchases should be pursued where applicable.

Map F-101: Transportation Investment Areas



Source: WILMAPCO

Other Transportation Planning Initiatives:

Since the adoption of the 2012 Comprehensive Plan, WILMAPCO has completed several transportation plans related to New Castle County, including:

- [Ardentown Paths Plan](#) (November 2017)
- [Concord Pike Master Plan](#) (November 2020)
- [Governor Printz Corridor Study](#) (January 2021)
- [Churchmans Crossing Land Use and Transportation Plan](#) (January 2022)
- [Newport Train Station Feasibility Study](#) (July 2013)
- [Newport Transportation Plan](#) (January 2021)
- [Marshallton](#) (March 2014)
- [Route 40](#) (September 2014)
- [Red Clay Valley Scenic Byway Design Standards Overlay](#) (Nov 2016)
- [Route 9 Corridor Master Plan](#) (May 2017)
- [Route 9 Paths Plan](#) (September 2021)
- [Southern New Castle County Master Plan](#) (September 2020)
- [SR 141 Transportation and Landuse Plan](#) (Aug 2017)
- [Glasgow Avenue Planning Study](#) (Sept 2017)
- [New Castle County Bicycle Plan](#) (May 2020)

These plans, as well as [others](#) completed by WILMAPCO, provide specific information and guidance, to improve and enhance these areas to achieve local goals and objectives.

2019 Transportation Justice Plan: A Title VI, Environmental Justice, Americans with Disability Act, and Language Assistance Plan for the WILMAPCO Region

In the [2019 Transportation Justice Plan](#), WILMAPCO and the University of Delaware analyzed the WILMAPCO region for transportation connectivity. It considered how various areas and populations, like racial and ethnic minorities, low-income residents, disabilities and seniors, are served by transportation facilities and services.

The plan identified key destinations that are important for populations identified above to reach, like medical centers, grocery stores, libraries, etc. The plan demonstrated that in the WILMAPCO region homes are disproportionately automobile dependent. **Figure F-11** shows that 95% of homes are connected to the key destinations by car while bike connectivity (23%) from homes to key destinations outpaced average

transit connectivity (19%) and walking connectivity (7%). While car travel has provided an unprecedented level of independent travel for most families, people without cars often experience isolation. They are unable to travel to work, run errands, or visit friends in a reasonable walking, bicycling, or bus trip.

Average Percentage of Households Connected to Destinations (Combined), by Mode

WILMAPCO Region

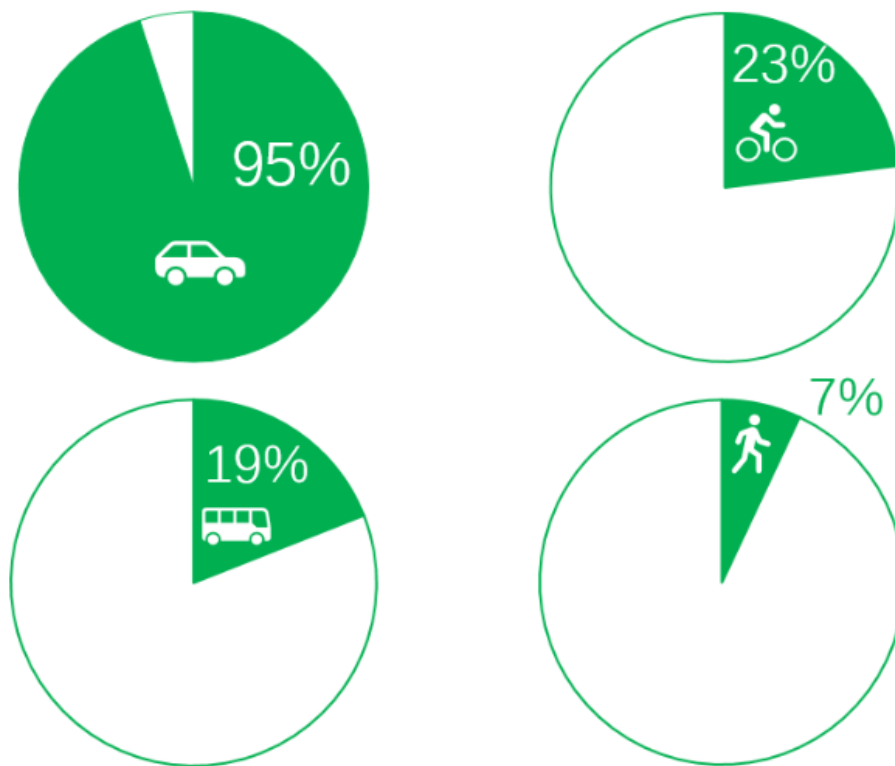


Figure F-11: Average Percentage of Households Connected to Destinations (Combined), by Mode
Source: WILMAPCO Transportation Justice Plan

The 2019 Transportation Justice Plan also analyzed the placement of suburban age-restricted communities and their connectivity to bus and pedestrian infrastructure. Age-restricted communities are developments where all or most residents must be over 55 years. In the WILMAPCO region, suburban existing and planned age-restricted communities are poorly linked to public transit. In New Castle County, only 17% of communities had a good connection to a good frequency bus route. These places are found along major highways linking Wilmington to the Greater Newark area. In the report, “Good frequency” is defined as a route that is operating every half-hour or better around mid-day. Only 9% of suburban age-restricted communities had solid sidewalk connections to surrounding destinations.

Underserved areas and populations must be better served by access to frequent, reliable, convenient, and affordable public transit and well-connected pedestrian infrastructure in the future, which is something the Comprehensive Plan strives to achieve through better planning strategies, including improved connected pedestrian/bicycle infrastructure; targeting public and private investment to improve multi-modal accessibility; and requirements of interconnection of streets within developments with existing streets and transportation networks.

Sea-level Rise Vulnerability Assessment

In 2011, WILMAPCO produced a [Sea-level Rise Vulnerability Assessment](#) to identify at-risk transportation infrastructure in the region using locally developed inundation scenarios. It advanced larger sea-level rise (SLR) adaptation planning efforts already underway in the region and addressed a key aspect of climate change.

According to the report, geologic differences between the Chesapeake Bay and the Delaware River result in greater SLR impacts in New Castle County. Some 12% of land there may be exposed to inundation at a 1.5-meter rise; a shade over 1% of Cecil County's land would be tested in the same circumstance.

These SLR challenges include major population centers, home to crucial infrastructure, such as the region's principal city, Wilmington, as well as the City of New Castle. More than 1,600 residential and commercial properties risk inundation at a 1.5 meter rise regionally. The report also found that neighborhoods with above average concentrations of Black/African American and low-income residents were more likely to face inundation.

SLR presents challenges to key facets of our transportation network. Segments of highways, such as Route 9 and US 13 along the Delaware River, risk increased flooding or complete inundation.

Segments of near-river railways such as the New Castle County Secondary and Norfolk Southern's Port Road Branch could be at risk. Wilmington's train station risks inundation with a one-meter rise. Structures at the Port of Wilmington may be inundated with a rise of as little as 0.5 meters. Additionally, at the time of the report, 60 funded and unfunded regional transportation projects at-risk of inundation were flagged in the report, along with impacted fixed-route bus routes, evacuation routes, bridges and marinas.

A "Critical Roadway Impact Index" was developed to help identify the most crucial of the key roadway segments challenged by SLR. The index considers a road segment's inundation level, traffic characteristics and the local demographics to begin to understand the segment's comparative importance within the regional system. Inundated stretches of US 40 in Elkton and Walnut Street in Wilmington received the highest scores.

Top Priority Pedestrian Segments

WILMAPCO developed a [Top Priority Pedestrian Segments](#) study in January 2021 to identify a process to more efficiently allocate non-motorized funding. It identifies 20 top regional pedestrian corridors and the main walkability concerns in those locations. As suburban areas developed and sprawl increased in the region, transportation became and remains most influenced by land development and highway interests, instead of interests in public transit or pedestrian/bicycle infrastructure.

Pedestrian Priority Areas helped to focus future pedestrian facility studies and investments and were defined as those areas within a municipality, one-mile of a school and one-quarter mile of a bus stop.

The study evaluated the region's 33,000 individual roadway segments on an index. To determine the segment's ability to generate pedestrian activity and its need for pedestrian safety enhancements, the index considered measures such as surrounding population and employment density, the pedestrian crash rate, and proximity to shops, libraries and community centers. The resulting Prioritized Pedestrian Network (PPN) was then further updated by reviewing more closely at the 20 highest-scoring corridors, on which walkability assessments were conducted to identify poor infrastructure and broken pedestrian connections.

The highest-scoring segments are generally found in communities along the I-95/US 40 belt in the north of the region. Wilmington has the heaviest concentration of high-scoring segments, especially the Central Business District and adjoining neighborhoods. Stretches of highway (namely SR 2, SR 4, US 40 and US

13) and nearby communities and towns (Elsmere and Newport) also scored high in the index in New Castle County, as do downtown Newark, New Castle and Middletown.

Sub-area Plans and Corridor Studies

New Castle County Department of Land Use partners with other agencies, organizations, and non-profits to identify corridors or designated areas on which to develop sub-area or corridor plans for reaching shared objectives. These [sub-area studies](#) support planning at a more local scale where specific community ideas and concerns should be more fully vetted, which is important in a County as large and diverse as New Castle County. The identified areas are good opportunities to localize planning and focus investments so that improvements and enhancements meet local and regional needs.

In recent years, these studies and plans have included park surveys and plans; corridor studies and master plans; a county-wide bicycle plan, and flood and stormwater studies. Current and recently completed plans are listed below. Additional information about these additional planning efforts are found in the [Community Planning and Design element](#).

- Churchman's Crossing
- Eden Park and Hamilton Park Community Survey
- Glasgow Avenue
- North Claymont Area Master Plan
- Route 9 Corridor Master Plan
- Southern New Castle County Master Plan
- US 202 Corridor Master Plan
- Port Penn Flood Study
- Route 141 Study

Looking forward

New Castle County residents, regardless of income, age, ability, or race, should have safe and efficient access to a multimodal transportation system, and it is important that the system is adaptable to accommodate future innovations. Transportation needs and demands are constantly changing, and we must be always looking forward and working to determine what transportation will look like decades from now. Transportation and land use must be coordinated to create livable, vibrant places and ensure that all New Castle County residents have safe access to employment, community services, retail, and other daily needs. Our strategies will seek to reduce traffic-related fatalities, encourage development and improvement of transit, bicycle and pedestrian networks to improve access to resources and encourage physical activities, preserve existing transportation networks and prepare for emerging transportation technologies to ensure that they have positive impacts on our communities. Achieving this will require important changes in land use regulations and policies as well as having strong partnerships and coordination with DeIDOT and WILMAPCO. As a voting member of WILMAPCO Council, and an active partner in transportation and land use plans such as the *Sub-area Plans and Corridor Studies*, it is imperative that we champion efforts such as Complete Streets¹⁰ when crafting these studies and in

¹⁰ "Complete Streets are streets designed and operated to enable safe use and support mobility for all users. Those include people of all ages and abilities, regardless of whether they are travelling as drivers, pedestrians, bicyclists, or public transportation riders. The concept of Complete Streets encompasses many approaches to planning, designing, and operating roadways and rights of way with all users in mind to make the transportation network safer and more efficient. Complete Street policies are set at the state, regional,

subsequent land use policies and regulations. This will ensure that we better coordinate land use and our transportation system thus accommodating for present and future challenges and best serving our communities.

Related Goals, Objectives, and Strategies:

- 8. Goal: All New Castle County residents will have safe, efficient access to employment, retail services, parks, and other daily needs including by walking, bicycling, public transit, and emerging modes. The transportation and land use systems are integrated and support each other to create livable places and a vibrant county.
 - 8.1. Objective: Establish a Vision Zero policy and coordinate with DeIDOT and WILMAPCO toward reaching zero traffic fatalities by 2050.
 - 8.1.1. Strategy: Support DeIDOT & WILMAPCO's efforts to address crash hot spots (including pedestrians, bicyclists, and motorcyclists) through safety improvements, such as traffic calming features and roundabouts
 - 8.1.2. Strategy: Encourage DeIDOT to utilize Intelligent Transportation System (ITS) infrastructure/services and associated technology to improve traffic operations, transit services, and safety
 - 8.2. Objective: Enhance and increase accessibility by all modes to/between local and regional destinations, including diverse housing, jobs, and goods/services.
 - 8.2.1. Strategy: Implement the County's Bike Master Plan to Increase the miles of safe, convenient, connected pedestrian/bicycle transportation network; monitor and update the plan at 5 years.
 - 8.2.2. Strategy: Create pedestrian- and bicycle-friendly streetscapes.
 - 8.2.3. Strategy: Adopt best-suited metrics of accessibility with regulations and policies (VMT per capita, trip-based delay, etc.)
 - 8.2.4. Strategy: Prioritize target areas and facilitate public and private investment to improve multi-modal accessibility (community area master plans, CCEDs, TIDs, around transit stations)
 - 8.2.5. Strategy: Require interconnection of streets within developments and existing streets and transportation networks
 - 8.2.6. Strategy: Incentivize mixed-use and transit oriented/supportive development areas that balance mix of jobs, housing, and other uses that support access to daily needs. (See Economic Development and Housing elements)

and local levels and are frequently supported by roadway design guidelines." Additional information can be found at: <https://www.transportation.gov/mission/health/complete-streets>

- 8.2.7. Strategy: Reevaluate standards and threshold requirements linking transit provision and development
- 8.2.8. Strategy: When reviewing age-restricted developments, work with DeIDOT and DTC to evaluate paratransit needs and opportunities for fixed route connectivity rather than exclusively expanding paratransit.
- 9. Goal: Transportation of people and goods is efficient and fair. The transportation system and land use/development are coordinated; development occurs in areas with ample existing or planned transportation infrastructure (and other infrastructure) and decisions are fiscally sound and fair for present and future generations.
 - 9.1. Objective: Preserve existing roads and transportation infrastructure, while limiting widening and creation of new multi-lane roadways. Make the best use of our past investments and their capacity through innovation and collaboration.
 - 9.1.1. Strategy: Prioritize multimodal transportation connection opportunities when reviewing rezoning applications for residential transition zones (ST) and regional non-residential districts (CR, OR, BP, I, and HI).
 - 9.1.2. Strategy: Work with DeIDOT to mitigate the impacts of e-commerce expansion and related demands on the road network, final-mile network, and around new distribution facilities, and where possible prevent/eliminate heavy truck travel through existing residential communities.
 - 9.1.3. Strategy: Foster an understanding that infrastructure costs not only to build or install, but there is also an obligation and expense to maintain.
 - 9.1.4. Strategy: Work with DeIDOT and WILMAPCO to account for final mile networks in plan reviews by integrating the checklist developed in the Statewide First/Final Mile Network Study to help land use agencies in accounting for final mile freight provisions.
 - 9.1.5. Strategy: Prioritize freight connectivity for areas/industries in Freight Intensive Sectors (FIS) (40% of all employment in Delaware) that are highly dependent on goods movement for marketplace competitiveness.
 - 9.1.6. Strategy: Support the implementation of the WILMAPCO 2021 Delaware Statewide Truck Parking Study.
 - 9.1.7. Strategy: Work with WILMAPCO and DeIDOT to plan for connected and automated vehicle (CAV) technology, including infrastructure development to facilitate Level 4 autonomy (i.e., trucks operating without a human driver under limited conditions)
 - 9.2. Objective: Plan for emerging transportation modes and technologies (e.g. renewable energy-based, autonomous, e-bikes/scooters, etc.) to leverage benefits and minimize potential negative externalities; embrace technology designed to address existing infrastructure issues, benefit the environment, and improve how people experience travel.
 - 9.2.1. Strategy: Support transition to electric and other renewable and efficient vehicles
 - 9.2.2. Strategy: Require/incentivize accommodations for electric vehicles

- 9.2.3. Strategy: Partner with DeIDOT, DTC, and others in the public and private sector to foster opportunities for applying emerging technologies in transportation/accessibility. (For example: a collaboration between a car-sharing non-profit, local government, and energy company are launching a fleet of 150 shared electric vehicles (EVs) and install 70 EV charging stations in Minnesota.)
- 9.2.4. Strategy: Conduct study to understand how to best design and regulate for new retail and distribution
- 9.2.5. Strategy: Conduct study to understand how to best design and regulate for Connected and Automated Vehicles (CAVs) and other emerging transportation technology
- 9.3. Objective: “Right-size” traffic/congestion and reduce its associated pollution burdens (both local and macroclimate).
- 9.3.1. Strategy: work with transportation-focused agencies to evaluate and adopt traffic metrics that sustain mobility and support reductions in congestion related emissions, such as Vehicle Miles Traveled (VMT).
- 11. Goal: The built environment and streetscapes promote physical activity and healthy lifestyles including options for walking and biking. All residents have safe access to physically active and healthy lifestyles.
- 11.1. Objective: Increase the percentage of people who walk, bike, and take transit to work (from 6% in 2018).
- 11.1.1. Strategy: Increase trees and landscaping to promote safer, more comfortable spaces (See Conservation element)
- 11.1.2. Strategy: Increase use of varied, pedestrian-scaled building form and frontage, with streetscapes that are physically and visually connected, providing a safe, low-stress experience
- 11.1.3. Strategy: Connect the low-stress bike and walking network
- 11.2. Objective: Increase access to healthy food retailers, medical care, and other daily needs.
- 11.2.1. Strategy: Establish incentives and flexibility in regulations to encourage these types of development
- 11.2.2. Strategy: Work with transportation partners to support improved accessibility
- 11.2.3. Strategy: Seek and support other emerging solutions for affordable provision of daily needs
- 11.2.4. Strategy: Direct funds for affordable housing to connected, accessible, and walkable locations close to transit, schools, daycare, jobs, shops, and services

See Also:

Economic and Community Development Element, Goal 5

Community Planning and Design, Goal 10

Climate Change and Hazard Mitigation Element, Goal 14



ELEMENT G

Utilities, Water & Sewer

G. Utilities, Water, and Sewer Element

Element Defined

Safe, adequate, and sustainable water and sewer infrastructure is critical to guiding New Castle County's planned growth and development, as well as supporting its residents, businesses, and natural environment. This chapter summarizes how water and sewer utilities are provided in New Castle County in 2020, challenges and opportunities currently faced or anticipated in the future, and projections of future supply and demand. At the end of the chapter are goals, objectives, and strategies for how the County and its partners should best provide these vital services for a sustainable future.

Access to safe, clean, affordable drinking water is critical to quality of life in New Castle County. Our drinking water comes from watersheds, which are areas of land that drain all the streams and rainfall to a single point, such as the outflow of a reservoir, mouth of a bay, or any point along a stream channel. Watersheds consists of surface water, like lakes, streams, reservoirs, and wetlands, and all the underlying groundwater. The New Castle County Unified Development Code defines groundwater as the portion of subsurface water that occurs beneath the water table in soils and geologic formations that are fully saturated. To provide drinking water, groundwater is drawn up from aquifers by public and private wells.

A healthy watershed provides clean drinking water, irrigation and healthy soil for crop production, protection from flooding, and adequate wildlife habitat in addition to providing enjoyment and outdoor recreation opportunities. Unfortunately various forms of pollution, including runoff and erosion, interferes with the health of the watershed. According to the Delaware Water Resouce Center, the major causes of Delaware's surface water quality problems are pathogenic bacteria, nutrient over-enrichment, toxic compounds, and the physical degradation of stream habitats. Delaware's ground waters have also been impacted by nutrients from fertilizers, animal manure, and septic systems; by leakage of contaminants such as petroleum from underground storage tanks; and by salt water intrusion. Protection of the natural resources in our watershed is essential to maintain the health and well being of all living things, both now and in the future.

What We Heard

During the NCC2050 public involvement process, residents expressed that access to safe, clean, affordable drinking water and wastewater services is important as is maintaining and repairing aging water and sewer infrastructure. Additionally, water pollution, failing retention basins, and flooding were cited as important issues. Green infrastructure and riparian buffers were suggested strategies to address these issues.

"Water resources are also important for recreation and biodiversity in addition to drinking water and flooding." –Let's Talk Workshop: Places and Spaces (November 9, 2020) participant

New Castle County Today

Water Supply

According to the Delaware Department of Natural Resources and Environmental Control (DNREC), in New Castle County, 75% of the drinking water is obtained from surface water sources (rivers, creeks, and streams) and 25% from groundwater, sourced from aquifers supplied by rainfall. The Delaware River Basin and a sub-basin, the Christina River Basin, are the primary sources of all drinking water for New Castle County. This watershed is shared with parts of Pennsylvania and Maryland. New Castle County is downstream of these areas and any impacts to those regions will affect our county.

The Delaware River is the longest un-dammed river in the United States east of the Mississippi, extending 330 miles from the confluence of its East and West branches at Hancock, New York to the mouth of the Delaware Bay where it meets the Atlantic Ocean. The Delaware River Basin provides drinking water to New York, New Jersey, Pennsylvania, and Delaware. **Figure G-1** displays the Delaware River Basin.

The Christina River Basin provides 75% of the drinking for northern New Castle County. The Christina River Basin is a watershed that drains portions of Pennsylvania, Delaware, and Maryland, and includes the Christina River, Brandywine Creek, White Clay Creek, and Red Clay Creek.¹ **Figure G-2** displays the Christina Basin and its sub-watersheds.



Figure G-1: Delaware River Basin; Source:

¹ Fast Facts: Protecting the Sources of Your Drinking Water, Source Water Program, Division of Water Resources, Delaware Dept. of Natural Resources and Environmental Control, April 2007

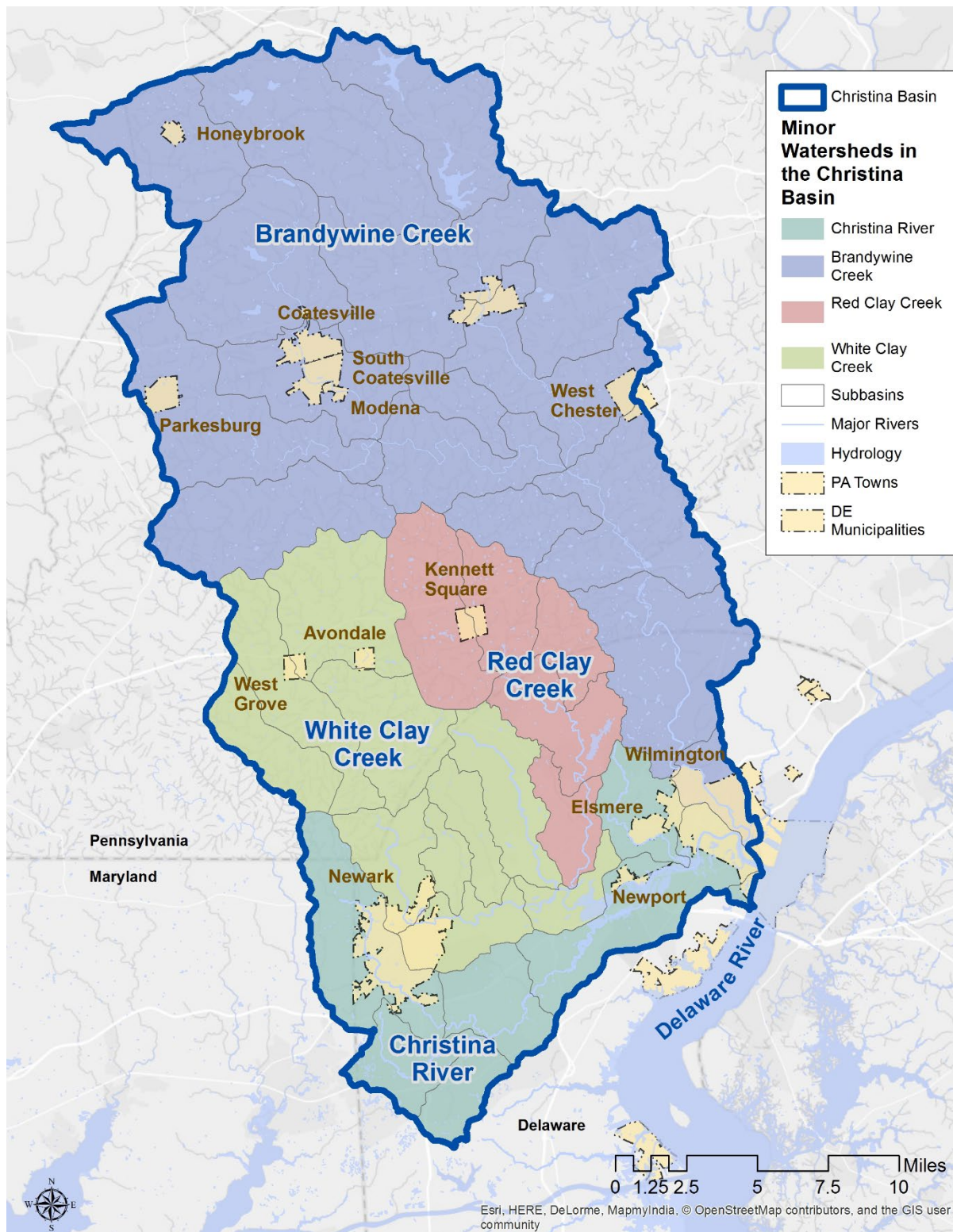


Figure G-2: Christina River Basin; Source: University of Delaware Water Resource Center

In general, water use in New Castle County is fairly consistent; however, southern New Castle County (south of the Chesapeake & Delaware Canal) uses significantly more water for agricultural irrigation while the northern portions of the county tend to have more commercial and industrial users.

Northern New Castle County

North of the Chesapeake and Delaware (C&D) Canal, 80% of water users receive their drinking water from one of the eight water providers (five are public and three are private). These water providers are responsible for collecting, treating, and distributing water, according to state and federal rules and regulations.² Public and private wells provide drinking water to the remaining residents. **Map G-1** displays New Castle County's water supply areas.

Northern New Castle County Water Providers

Public:

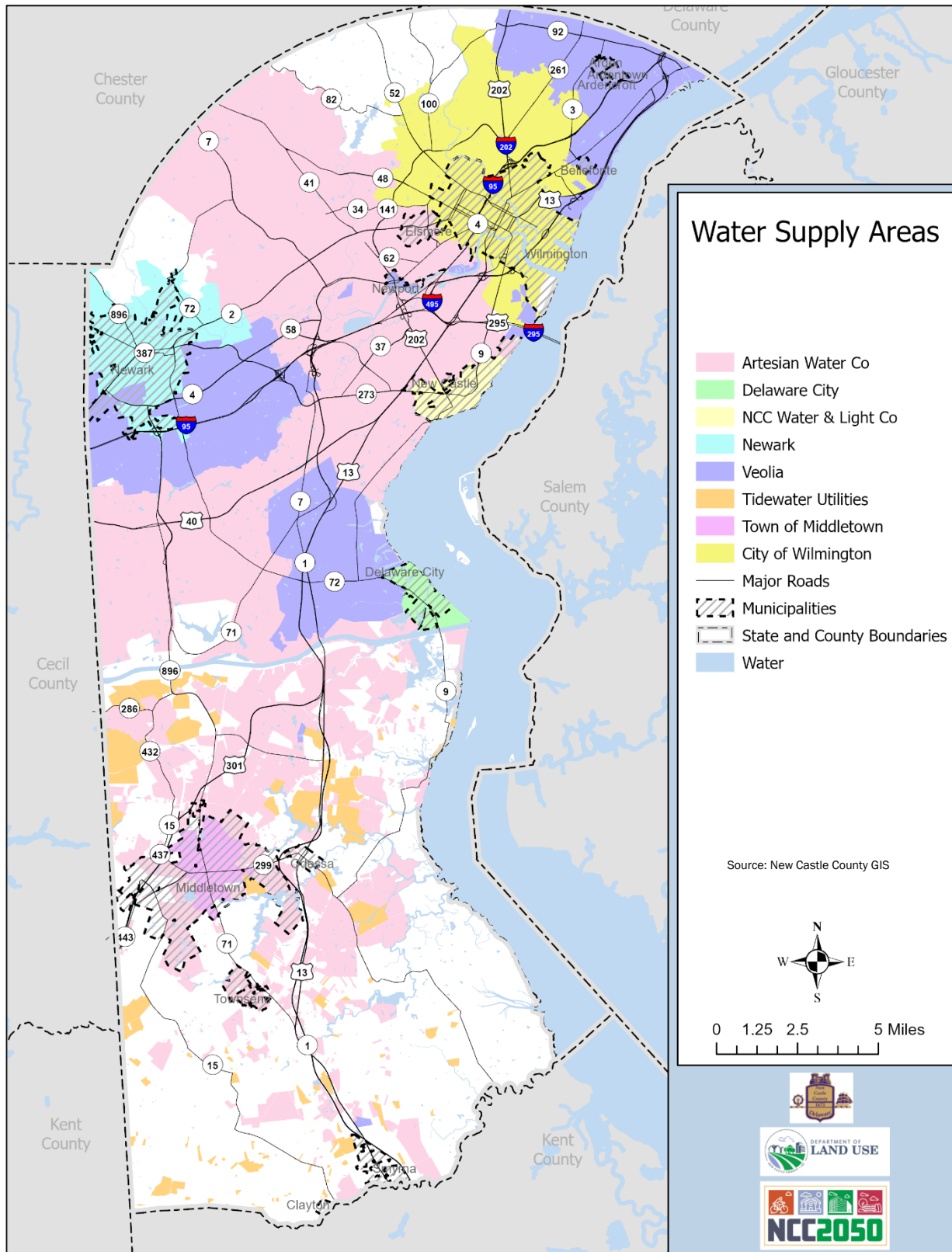
- City of Newark
- City of Wilmington
- Town of Middletown
- Delaware City
- City of New Castle Municipal Services Commission (NCC Water and Light Co.)

Private:

- Artesian Water Company
- Veolia (Formally SUEZ Delaware)
- Tidewater Utilities

² Delaware's drinking water: Where does it come from and is it safe?, DelawareOnline/Delaware News Journal, Jan. 22, 2020, <https://www.delawareonline.com/story/news/local/2020/01/22/delawares-drinking-water-where-does-come-and-safe/2806669001/>

Map G-1: Water Supply Areas



Water Demand

According to *Water Supply and Demand Projections in Northern New Castle County through 2050* from the University of Delaware Water Resources Center (DWRC), 2020 water demand as recorded by the water providers in northern New Castle County was below normal and ranged between 49 and 66 million gallons per day (mgd). Looking forward to 2021, base demands are selected as the maximum monthly water demand recorded for each provider for the five-year period from 2016 through 2020. Water demands (*Table G-1*) are projected from 60.8 mgd recorded in 2020 to 65.0 mgd in 2021, 66.3 mgd in 2025, 68.0 mgd in 2030 and 75.1 mgd by 2050. Projected 2024 demands based on 0.5% annual population growth for New Castle County as reported by the Delaware Population Consortium in October 2020.

Table G-1: Maximum Monthly Water Demand in Northern New Castle County

Purveyor	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2035	2040	2045	2050
Wilmington	17.2	18.4	17.0	17.6	18.3	17.4	18.4	18.5	18.6	18.7	18.8	19.2	19.7	20.2	20.7	21.3
Artesian Water	19.2	19.3	18.6	20.0	21.0	20.8	21	21.1	21.2	21.3	21.4	22.0	22.5	23.1	23.7	24.3
SUEZ DE	20.4	18.9	18.1	21.2	18.2	18.6	21.2	21.3	21.4	21.5	21.6	22.2	22.7	23.3	23.9	24.5
Newark	3.5	3.8	3.3	3.5	3.5	3.5	3.8	3.8	3.8	3.9	3.9	4.0	4.1	4.2	4.3	4.4
New Castle MSC	0.5	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7
Total (mgd)	60.8	61.0	57.5	62.8	61.5	60.8	65.0	65.3	65.7	66.0	66.3	68.0	69.7	71.5	73.3	75.1

Source: *Water Supply and Demand Projections in Northern New Castle County through 2050*

Data from 2001-2016 shows that per capita water demand in northern New Castle County has declined from a high of 165 gallons per capita per day (gpcd) in 2001 to 125 gpcd by 2015 and is projected to decline and level off to near 120 gpcd by 2030. The decline in per capita water demand is thought to be based on a variety of factors including growing water conservation by consumers, conservation water rates, rehabilitation of leaking water mains, and maturation of neighborhoods that require less lawn watering. Since per capita water demand is declining and population is projected to level off and slightly decline, the projected water demands in northern New Castle County through 2050 are conservative.

Southern New Castle County

Groundwater drawn from aquifers is the sole source of drinking water in Southern New Castle County. South of the C&D Canal, where there are approximately fourteen major aquifers, all of the water is drawn from public and private wells. According to the *Water Supply and Demand in Southern New Castle County through 2050* report, there are over 4,600 individual wells in southern New Castle County, with the majority located in the areas north of Middletown, Odessa, and Townsend. Other wells include community wells, such as the Mount Pleasant Trailer Park and Cantwell Water Company, and non-community wells to serve area businesses, farms, golf courses, and nurseries.

Public Community Wells

- Artesian Water Company (26 wells)
- Artesian Water Company, Delaware Correctional Center (4 wells)
- Tidewater Utilities (24 wells)
- Town of Middletown (4 wells)
- Mount Pleasant Trailer Park (2 wells)
- Cantwell Water Company (2 wells)

Self-Supplied Non-Community Wells (20 wells)

- Transient: Restaurants, stores, hotels, parks
- Non-Transient: Schools, daycare centers, office, factories

Irrigation Water Supplies

- Farms (26 wells)
- Golf courses, nurseries (1 well)

Water Demand

The anticipated demand for individual wells is low due to the trend of development towards larger subdivisions (greater than 25 units), which are required by the Unified Development Code (UDC) to be served by public water. The number of individual wells is anticipated to only increase by 0.5 percent through 2050. The anticipated increase in demand for public water corresponds with the projected increase in population over time. The increase in demand for public water is anticipated to peak in 2020 and decrease into 2050. Based on the population projections, there is adequate groundwater available to service the increase in population and associated households. **Table G-2** projects public water demands through 2050 assuming increases in demands coincide with population growth.

Table G-2: Public Water Demand in Southern New Castle County

Year	2010	2020	2030	2040	2050
% increase in population	--	18.0	15.7%	13.6%	11.9%
Population	52,454	61,882	71,589	81,296	91,002
Less population individual wells	14,530	15,266	16,039	16,500	16,650
Population public water supply	37,924	46,616	55,550	64,796	74,352
% increase public water supply		22.9%	19.2%	16.6%	14.7%
Water Purveyor	(mgd)	(mgd)	(mgd)	(mgd)	(mgd)
Artesian Water Co.	2.3	2.8	3.4	3.9	4.5
AWC: DE Correctional Center	1.7	1.7	1.7	1.7	1.7
Tidewater Utilities	1.7	2.1	2.5	2.9	3.3
Middletown	1.7	2.1	2.5	2.9	3.3
Self-Supplied Non-Community Wells	0.3	0.3	0.3	0.3	0.3
Peak Daily Public Water Demand	7.7	9.0	10.4	11.7	13.2
Individual Wells (0.5% /yr)	1.5	1.5	1.5	1.5	1.6
Potable Peak Daily Demand	9.2	10.5	11.9	13.3	14.7
Farm Irrigation (wet)	0.8	1.0	1.1	1.3	1.5
Farm Irrigation (dry)	2.7	3.2	3.8	4.4	5.0

Source: Water Supply and Demand in Southern New Castle County through 2050

The *Water Supply and Demand in Southern New Castle County in 2050* report from (DWRC) shows that water demand for farm irrigation is projected to continue to rise slightly in southern New Castle County. From 2012 to 2017, the number of farms has declined from 374 to 361 and farmland has increased slightly from 64,169 to 67,455 acres in southern New Castle County while irrigated farmland has increased by 510 acres. Since farm irrigation draws mostly from shallow aquifers and public water supplies pump from deeper aquifers, conflicts between the users should be minimized.

Table G-3 compares water supply and demand for public water providers for 2010 and 2050 population conditions. In 2010, public water suppliers had existing supplies (15.7 mgd) that exceeded peak daily demands (8.2 mgd) thus accounting for a healthy surplus (+7.5 mgd). By 2050, the public water providers are projected to have supplies (15.7 mgd) that exceed the forecasted peak daily demand (13.6 mgd) for a surplus of 2.1 mgd. Surplus/deficit calculations are based upon peak daily supplies in accordance with current DNREC water allocation permits.

Table G-3: Water Supply and Demand in Southern New Castle County (2020-2050)

Water Purveyor	Current Max Daily Allocation (mgd)	2020 Peak Day Demand (mgd)	2030 Peak Day Demand (mgd)	2040 Peak Day Demand (mgd)	2050 Peak Day Demand (mgd)	2020 Surplus/ Deficit (mgd)	2030 Surplus/ Deficit (mgd)	2040 Surplus/ Deficit (mgd)	2050 Surplus/ Deficit (mgd)
Artesian Water Co.	8.8	2.8	3.4	3.9	4.5	6.0	5.4	4.9	4.3
AWC: DE Correctional Center	2.1	1.7	1.7	1.7	1.7	0.4	0.4	0.4	0.4
Tidewater Utilities, Inc.	2.7	2.1	2.5	2.9	3.3	0.6	0.2	-0.2	-0.6
Middletown	1.7	2.1	2.5	2.9	3.3	-0.4	-0.8	-1.2	-1.6
Self-Supplied	0.4	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1
Public Water Supply	15.7	9.0	10.4	11.7	13.2	6.7	5.3	4.0	2.5
Individual Wells	1.5	1.5	1.5	1.5	1.6	0.0	0.0	0.0	-0.1
Total Potable Water	17.2	10.5	11.9	13.3	14.7	8.8	2.8	3.4	3.9

Source: Water Supply and Demand in Southern New Castle County through 2050

Water Supply and Demand in Southern New Castle County through 2050 also found that there will be sufficient groundwater availability to meet peak demands from public water supply uses based on population growth estimates provided that:

- Public water supply and irrigation wells are pumped in accordance with DNREC water allocation limits. DNREC should continue to monitor demands and water levels from allocated public water supply wells and irrigation wells so as not to diminish the capacity of irrigation wells for producers that wish to sustain farming in southern New Castle County.
- Water providers interconnect between and within systems, add new finished water storage and aquifer storage and recovery, and transport water from aquifers with excess availability south of Townsend to growth areas between Middletown/Odessa and the Chesapeake & Delaware Canal

The DWRC also recommends, to protect the quantity and quality of aquifers that provide sole source drinking water, subdivisions should be served by public water systems rather than by individual wells. As a result, the New Castle County Unified Development Code (UDC)³ requires that new subdivisions with more than 25 lots be served by public water systems. For purposes of water quantity, quality and security, New Castle County should work with the water purveyors/utilities, and public service commission to look for opportunities for interconnectedness of the system as a whole and to connect to public water supply as part of a strategy to prevent water supply disruptions in those communities of 25+ units that were developed on private well systems prior to the code requirement being added.

Climate Change and Saltwater Intrusion in Southern New Castle County

Water Supply and Demand in Southern New Castle County through 2050 outlined possible impacts of climate change on water in southern New Castle County. A comparison of air temperature data and water demand data in New Castle County showed that water demand increases by 3% for every 1% increase in maximum air temperature. If summer maximum air temperatures are projected to increase by 3° F by 2020-2039 (or 3.3%), then peak water demand may increase 9.9% to 10.1 mgd by 2020-2039 due to warming. By 2050, projected water demands in southern New Castle County will increase 52% due to population growth and 59% if climate change is accounted for.

As sea levels rise as a result of climate change, salt water will make its way further inland and into the underground aquifers that supply water for drinking and agricultural uses. This is called saltwater

³ Section 40.12.115 and Section 40.22.410

intrusion, or the process of saltwater moving underground into areas of freshwater in an aquifer where water is present, as defined by [DNREC](#). Shallow coastal groundwater aquifers and drinking water sources could be penetrated by salt water and become saline. DNREC has conducted regular monitoring of saltwater intrusion for multiple decades. Data has not indicated any reason for concern. With changes that climate change will bring, a review of adequacy of monitoring program should be considered. More information about intrusion is found in the [Climate Change & Resiliency element](#).

Source Water Protection

Source water, including rivers, streams, lakes, reservoirs, springs, and groundwater, provide water to public drinking water supplies and private wells. These areas also include wellhead areas, excellent ground-water recharge potential areas, and surface water supply areas within watersheds. Source water protection is the wise use of land around drinking water sources to reduce risks associated with exposure to contaminated water.

The Source Water Assessment and Protection Program (SWAPP), created as part of the Safe Drinking Water Act Amendments of 1996, has the expressed goal of achieving better protected public drinking water resources by providing local and state governments and the public more information about those resources. DNREC has the lead role in the development and implementation of the Delaware SWAPP. The Delaware Division of Public Health and the Water Resources Agency, Institute for Public Administration at the University of Delaware, closely supports its work.

The State of Delaware Source Water Protection Law of 2001 (7 Del. C. 6081, 6082, 6083) requires local governments with year-round populations of 2,000 or greater to implement measures to protect the quality and quantity of public water supplies within delineated surface water, wellhead, and ground-water recharge areas by 2007. Since 1987, the University of Delaware has administered the Water Resource Protection Area Program for New Castle County. The purpose of the WRPA protection standards in the New Castle County Unified Development Code is to protect the quality and quantity of surface water and groundwater supplies. Under the Unified Development Code, all development within recharge, wellhead, Cockeysville formation, and reservoir water resource protection areas are not permitted to exceed 20% of impervious cover or disturb more than 50%. Applications that propose exceeding either of these thresholds must provide an Environmental Impact Analysis (EIA) and may be subject to Resource Protection Areas Technical Advisory Committee (RPATAC) and Board of Adjustment (BOA) for recommendation and approval which would include conditions to recharge and monitor. Presently, over 20% of New Castle County land area is protected by the WRPA provision of the Unified Development Code.

Map G-2 shows the Water Resource Protection Areas within New Castle County, including wellhead protection areas and recharge areas. A wellhead protection area is the surface and subsurface area surrounding a public water supply well through which contaminants could reach the well. Groundwater recharge areas are defined as areas with very permeable soils where recharge occurs quickly.

Water Quality

Delaware has established pollution reduction targets for watersheds that do not meet water quality standards set to protect waterways for drinking, fishing, swimming, boating, or to support aquatic life. These targets, or Total Maximum Daily Loads (TMDLs), have also been established for the Chesapeake Bay and its tributaries through the Chesapeake Bay Program under the United States Environmental Protection Agency (EPA), in cooperation with member states and for tributaries of the Delaware Estuary. All major watersheds within southern New Castle County experience impairment due to excess nitrogen and phosphorous. Nitrogen and phosphorus pollution frequently come from wastewater, animal feed lots, and polluted runoff from fertilized crop land and lawns. Vehicle exhaust and industrial sources, such as power plants, also contributes to nitrogen pollution.

Several governmental agencies and organizations have a role in regulating water supply in Delaware:

DNREC's Water Supply Section is charged with managing and issuing well construction and use permits for wells withdrawing 50,000 gallons per day (gpd) or less and with permitting water withdrawals of over 50,000 gpd. Withdrawals of over 100,000 gpd within the jurisdictional area of the Delaware River Basin Commission (DRBC) must also receive approval from the DRBC. In addition, the Water Supply Section conducts long-term water supply planning, water conservation efforts, and coordinates with other organizations in these pursuits.

The Delaware Water Supply Coordinating Council (WSCC) is charged with developing new water supplies in New Castle County and working cooperatively to manage water supplies more efficiently. The Council includes representatives from the Office of the Governor, several state agencies, the Delaware Geological Survey, the Water Resources Agency at the University of Delaware, the Delaware River Basin Commission, all three county governments, public and private water utilities, local governments, the Delaware Rural Water Association, businesses, community groups, and more. The group is chaired by the Secretary of the Department of Natural Resources and Environmental Control (DNREC).

The Water Resources Agency (WRA) at the University of Delaware provides [services](#) to Delaware's governments as the State Water Coordinator, as a voting member of New Castle County Resource Protection Area Technical Advisory Committee (RPATAC), as a local Christina Basin watershed coordinator, and as the lead agency in charge of implementing a Source Water Protection Plan for Delaware's four drinking water intakes.

According to the [City of Wilmington Water Supply Intake story map](#), Source Water Assessment Plans identify source water areas and determine the vulnerability and susceptibility of the source water to contamination. The procedures used in local Source Water Assessment Plans are based on the [Delaware Source Water Assessment Plan](#) which was established in 1999 after the passage of the Safe Drinking Water Act. Source Water Assessments are [publicly available](#) from the Delaware Source Water Protection Program.

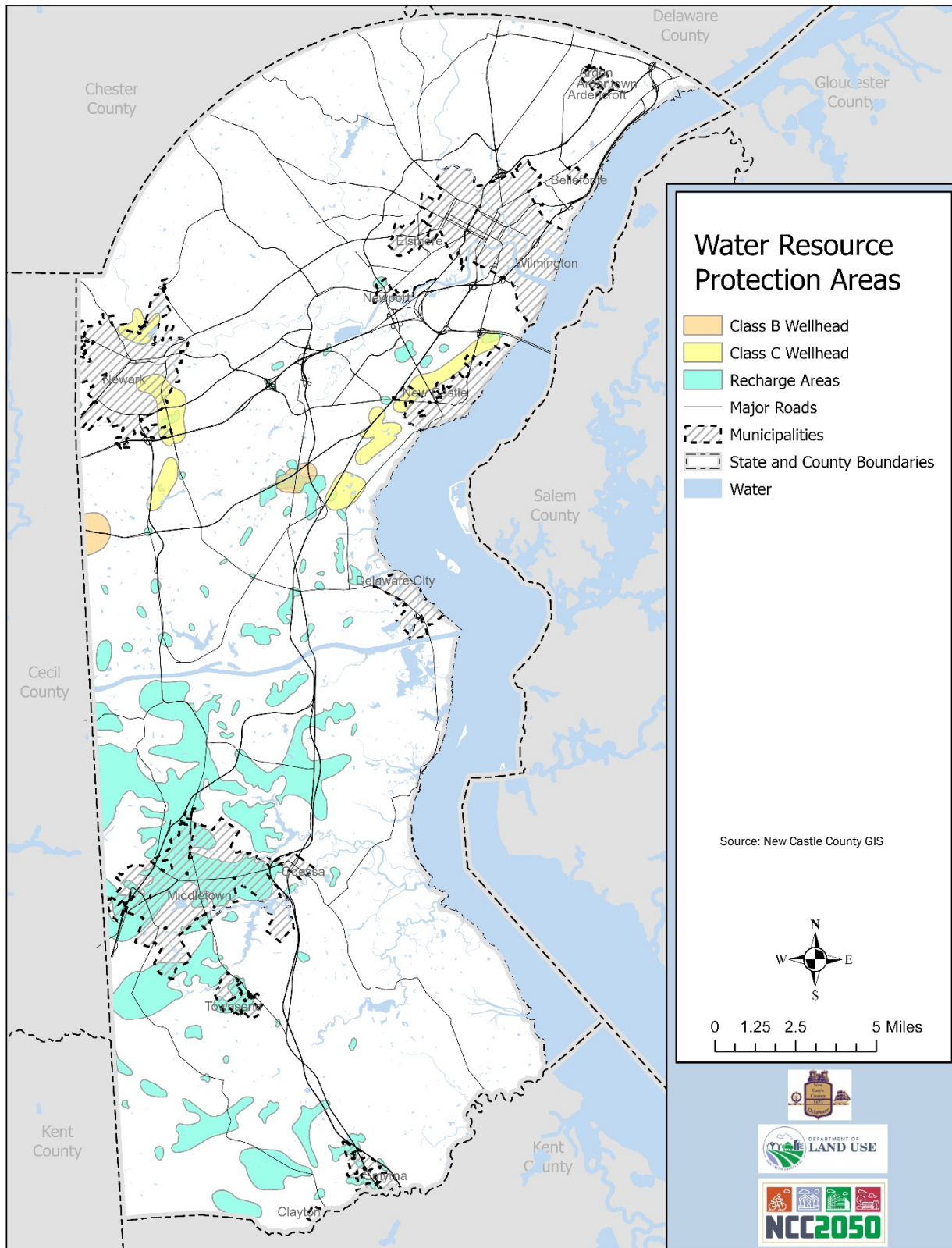
Water utilities are subject to regulation by the Delaware Public Service Commission (PSC). Most aspects of water distribution, including maximum rates, are regulated by the PSC, which is also charged with granting Certificates of Public Convenience and Necessity as appropriate when water utilities wish to expand their service territory.

Surface water quality has improved significantly over the past decade. As a result of increased water quality, fisheries are returning. However, high nitrogen and polychlorinated biphenyls (PCB) levels, which come from industrial chemicals, remain to be addressed. DNREC's Surface Water Discharges Section (SWDS) works to improve surface water quality. The SWDS regulates point sources of pollution including municipal and industrial wastewater treatment systems and their construction, biosolids applications, and stormwater discharges associated with industrial activities. The SWDS is also responsible for issuing regulatory permits under the National Pollutant Discharge Elimination System (NPDES), which require

permittees to establish Water Quality Improvement Plans to achieve TMDLs. New Castle County is a NPDES Permittee and has two approved Water Quality Improvement Plans (WQIPs)—Christina River and Dragon Run. The DNREC program tasked with protecting groundwater is the Groundwater Discharges Section (GWDS). The GWDS oversees all aspects of the siting, design, and installation of onsite wastewater treatment and disposal systems (known as septic systems)⁴

⁴ New Castle County holds a National Pollution Discharge Elimination System (NPDES) permit specifically for the Municipal Separate Storm Sewer System (MS4), whereby an MS4 permit was issued under Phase I with the Delaware Department of Transportation as co-permittee Phase I MS4 permits require that the permittee must develop a program and associated plan to address six minimum control measures according to permit requirements: (1) public education and outreach; (2) public involvement and participation; (3) illicit discharge detection and elimination (4) construction site stormwater runoff control; (5) post-construction stormwater management in new development and redeveloped projects; and (6) pollution prevention/good housekeeping for municipal operations.

Map G-2: Water Resources Protection Areas



Stormwater Management

One of the key functions of the New Castle County Department of Land Use, Engineering Division is to control erosion and flooding within the county. Stormwater is the result of rainwater and snow melt that cannot be absorbed into the ground and often causes flooding of roads or buildings. Increased stormwater runoff is found in areas with impervious surfaces, like roads, parking lots, and building roofs; therefore, more building and development leads to increased stormwater and the increased need for stormwater management facilities.

The Department of Public Works maintains 60 stormwater management facilities and monitors over 3,000 privately maintained stormwater management facilities post-construction. Public Works also assists maintenance organizations to ensure their facilities are properly maintained to meet environmental standards. These activities are regulated through the County's MS4 permit, in which the County is a joint permittee with DelDOT. Public Works is also responsible to perform major maintenance on privately owned stormwater facilities in accordance with NCC Code

In the County's Fiscal Year 2022-2027 capital budget, approximately \$17 million of capital funds are projected for use on stormwater infrastructure improvements. The projects range from small scale stormwater facility repairs and replacement to Water Quality Improvement Plans (WQIP), which aim to improve water quality in an entire watershed. major basin rehabilitations to reduce wet-weather overflows.

Water Quality Improvement Plans (WQIP) have been under development with DelDOT and submitted to DNREC in 2020. The Christina River Watershed WQIP and Dragon Run Creek Watershed WQIP present a combination project-based implementation of traditional best management practices (BMPs), such as stormwater facility retrofits, as well as non-traditional BMPs, such as tree plantings and stream restoration to address stormwater concerns in the watersheds. More details are available in the Capital Improvements element.

Wastewater

New Castle County is responsible for the installation and management of the sewer systems throughout most of the County. New Castle County's Public Works Department, Environmental Operations and Engineering Divisions, manages over 1,760 miles of sewer, providing service to more 122,000 customers, handling 50 million gallons of water every day. The system includes four wastewater treatment plants and 175 pump stations. The County is roughly divided into 11 Sanitary Sewer Basins, which mirror most watersheds. New Castle County is primarily responsible for all sewer lines outside the incorporated municipalities. Map G-3 displays New Castle County's existing and planned sewer service areas.

In April 2020, the Delaware Department of Natural Resources and Environmental Control (DNREC) produced a [Statewide Assessment of Wastewater Facilities](#) outlining details related to all wastewater facilities in Delaware. At the time of this assessment, DNREC noted that New Castle County is in the early stages of establishing a risk-based asset management program, entering all sewer system evaluation study results into a computerized maintenance management software (CMMS), and analyzed by a custom application which provides Operations and Engineering recommendations and prioritization. The analysis is performed by a program called SCREAM that factors use, risk, maintenance and life-cycle to prescriptively manage sanitary sewer assets. Public Works is dedicated implementing state of the art technology and practices which has already reduced overflows by 60% since 2012. DNREC is also responsible for issuing National Pollutant Discharge Elimination System (NPDES) permits, which regulates point sources that

discharge pollutants into waterways. National Pollutant Discharge Elimination System (NPDES) permits, which regulates point sources that discharge pollutants into waterways.

Northern New Castle County

North of the C&D Canal, most dwellings are connected to the public sewer system. The generated sewage within this area is conveyed through a network of sanitary sewer pipes and pump stations via nine major interceptor lines to the Wilmington Wastewater Treatment Plant. On-lot septic systems are largely confined to the northwest portion of the Brandywine Hundred on land zoned Suburban Estate.

Southern New Castle County

South of the C&D Canal, there are four sewer service providers.

- New Castle County
- Middletown
- Smyrna
- Clayton

Sewer infrastructure is largely limited to the central core area of the Southern New Castle County Master Plan. The Department of Public Works provides sewer service to unincorporated New Castle County as well as the municipalities of Odessa and Townsend. The Lea Eara Farms subdivision, which is located in the west, was provided sewer service by the County upon failure of the subdivision's private treatment plant. Middletown, Smyrna, and Clayton have constructed and manage their own sewer infrastructure. There is currently a small portion of the Town of Middletown that is connected to the County's sewer infrastructure. In areas of New Castle County where sewer service is not available, onsite wastewater facilities, more commonly known as septic systems, are constructed. In reviewing both DNREC Septic permits and property that receives public sewer service (Public Works data), we estimate that there are roughly 13,000 active septic systems in the unincorporated areas of New Castle County.⁵

When comparing a typical lot developed on septic to one on public sewer, the University of Delaware has found that the septic lot potentially delivers 95% more nitrogen (typically in the form of nitrates) contamination to ground water than the sewered lot.⁶ Prolonged nitrate exposure, through drinking water exceeding regulatory limits potentially leads to infant methemoglobinemia (blood disorder), colorectal cancer, thyroid disease, and neural tube defects.⁷ Averting unnecessary health risks resulting from potential contamination of drinking water has been an important element in New Castle County land use policy and regulations dating back about 30 years. Incentives to develop on sewer and limitations for developing with on-site wastewater treatment have been adopted by New Castle County Council including acreage requirements in the Suburban and Estate Suburban Reserve zoning districts (2 and 5 acres respectively) and a 5-lot subdivision limitation on Suburban zoned land without sewer service to protecting existing and future residents.⁸

⁵ Analysis performed on sewer billing data compared to the septic permit data provided by DNREC.

⁶ Southern New Castle County Wastewater Plan (September 27, 2019)

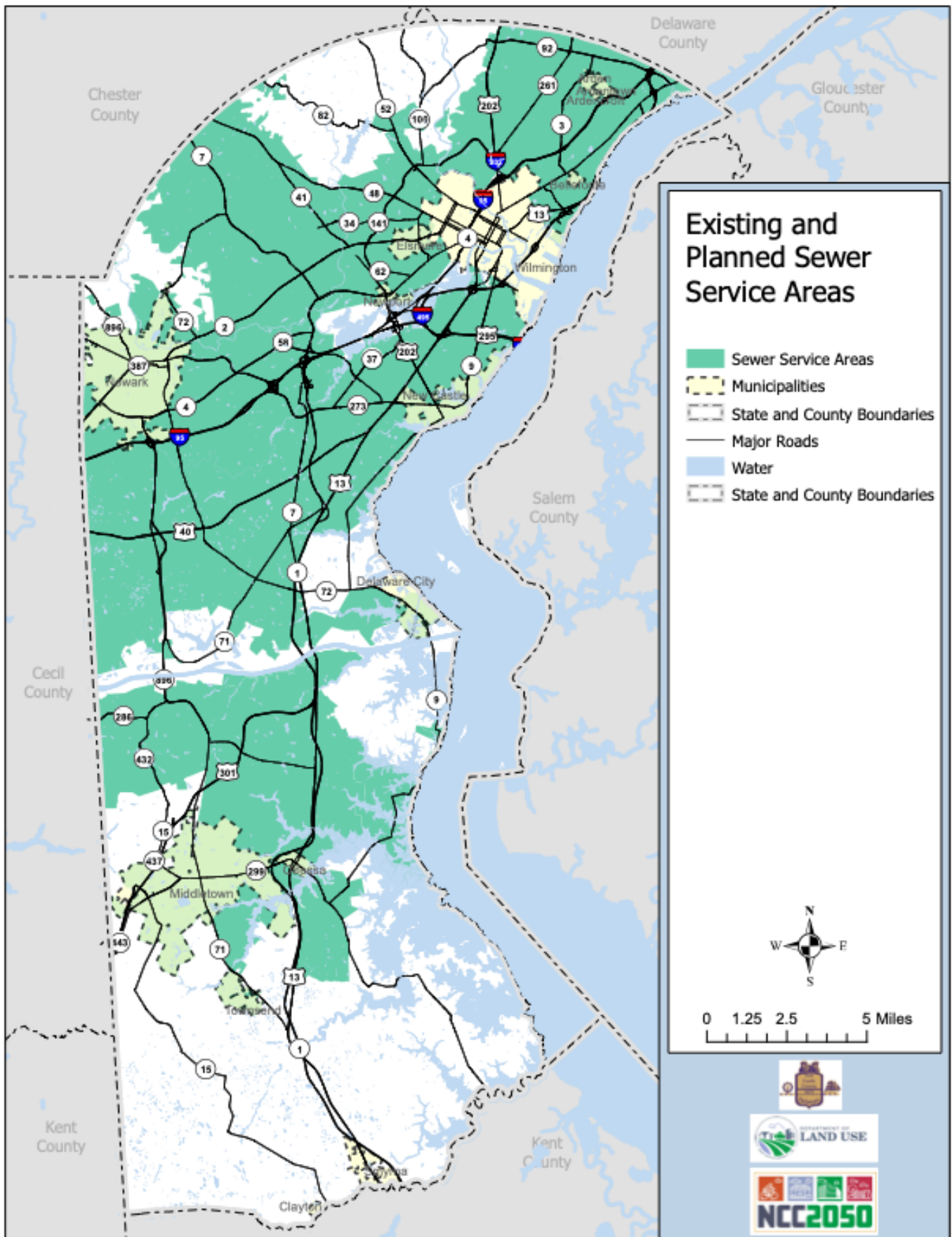
⁷ Based on a peer reviewed article in the Journal of Environmental Research and Public Health (July 23, 2018), and published online at the US National Library of Medicine, National Institutes of Health
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6068531/>

⁸ The Suburban District, as discussed in the Future Land Use Element, is a "residential district that either has existing or anticipated for future sewer service consistent with land use policies and projected residential growth." Responsible

As New Castle County looks to the future, it must continue to protect our water resources, take deliberate actions to improve ground water quality by providing an efficient and effective public sanitary sewer service. In instances where public sanitary sewer service is not an option, the County must work with DNREC to assure that the systems installed are high quality systems that are inspected at a regular basis.

development in this area is essential to avert inefficient use of County infrastructure and potential overall environmental impacts.

Map G-3: Existing and Planned Sewer Service Areas



Sewer Service Area Map Developed by the Departments of Land Use and Public Works

Approved Sewer Projects

Wastewater projects approved under the 2022 New Castle County Capital Budget includes:

1. Brandywine Interceptor Renovation: Project includes rehabilitation, repair and replacement of the existing Brandywine Interceptor to convey existing wastewater flows. This is a phased project commencing with the Alopocas Portion of the interceptor.
2. Christina River Force Main (CRFM): 20% Design of a new CRFM asset to provide redundancy and support to the existing CRFM. The project consists of both a parallel pipe design and assessment, protection, and rehabilitation measures to the existing CRFM.
3. Delaware City Industrial Expansion: Design and construct a regional wastewater system to serve commercial and industrial development within and around the Delaware City Industrial Refinery. The southern portion of the system was completed in September 2021. The northern portion of the system, serving the areas along Governor Lea Road are currently under design.
4. Edgemoor System Rehabilitation: Wastewater asset rehabilitation in Phase 2 of Brandywine Hundred Rehabilitation communities, including excavated repairs focusing on limited capacity sub-basins and operational needs.
5. Lea Eara Farms Wastewater Treatment Plant Closure: This project consists of the decommissioning and closure of the Lea Farms WWTP. The Lea Eara Farms force main was previously completed and was placed in operation. Restoration of the WWTP will occur subsequent to the decommission phase.
6. North Delaware Interceptor: The project consists of the continued assessment of existing interceptor system serving the North Delaware sanitary system located along Governor Printz Boulevard. The project also includes planning, design and construction for trunkline replacement through the Claymont Transit Center Redevelopment project and the future Naaman's Interceptor Realignment
7. Southern Sewer Service Area: Design and construction of the wastewater system supporting Southern New Castle County including treatment and disposal upgrades serving planned growth through 2050. Regional system construction as required by growth rate and Land Use planning efforts.
8. White Clay System Rehabilitation: Includes the investigation, rehabilitation and/or replacement sanitary sewer assets.

Looking Forward

New Castle County has been blessed with clean water supply sources that adequately supplies the needs of our residents into the future. It is of utmost importance that we protect these assets to protect the public health. We should achieve this by encouraging development where sewer infrastructure is present with ample protections for our water resource protection areas, while dissuading development in areas without sewer infrastructure. The County has developed the following Goals, Objectives and Strategies based on the analysis and conditions above, the Deed Dive Session on infrastructure¹⁰ as well as other public input received during the NCC2050 planning process.

¹⁰ Deep Dive Session 3: Infrastructure: Transportation, Water & Sewer and Hazard Mitigation

Related Goals, Objectives, and Strategies

3.Goal: Clean water is available to all residents now and in the future.

3.1. Objective: Continue to ensure water services and potable water supply is sufficient to meet demand.

- 3.1.1 Strategy: Continue to work with the Water Supply Coordinating Council, DNREC and the Water Resources Center at the University of Delaware to monitor the water supply, evaluate changing demands and influences, and ensure availability now and for future generations.
- 3.1.2 Strategy: Consider additional safeguards for Water Resource Protection Areas (WRPAs) and the public water supply.
- 3.1.3 Strategy: New Castle County government leads by example and community partnerships, implementing water-saving techniques and best practices, such as low-water landscaping, water-saving technology in buildings, rain barrel program, etc.
- 3.1.4 Strategy: Work with water purveyors, utilities, and public service commission to look for opportunities to connect to public water supply as part of a strategy to prevent water supply disruptions in those communities of 25+ units that were developed on private well system prior to the code requirement being added.
- 3.1.5 Strategy: Work with water purveyors interconnect between and within systems, add new finished water storage and aquifer storage and recovery, and transport water from aquifers with excess availability south of Townsend to growth areas between Middletown/Odessa and the Chesapeake & Delaware Canal.
- 3.1.6 Strategy: Work with DNREC to monitor demands and water levels from allocated public water supply wells and irrigation wells so as not to diminish the capacity of irrigation wells for producers that wish to sustain farming in southern New Castle County.

3.2. Objective: Continue to maintain efficient and effective sanitary sewer service in existing areas served by sewer and extend service to new areas, as planned, to meet growth demands in a sustainable manner.

- 3.2.1 Strategy: Encourage new development within Sewer Service Areas and regulate septic use for low-density development consistent with County Septic Policy.
- 3.2.2. Strategy: Delineate a Growth Area Boundary and amend the Sewer Service Area Map to include areas planned and not planned for sewer service (including definitions that provide clarity and predictability).
- 3.2.3. Strategy: Designate areas for growth and areas for preservation, working collaboratively with the Office of State Planning Coordination
- 3.2.4. Strategy: New Castle County and incorporated towns should continue coordination and collaboration on development, infrastructure, and policies to support efficient/effective provision of sewer and water, including using joint planning areas.
- 3.2.5 Strategy: Update Chapter 38 (which covers sewers and sewage disposal) and Public Works policies to achieve consistency with the UDC and the NCC2050 Comprehensive Plan.



ELEMENT H

Housing

H. Housing Element

Element Defined

For well over the last 10 years, the gap between the highest earners and the average wage group has grown, according to the Delaware State Housing Authority (DSHA). Compounded with wages not increasing proportionally to housing costs, many residents have been experiencing housing insecurity. The onset of the COVID-19 pandemic exposed the inequity of those hardest hit, increased the number of residents experiencing housing insecurity, and placed those already struggling into dire housing circumstances.

Changes in population demographics are occurring, including an increase in the proportion of people 65 and older (and households of retirees) and an increase in non-white people, especially persons of Hispanic descent. The makeup of households is changing, too. According to the DSHA's [2015-2020 Statewide Housing Needs Assessment](#), families are smaller on average. There is a growing trend of multi-generational families and “doubling up” of families in a household unit. There are also fewer homeowners and more renters than in the 2000s. New Castle County also continues to see concentrations of minority families living in poverty, most notably in Wilmington, where the percentage of affordable housing is significantly greater than in the rest of the county.

While a variety of federal, state, and local measures are taking shape to keep residents housed for the short term, the county's land use policy is critical in providing many long-term housing solutions. With the COVID-19 pandemic, it is critical that all levels of government bring their resources and abilities to the table to work collectively to keep people safely and affordably housed. This Comprehensive Plan will allow the County to review and revise land use regulations, policies and programs, and to enable and expand housing options for New Castle County residents regardless of income, race, age, or ability.

What We Heard

“I would like strategic planning to increase the supply of affordable housing throughout the state.” – Public Participant, Housing Deep Dive Session

“We should foster connectivity for better access to jobs and create “inclusionary zoning.” We should promote increased use of accessory housing units or accessory dwelling units (ADU) in our ordinances. There are many best practices that can allow/encourage accessory housing units. Much of NCC’s two-acre minimum zoning is restrictive and does not allow flexibility in housing development. The elderly and seniors can benefit greatly from more flexible housing and development regulations. This flexibility also serves the needs of students.” – Karen Horton, Principal Planner, Delaware State Housing Authority

“NCC has a unique opportunity for inclusionary housing and land use. It can foster land use patterns that place jobs near housing to reduce commuting and auto use. Create equity in housing through policies that create affordable housing development incentives.” – Charuni “Char” Patibanda, Director of Office of Economic Development, New Castle County

“I think it is a worthwhile challenge to provide affordable housing that is equitable and energy-efficient. That would solve several issues we have discussed—inequality, climate-change and mixed type developments” – Public Survey Participant

NCC Today

Housing Stock

The housing stock in New Castle County is dominated by single-family detached units, which account for over 50% of the overall housing stock. The second largest group is single family attached units, leaving only a quarter of the housing stock to multifamily units. Single family detached homes traditionally have larger lots and contribute to sprawl. If New Castle County wants to plan for affordable, walkable communities in the future, adding a variety of housing types in designated growth areas is key. See *Figure H-1* for the Housing Stock breakdown in New Castle County.

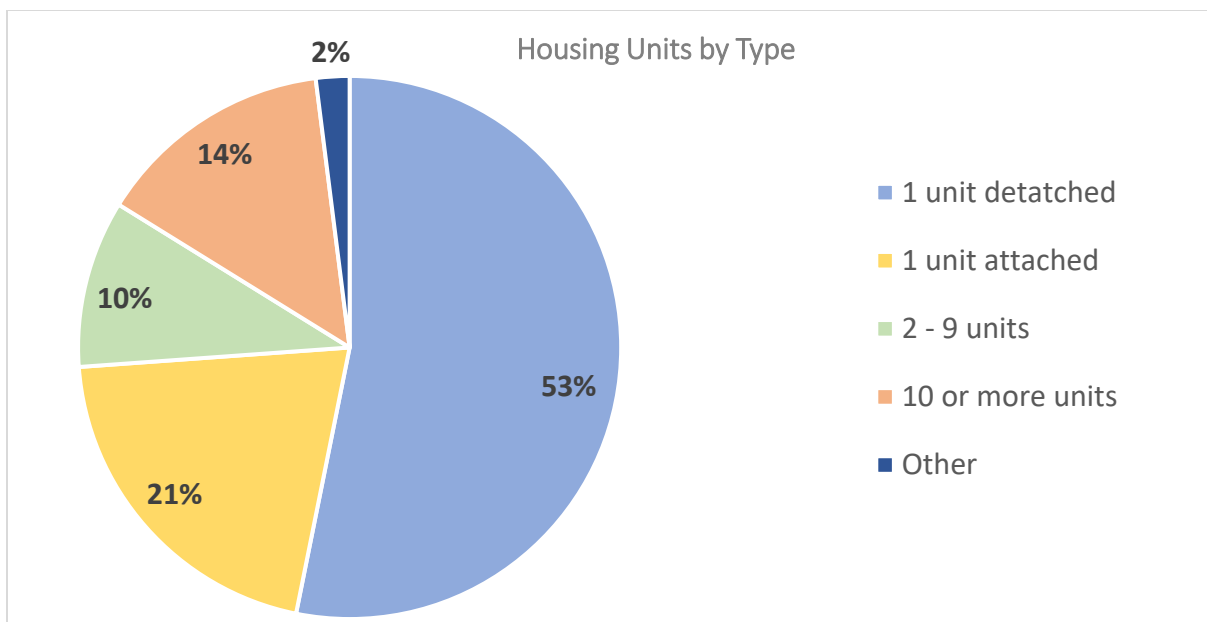


Figure H-1 Type of Housing Stock in New Castle County, 2019 ACS

The [2015-2020 Statewide Housing Needs Assessment](#) examined housing trends and issues related to housing policy through 2020. The assessment and its associated [Executive Summary](#) showed differences in housing in the northern and southern portion of the County.

In northern New Castle County, housing stock is much older than the state average, with more than 60% of the homes built before 1970. Alternately, housing in the southern portion of the county is significantly newer, with 80% of the housing developed after 1980 and 40% built in the last 10-15 years. See **Figure H-2: Age of Housing Units**. Since the housing bubble burst in 2009, there has been slow growth in new homes being built, around 5% of the entire housing stock. Reinvestment into the older housing stock and strategic placement of new, planned housing with greater density will be explored in more detail in the following pages.

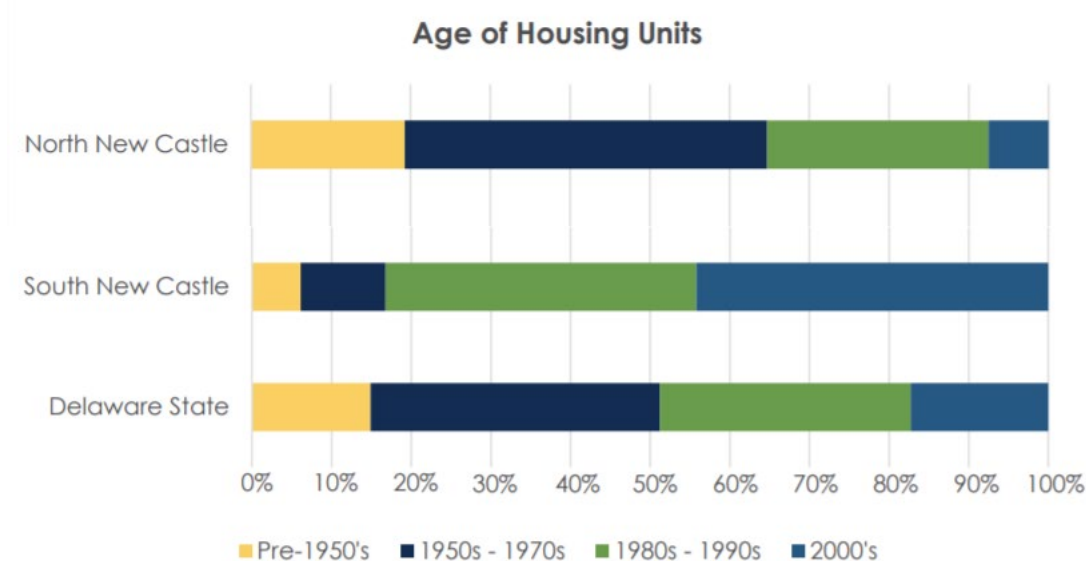


Figure H-2 Age of Housing Units; Source: DSHA Delaware Housing Needs Assessment Executive Summary

DSHA's 2015-2020 Statewide Housing Needs Assessment found there was a significant need for more rental housing and physically smaller, more affordable housing. This is due in part to trends of a growing

senior population, aging family members living with younger generations, and smaller family sizes in general.

Housing Costs and Income

DSHA's [2020 Delaware Statewide Analysis of Impediments to Fair Housing Choice](#) addressed housing options related to income and ethnicity. This analysis highlighted that New Castle County is the most populous and most diverse of Delaware's three counties. The City of Wilmington is home to a higher proportion of the minority population and displays high levels of segregation. The housing stock in Wilmington is more likely to be older, multifamily units, while homes in the suburbs tend to be newer, single family detached homes. Outside of the city, 2.1% of housing is publicly supported (i.e., Section 8), while 16% of the housing in the city is subsidized.

Tables H-1 and H-2 illustrate rental and owner-occupied housing affordability related to income for a single person and a four person household. These tables illustrate affordability ranges for rental and owner housing costs at various income limits relative to Area Median Income. The affordability ranges are calculated based on the assumption that rental housing costs should not exceed 30% of gross income and that owner costs should not exceed 3.5 times annual income in order to be considered affordable.

Table H-1 - Housing Affordability by Income

1 person household*

\$66,200

	Income Limits	Rent**	Owner Costs***
<30% AMI	\$19,860	\$497	\$69,510
30-50%	\$19,860 - \$33,100	\$479 - \$828	\$69,510 - \$115,850
50%-80%	\$33,100 - \$52,960	\$828 - \$1,324	\$115,850 - \$185,360
80%-100%	\$52,960 - \$66,200	\$1,324 - \$1,655	\$185,360 - \$231,700

*Philadelphia-Camden-Wilmington, PA-NJ-DE-MD MSA

** Rent, utilities affordable at 30% of gross household income

*** Mortgage affordable at 3.5 times gross household income

Source: 2021 HUD Income Limits, Novogradac Income and Rent Calculator

Table H-2 - Housing Affordability by Income

Family of 4*

\$94,500

Income Limits	Income Ranges	Rent**	Owner Costs***
<30% AMI	\$28,350	\$709	\$99,225
30-50%	\$28,350 - \$47,250	\$709 - \$1,181	\$99,225 - \$165,375
50%-80%	\$47,250 - \$75,600	\$1,181 - \$1,890	\$165,375 - \$264,600
80%-100%	\$75,600 - \$94,500	1,890 - \$2,363	\$264,600 - \$330,750

*Philadelphia-Camden-Wilmington, PA-NJ-DE-MD MSA

** Rent, utilities affordable at 30% of gross household income

*** Mortgage affordable at 3.5 times gross household income

Source: 2021 HUD Income Limits, Novogradac Income and Rent Calculator

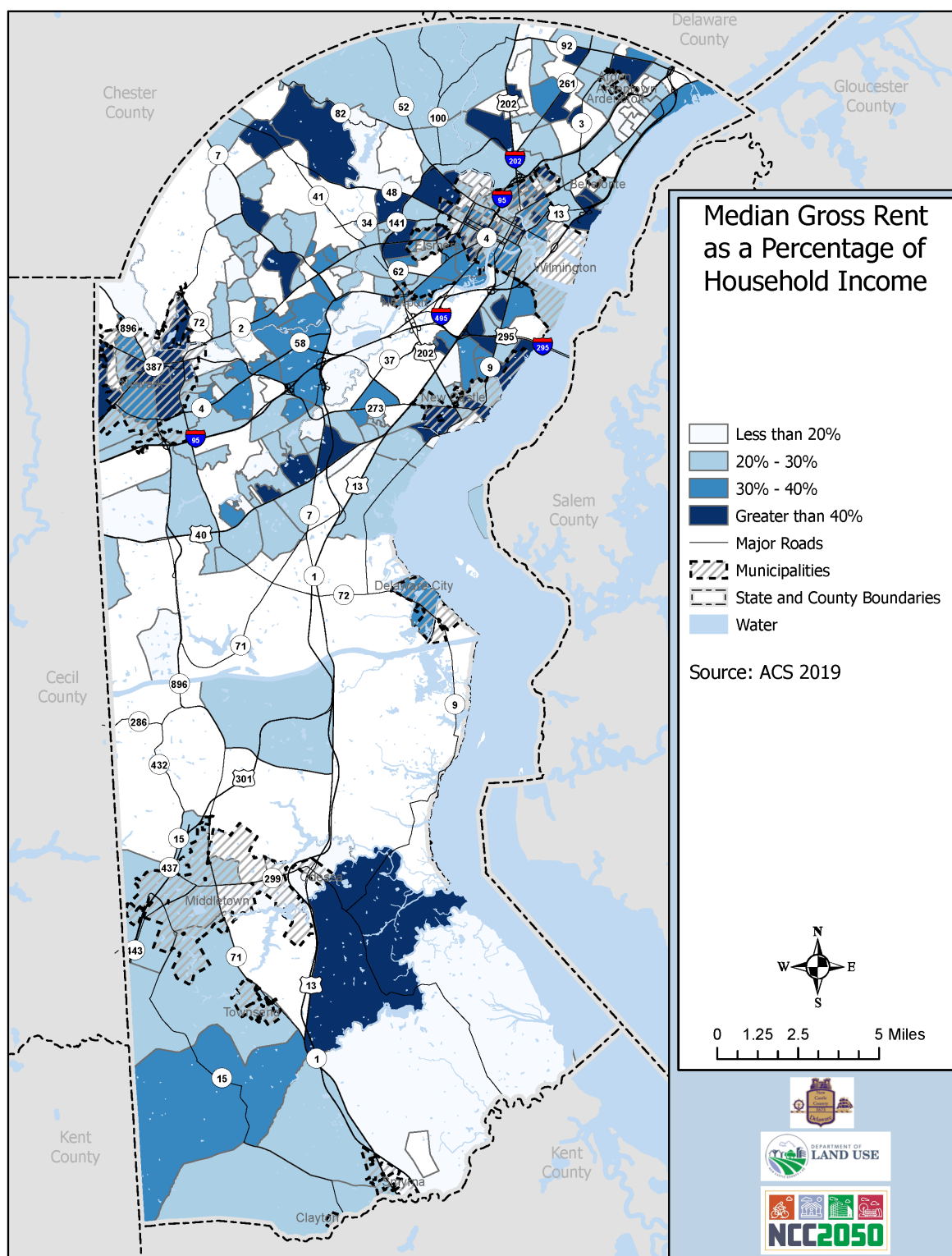
Map H-1 demonstrates the distribution of renters spending more than 30% of their income on housing costs. Thirty percent (30%) is the threshold where households are considered cost burdened. As shown in the darker blue shades, much of the highest concentration of rent disparities are found north of the C&D Canal, though almost all of the county has a percentage of renters experiencing rent burdens. Further, an estimated 14% (27,000) of households in New Castle County are extremely cost burdened, meaning they spend 50% or more of their household income on housing.¹

Map H-2 displays similar data for homeowners. There are fewer areas with homeowners spending 30% or more of their income on housing, but areas with homeowners spending between 17 and 30% of their income on housing are widespread in the county.

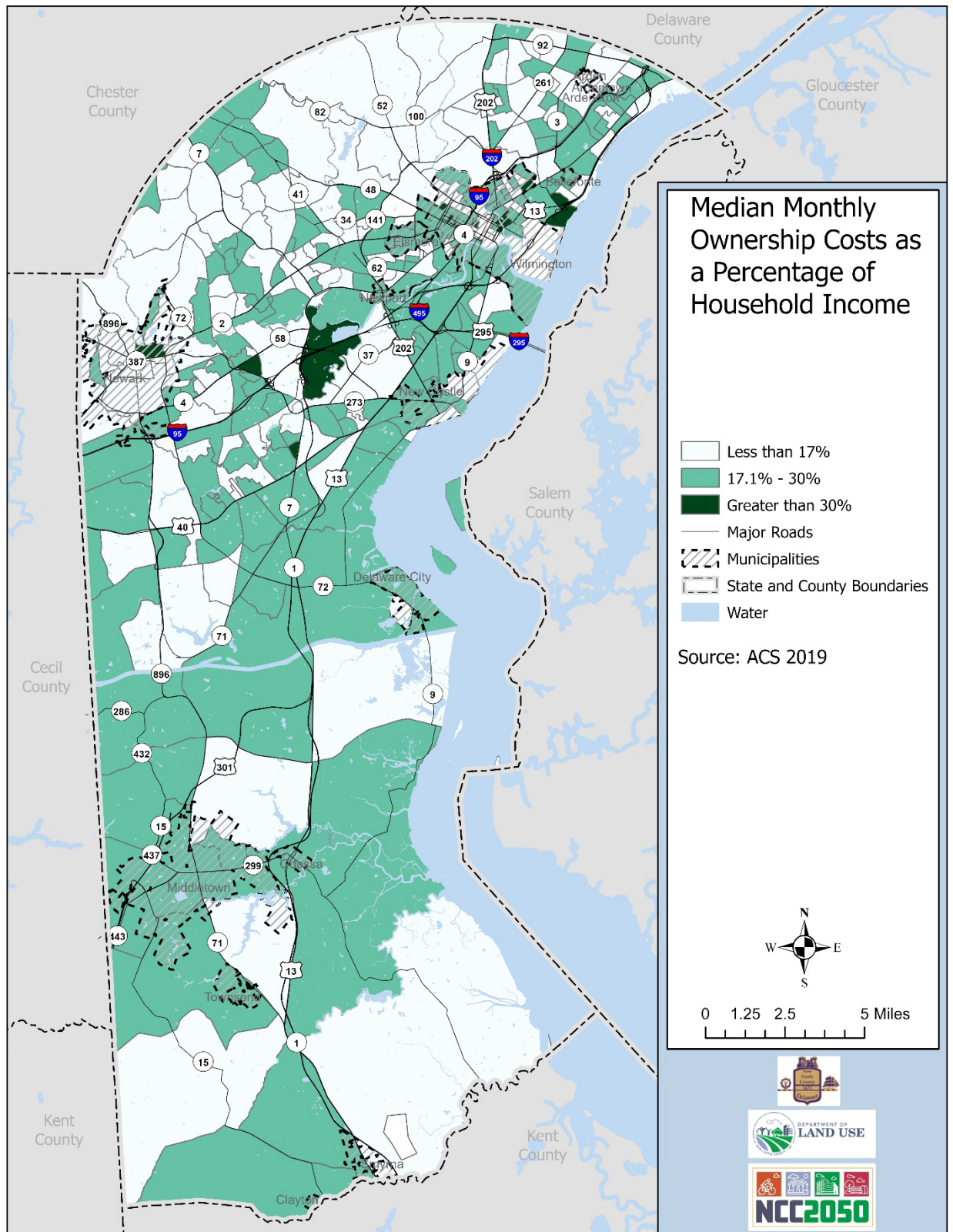
¹ Includes the population of incorporated municipalities

<https://www.countyhealthrankings.org/app/delaware/2021/measure/factors/154/data>

Map H-1 Percent of Renters Spending 30% or More of Income on Rent

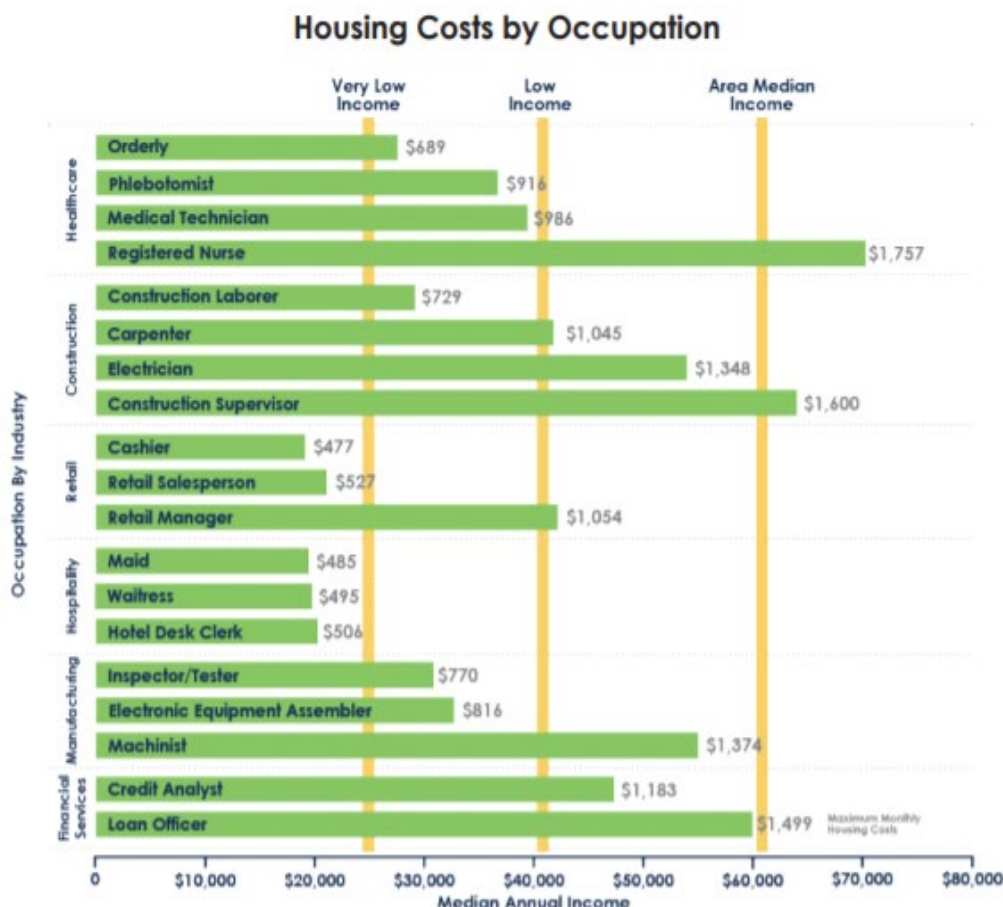


Map H-2 Median Owner Costs as a Percentage of Household Income



According to the 2019 ACS, 152,974 units, or 67.9%, of the housing stock was owner-occupied. The median mortgage was \$1,657 per month and the median value of a home was \$272,800.

Some of Delaware’s strongest industries—particularly health care, tourism, and retail—have many low- and moderate-wage workers, creating a significant demand for workforce housing. See **Figure H-3** Housing Costs by Occupation; Source: 2015-2020 Delaware Housing Needs Assessment for a breakdown of housing costs by occupation in New Castle County.



Source(s): Delaware Department of Labor, *Delaware Occupation and Industry Projections*, August 13, 2012; and income data from Novogradac and Company using New Castle County income limits.

Figure H-3 Housing Costs by Occupation; Source: 2015-2020 Delaware Housing Needs Assessment

Minority households are less likely to become homeowners than White, non-Hispanic households, and when they do become homeowners, have a higher chance of experiencing housing challenges than White, non-Hispanic homeowners. The 2019 ACS Survey reported that 72,303 units, or 32.1%, of the housing stock was renter-occupied. The National Low Income Housing Coalition estimates that the rent affordable at mean renter wage in New Castle County is \$954. However, Housing and Urban Development (HUD) Fair Market Rents for New Castle County in 2017 were \$1,003 for a one-bedroom unit, \$1,211 for a two-bedroom unit, and \$1,515 for a three-bedroom unit.² The average renter wage was \$8.35, and the wage needed to afford a fair market rate two-bedroom unit in New Castle County was \$23.29, meaning a person

² DSHA Housing Fact Sheet

working at minimum wage would need almost three full-time jobs to afford a two-bedroom apartment.³ The Fair Market Rent value of even a one-bedroom unit is outpricing average renter wages. In New Castle County, almost half of all renters and one-third of all homeowners have housing challenges, which is defined as paying more than 30% of their income on housing costs, living in overcrowded conditions, or substandard living condition (See *Figure H-4*). Since the COVID-19 pandemic, this number has increased dramatically, based on the trends observed across the country.

[The State of Housing and Homelessness in the First State](#) from the Housing Alliance Delaware noted that there is still a significant population of residents experiencing homelessness or housing hardship.

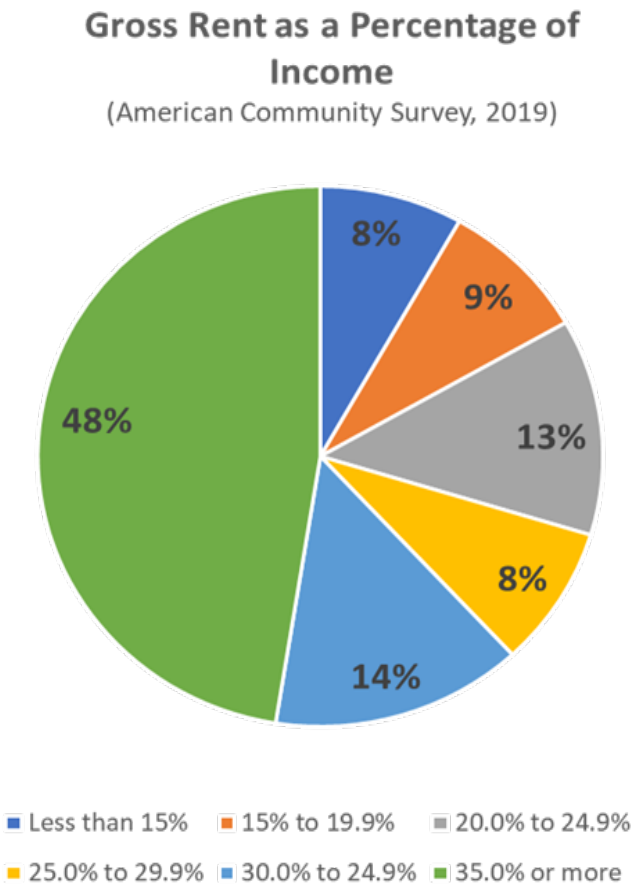


Figure H-4 Gross Rent as a Percentage of Income

New Castle County had the highest amount of people experiencing homelessness on the Point in Time Count (PIT)⁴ conducted in accordance with the Housing and Urban Development (HUD) federal mandate. On that night in January 2020, 654 people were counted as experiencing homelessness (or 64% of the state’s total homeless population).

In order to help address the urgent need for emergency housing, New Castle County created the New Castle County Hope Center. The Hope Center is a 192-room former hotel which was acquired by the County using CARES Act funding and opened in December 2020. The New Castle County Hope Center is an emergency shelter with the goal to reduce the homeless population in the County by providing safe and

³ The State of Delaware passed [Senate Bill 15](#) in July 2021 which increased the hourly minimum wage to \$10.50 effective January 1, 2022 and provides for annual increases of \$11.75 in 2023, \$13.25 in 2024, and \$15.00 in 2025.

⁴ HUD defines the Point-in-Time (PIT) count as a count of sheltered and unsheltered people experiencing homelessness on a single night in January

stable temporary housing to those experiencing homelessness. The Hope Center also provides on-site health and social services as well as resources that help residents locate and transition into a permanent housing solution, breaking the cycle of homelessness.

Housing and Aging

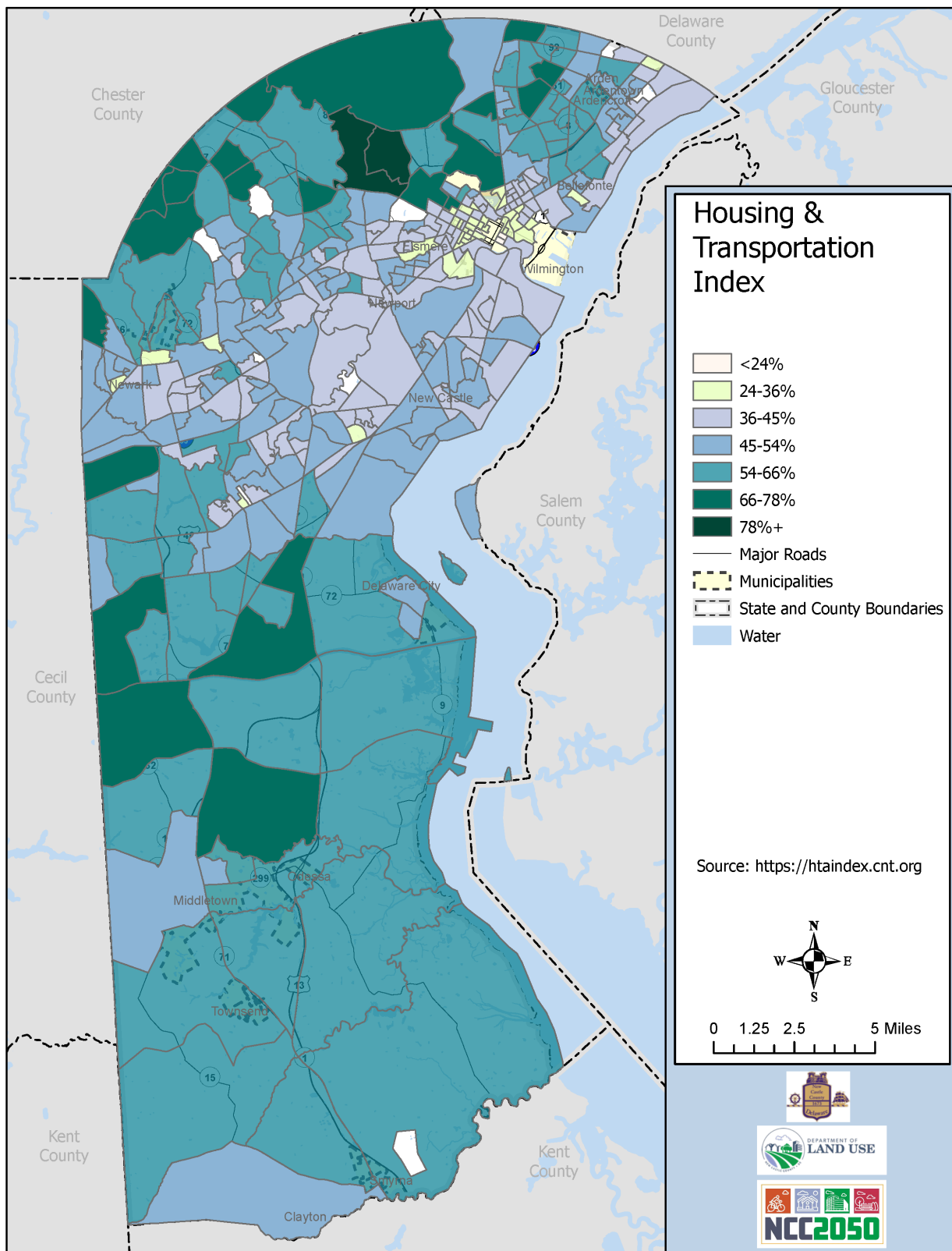
Seniors will have different housing needs as they age, such as homes that feature universal design (zero step entrances, hallways wide enough for a wheelchair, and bathrooms on the main level). Since most are homeowners, solutions to age within their homes will be increasingly important. In addition, a variety of housing types provide opportunities for seniors to age in place, including apartments, age-restricted communities, or accessory dwelling units (ADUs). An ADU allows for seniors to maintain independent living while still being close to family members or caretakers.

Housing and Transportation

Along with housing costs, transportation costs make up a significant portion of household spending as transportation is necessary for household members to access jobs, goods, and services. Therefore it is important to look at housing and transportation costs together. The Housing and Transportation Index looks at the combined spending per household on housing and transportation. As seen in *Map H-3*, there are several regions in New Castle County where households are spending over 45% of their income on combined housing and transportation costs⁵ As expected, areas of more dense population have more alternative transportation choices. Many of those areas have housing costs that exceed the 30% threshold, so while transportation costs appear to be less of a burden, a majority of the costs are taken up by rent. Housing recommendations need to be planned in coordination with transportation to minimize cost burdens on households and ensure access to opportunity.

⁵ The Housing and Transportation index is an affordability index that factors for both housing and transportation costs created by the Center for Neighborhood Technology. The H+T Index sets the benchmark for affordability at no more than 45% of household income. (<https://htaindex.cnt.org>)

Map H-3 Housing and Transportation Index



Addressing Housing Challenges

The Housing Pipeline

As outlined in the *2015-2020 Statewide Housing Needs Assessment*, families are getting smaller, but there tends to be more “doubling up,” multiple families living in one home or multigenerational families living in one home. The housing crisis and recession has resulted in fewer households of all ages being homeowners, and demand for new housing has shifted to smaller, more affordable homes and rental housing. However, the development pipeline and new home construction in New Castle County is dominated by single family detached dwellings, as shown in DHSA’s [Housing Production Report](#), creating a mismatch between available housing and the needs of the community (See *Figure H-5*).

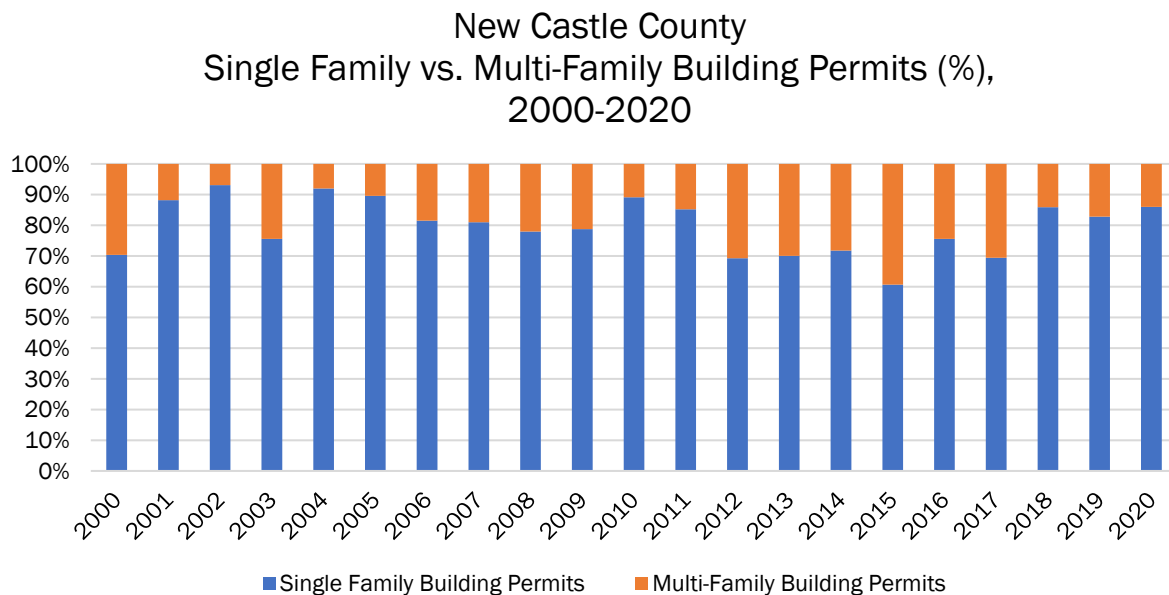


Figure H-5 Single Family vs. Multi-family Building Permits, 2000-2020, Source: DSHA Housing Production Report

Affordable Housing Programs

New Castle County Department of Community Services administers initiatives to address some of the challenges noted in this element and provide an opportunity for low to moderate income households to purchase homes in the County.

They coordinate with [federal housing programs](#) and administer the [Workforce Housing Program](#), which is designed to provide an opportunity for middle income households to purchase or rent affordable new construction housing units in New Castle County. There are certain lots within select developments that are specifically available for income-qualified buyers. These federal programs include the Neighborhood Stabilization Program (NSP)⁶ and the HOME Investment Partnership Program.⁷

⁶ The Neighborhood Stabilization Program (NSP) was established after the 2008 housing crisis for the purpose of providing emergency assistance to stabilize communities with high rates of abandoned and foreclosed homes, and to assist households whose annual incomes are up to 120 percent of the area median income (AMI). NSP funding can be used for establish financing mechanisms for purchase and redevelopment of foreclosed homes and residential properties, purchase and rehabilitation of homes and residential properties abandoned or foreclosed, establish land banks for foreclosed homes, demolish blighted properties, or to redevelop demolished or vacant properties.

⁷ The HOME program is a federal entitlement program that provides grants to states and units of general local government to implement local housing strategies designed to increase homeownership and affordable housing opportunities for low and very low-income Americans. Eligible uses of funds include tenant-based rental assistance; housing rehabilitation; assistance to

The county uses the NSP funding to improve neighborhoods with large numbers of vacant or abandoned properties. The county has the ability to purchase vacant or abandoned properties which can be subsequently rehabilitated and sold to income qualified home buyers. Prioritized zip codes in New Castle County are: 19720, 19702, 19709, 19802, 19805, & 19701. HOME funds are distributed to the county directly from HUD. The county provides a plan to HUD outlining how the funds will be used and a performance plan is submitted annually to HUD. The county utilizes HOME funding for 1st time homebuyers or other individuals at 80% or below of Area Median Income.

In addition to these assistance programs and to eliminate government redundancies, New Castle County consolidated the previously established Housing Advisory Board and the Rental Housing Advisory Committee. The consolidated board, which retained the [Housing Advisory Board](#) name, not only continues to focus on rental housing matters but also engages in a broader focus on housing development, services, and Housing Trust Fund distributions to address the housing needs of very low-income households (those earning less than 65% of median income), and low-income households (those earning less than 80% of median income) in New Castle County. This ensures all residents, regardless of economic challenges, are able to obtain safe, quality housing.

Traditional Neighborhood Housing and Moderately Priced Dwelling Units

Traditional Neighborhood Housing is an inclusionary zoning program with a mandatory and voluntary component. [Moderately Priced Dwelling Units](#) (MPDUs) are required for all major residential subdivisions proposing a rezoning application or variance applications with density increases proposing twenty-five (25) or more dwelling units except for mixed-use developments. Major residential subdivisions that do not require a rezoning may receive a density bonus if a portion of the proposed units are voluntarily designated as MPDUs. The Traditional Neighborhood Housing Program is designed for people who make less than 90% of area median income as determined by the U.S. Department of Housing and Urban Development (HUD) for New Castle County.

The County's Housing Trust Fund is part of the broader affordable housing program. per Section 40.07.530 of the UDC: "A contribution shall be made for all dwelling units that are not designated as MPDUs on all Traditional Neighborhood Housing Program plans. The contribution shall be twelve (\$12.00) dollars per one thousand (\$1,000) dollars of permit construction valuation and shall be payable at the time of issuance of a Certificate of Occupancy. All monies shall be deposited in the Housing Trust Fund."

Accessory Dwelling Units

One solution that New Castle County currently allows in residential zoning districts are Accessory Dwelling Units (ADU), which was added to the County code in 2007. It is defined as: *"a second, subordinate dwelling unit added to or created within a single-family detached dwelling, which provides independent living, sleeping, eating, cooking and sanitation facilities."* ADUs are currently permitted on any residential property. However, an ADU must be attached to the main dwelling unit on properties less than two acres. On properties two acres or larger, ADUs may be detached from the primary dwelling unit. In all cases, the

homebuyers; and new construction of housing. HOME funding may also be used for site acquisition, site improvements, demolition, relocation, and other necessary and reasonable activities related to the development of non-luxury housing. Funds may not be used for public housing development, public housing operating costs, or for Section 8 tenant-based assistance, nor may they be used to provide non-federal matching contributions for other federal programs, for operating subsidies for rental housing, or for activities under the Low-Income Housing Preservation Act.

property owner is required to live in one of the units. However, the County placed a cap on ADU permits, allowing only 0.2% of single-family detached homes in the County which was reached in 2016.

As a result, the County added an additional 0.2% for a total 0.4% ADU permitted. Over half of the permitted ADUs are on lands that are connected to septic, not sewer, and on average 20 to 25 units have been permitted per year. This use could become part of a solution to many of the existing housing issues within the County. ADUs create opportunities for aging in place by providing space near family members for older residents. ADUs may serve as rental homes to provide affordable housing for low-income residents and an additional revenue source for owners. ADUs also provide an opportunity to meet housing needs while not sacrificing green fields. Enhancing ADU provisions would increase their use and effectiveness for fulfilling housing needs.

New Castle County population demographics are changing and so are the housing needs of our residents. This Comprehensive Plan will allow the county to review and revise land use regulations, policies, and programs, and to encourage the availability of the right housing options for New Castle County residents regardless of income, race, age, or ability. Housing stock in the county should provide diverse options to meet the many needs of our residents and integrate with our existing communities. Our strategies also will help us to create a better balance of employment centers, housing, shopping and other resources, along with access to our transportation network. This plan proposes to improve existing housing stock, expand access to homeownership, and other initiatives to ensure that more residents thrive where they live.

Home Repair

The New Castle County Department of Community Services administers a variety of federally funded programs which provide funding for home repairs to low-income households.⁸

Emergency Repair Loan Program:

An affordable program designed to assist qualified homeowners repair one critical need in their home. Types of eligible repairs include heater repair, plumbing leaks, unsafe electrical system, severe roof leaks, replacement of sewer or water lines. Funding availability per loan ranges from \$500 to \$5,000.

Senior Minor Home Repair Program:

This grant program for eligible senior homeowners (homeowners over the age of 60 and meet the income requirements) addresses home repair needs that focus on health, safety, and security conditions of the home. Qualified repairs include minor carpentry, plumbing, or electrical repairs, as well as smoke detectors. Funding availability per home is from \$500 to \$2,500.

Architectural Accessibility Program:

This is a grant program designed to enhance the ability of a qualified household member to safely function in their home and enter and exit the home safely. Qualified work includes installation of an access ramp, widening of doorways, re-plumbing of kitchen or bath facilities, lowering electrical switches, stair lifts, walkways to ramps.

Vacant Properties

The county created the Vacant Spaces to Livable Places program to address vacant properties throughout the county. Over 1,300 vacant properties in the County, with most of these vacant properties being maintained by the County at taxpayer expense. The program encourages vacant properties to transition to

⁸ These programs are funded by the U.S. Department of Housing and Urban Development (HUD) through Community Development Block Grant (CDBG) funding. Property value cannot exceed \$278,050 after repairs are made. Qualified households must have an adjusted gross income below 80% of the HUD Area Median income (income guidelines as of 4/1/2021.)

new homeowners or be redeveloped without the need for a long foreclosure process or significant financial investment by taxpayers. Between 2017 to 2022 there has been a 59% reduction in vacant properties (from 1350 to 553). The program is a five-step process:

1. **Register Vacant Properties:** The New Castle County Property Maintenance Code requires vacant property owners to register with the county after the property has been vacant for 90 consecutive days. The county is also able to register vacant properties which have been identified and meet the criteria for vacancy. Annual registration fees are assessed for each year that a property remains vacant.
2. **Prioritize Monitions:** The County Monitions Review Team makes recommendations for properties for monition, the legal process to bring a property to Sheriff's Sale. These vacant properties generally have considerable code enforcement violations and associated fees, have been the subject of constituent complaints, have received numerous calls for police services, and owe back property taxes. The Team includes representatives from the Departments of Land Use, Community Services, Police and Finance
3. **Notify Property Owners:** The Office of Law sends a 10-day demand letter to property owners and interested parties to notify them of a potential monition action if delinquent fees are not paid. In many cases, these letters have resulted in payoffs, either from the property owner or financial institution, without having to file a monition.
4. **File Monitions & Conduct Sheriff's Sale:** The County's Office of Law oversees the filing of monitions to bring the recommended properties to Sheriff's Sale. The County implemented an additional screening at Sheriff's Sale in 2018, to prevent already delinquent property owners from acquiring additional properties. This Bidder Prequalification process has identified multiple tax delinquent property owners since 2018 who were successful bidders but not in compliance with prequalification requirements. These bidders were required to pay their outstanding fees before the properties were transferred.
5. **Acquisition & Disposition:** When there are no qualified bidders on a property at Sheriff's Sale, the property reverts to the County ownership. Between 2017 and 2021, 25 properties did not receive a third-party bid. The County Acquisition and Disposition Team reviews these properties to decide the best method to return the properties to productive use, including: Soliciting a bid for redevelopment, selling on the open market, or retaining ownership. The Team includes representatives from the Departments of Land Use, Community Services, Law, Finance, and Administrative Services.

Demolition by Neglect

The County's Property Maintenance Code and Unified Development Code address "demolition by neglect." This term refers to allowing a property to deteriorate by lack of care and maintenance to a point that demolition is the only safe or financially feasible option. This is often done by owners of historic properties who do not want or are unable afford maintaining the property to meet historic guidelines. (See Historic Preservation Element)

Related Goals, Objectives, and Strategies

4. **Goal:** Healthy, safe housing options throughout the County are diverse, meeting needs of people of all incomes, ages, abilities, and races, while maintaining design and form of the built environment that integrates with existing communities.

- 4.1. Objective: Increase variety and range of price-points of safe, quality housing options, in a diversity of locations.
- 4.1.1. Strategy: Enable/encourage greater range of housing types in residential zones, including Accessory Dwelling Units (ADUs), duplexes, and multiplexes.
 - 4.1.2. Strategy: Modify existing ADU provisions by removing regulatory barriers. Eliminate the limit on the percentage of permitted ADUs in the county, as well as assess current lot size requirements for detached ADUs.
 - 4.1.3. Strategy: Enable and pursue innovative housing types to help meet demand now and in the future.
 - 4.1.4. Strategy: Require moderately-priced dwelling units (MPDUs) in by-right residential developments of 15 units or more. Model after Montgomery County, MD, and their MPDU program.
 - 4.1.5. Strategy: Using the market value analysis (MVA) and other data, identify priority areas and areas of opportunity and implement affordable and moderately priced housing efforts there to achieve better distribution of housing types and price points along with accessibility to daily needs (jobs, transit, school, etc.). Consider establishing sliding scale for MPDU requirements. For example, in parts of the county better served by affordable housing fewer MPDUs are required, and in areas with fewer affordable units more MPDUs are required.
- 4.2. Objective: Increase proximity of quality housing to other daily needs throughout the county, especially jobs, to support overall cost of living affordability. Better balance of jobs and housing to support residents and their access to both quality/affordable living and living-wage jobs as well as employers and their workforce.
- 4.2.1. Strategy: Incentivize mixed-use development areas that balance jobs, housing, shopping and services at varying income levels.
 - 4.2.2. Strategy: Support the creation and enhancement of transit-oriented development and mixed income development, such as by allowing multi-family housing within a distance of all transit centers/stations and specific transit lines.
 - 4.2.3. Strategy: Advance Universal Design to support aging in place by allowing for by-right Accessory Dwelling Units (ADU) and evaluate current development bonuses for age-restricted housing.
 - 4.2.4. Strategy: Designate target growth areas and encourage development in those places where transit, water, and sewer infrastructure already exists. Also ensure there is consistency as the transportation investment area map (part of the regional transportation plan) to include areas in the county where transit and transit supportive infrastructure exists (e.g. Newport, Churchman's Crossing, Claymont).
 - 4.2.5. Strategy: Update Chapter 38 and Public Works policies to achieve consistency with the UDC and Comprehensive Development Plan updates.
 - 4.2.6. Strategy: Update the Unified Development Code to clearly differentiate between zoning districts intended to receive sewer service and districts that will not.
 - 4.2.7. Strategy: Work with the Neighborhoods and Fair Housing Association to promote and support the Fair Housing Law to guide fair housing practices.
- 4.3. Objective: Expand access to homeownership, especially among low-income residents and people of color.

- 4.3.1 Reduce regulatory barriers and processes that unnecessarily increase the cost of housing or delay/prevent its development.

4.4. Objective: Upgrade the condition of substandard housing stock—including integration of green energy—throughout the County, without causing displacement.

- 4.4.1. Strategy: Work with local communities to create partnerships to help communities establish and advance a neighborhood vision, including supporting and funding the upgrade and installation of environmentally friendly design elements and energy conservation in existing homes.
- 4.4.2. Strategy: Work with housing agencies to identify and monitor for displacement/gentrification and proactively implement strategies to prevent it from happening.
- 4.4.3. Strategy: Work with residential real estate industry to establish energy disclosure reporting (e.g. Truth in Sale of Housing and Time of Rent energy disclosure) to provide homeowners, prospective buyers, and renters with the general energy performance of a home/unit and provide recommendations on what could be done to improve the energy efficiency.
- 4.4.4. Strategy: Provide support and funding for home repairs for low- and middle-income households while providing protections from foreclosures or sheriff's sale for homeowners whose residence has code violations.
- 4.4.5 Strategy: Ensure that Housing Trust Funds are distributed equitably.

See Also:

Economic and Community Development Element, Goal 6



ELEMENT I

Historic Preservation

I. Historic Preservation Element

Element Defined

Long before Delaware became the “First State,” Delaware was inhabited by members of the Lenni Lenape, also called the Delaware Tribe, and Lenape Nanticoke nations. Settling throughout the Delmarva peninsula, the tribes utilized the rich resources found along the Delaware Bay to sustain life for centuries. New Castle County’s European history begins in the early seventeenth century, when Dutch and Swedish explorers established military forts and trading posts along the Delaware Bay and Delaware River. In 1651, the Dutch constructed Fort Casimir on land which is now the Town of New Castle. England gained control of Dutch territory along the Delaware River in the 1660s and by the 1670s, Delaware was placed under the control of the Duke of York and became one of the original thirteen colonies.

Since its incorporation, New Castle County has played a vital role in American history. Colonial settlers in Delaware would become leading members of the American Revolution; Delaware was the first of the original 13 colonies to ratify the Constitution that formed the United States government. By the early nineteenth century, the economy in New Castle County was characterized by a mix of agriculture and industry, including the establishment of the DuPont powder mills in 1802. The Chesapeake and Delaware Canal was completed in 1829 and established an important trade network through Delaware and Maryland which spurred the establishment of small towns such as St. Georges. The Piedmont region of Delaware was characterized by mills and mushroom farms while south of the canal saw important technological advances in farming practices led by the rural elite. In the years leading up to and during the Civil War, New Castle County was an important stop on the Underground Railroad and home to many abolitionists. The Industrial Revolution took off within New Castle County as it did in many eastern states. By the early twentieth century, the suburbanization of New Castle County saw its early beginnings after the years of the Industrial Revolution. Today, New Castle County’s landscape is largely characterized by suburban development that boomed in the mid-twentieth century and continues to grow even today. New Castle County is home to several cultural institutions, including Winterthur and Hagley Museum, that continue to tell the story of the county’s history for the benefit of residents and visitors.

New Castle County has a long history of historic preservation policy dating back to the 1970s. In 1966 with the passage of the National Historic Preservation Act, the nation saw a push to preserve historic resources. New Castle County was quick to establish Historic overlay zoning districts in the early 1970’s. The first established Historic overlay zoning district was Holly Oak, which was rezoned in 1976. Today, New Castle County participates in the Certified Local Government (CLG) program, which is a federal program that helps state and local governments participate in historic preservation initiatives. By having an historic resources code and active Historic Review Board, New Castle County meets the requirements to participate in the CLG program and is able to receive preservation benefits in the form of an annual grant.

As New Castle County continues to identify, evaluate, and target areas where growth should occur, it should also target the preservation of historic resources and districts. Historic resources play an important role in ‘placemaking’; therefore, the county should identify opportunities to preserve these historic resources for the benefit of residents and visitors. The continued preservation and protection of resources (buildings, structures, sites, objects, districts and landscape features) that have architectural, cultural, archaeological, educational and aesthetic value are critical to the character of the county. In addition, preservation of historic, cultural, and scenic resources creates important opportunities for the county including education, economic development, and tourism (heritage & agrotourism). Most importantly, preservation plays an important role in the health, prosperity and welfare of all residents of the county and enhances the quality of life for all.

What We Heard

“What do you think the biggest challenge is for historic preservation in New Castle County?”

- *Development pressure*
- *Big business*
- *Perceived cost*
- *Need more code protections*
- *Lack of cultural interpretation*
- *Retail development*
- *Need incentives*
- *Planning*
- *Lack of solid planning*
- *Developers*
- *People not aware of what properties and areas are historic*
- *Too expensive to make historic buildings fit modern needs”*

– Public Poll Responses, Deep Dive Session 4

“As part of the comprehensive planning process, we have to look at these resources and identify viable ways to encourage and ensure their preservation. To preserve historic resources and promote their value and significance through the comprehensive plan’s goals and strategies, we should identify opportunities for historic preservation and placemaking and pair them together.”

– Betsy Hatch, Historic Preservation Planner NCC Department of Land Use, Deep Dive Session 4c

New Castle County Today

Historic preservation practices in New Castle County continue to evolve over time as historic resources are continually identified. New Castle County’s Unified Development Code states that in order to be evaluated for historic designation, a resource should generally be a minimum of 50 years in age. In order to achieve its goals and encourage historic preservation, the county has several key tools on the local, state, and national level. In November of 2020, New Castle County adopted an ordinance that enhanced and modernized the Historic Review process and achieved several key goals including incentives for Historic overlay zoning, preservation of historic resources on major land development plans, and new powers to the Historic Review Board pertaining to demolition permits. In order to understand historic preservation in New Castle County, it is important for residents to understand the current tools at the county’s disposal.

New Castle County Historic Review Board

The New Castle County Historic Review Board (HRB) is established under the County’s Unified Development Code and is charged with making recommendations and decisions on land use applications that impact the County’s historic resources. The Historic Review Board is one of the primary authorities for historic resources in the unincorporated portions of the County. These applications include, but are not

limited to, building and demolition permits, land development plans, Historic Overlay rezonings, and nominations to the National Register of Historic Places.¹ The Historic Review Board also plays a pivotal role in the Demolition by Neglect regulations, which require that the cCounty's historic resources within the bounds of an Historic Overlay zone are maintained to a certain standard to avoid deterioration due to lack of maintenance.

The Historic Review Board consists of nine members that are appointed by the County Executive and County Council. The Board members are comprised of preservation professionals including an architect and archaeologist, as well as individuals who have demonstrated a concern in the field of historic preservation and have knowledge of the county's history.

New Castle County Historic Overlay Zoning Districts

New Castle County developed Historic Overlay zoning in the 1970s as a tool to assist property owners with the protection of the integrity of their historic properties. It was intended to identify properties where renovations or other changes should be carefully considered and planned. Only exterior alteration and new development of land within the overlay zoning districts require historic review. The general philosophy behind the Historic Overlay zoning districts is to respect the original character of the historic property by making repairs and renovations as seamless as possible. Historic Overlay zoning districts are distinct from other historic designations, such as the National Register of Historic Places.

Today, New Castle County has 49 Historic Overlay zoning districts, which are districts designated by the Historic Review Board and County Council. In order to qualify, each district must be at least 50 years in age, or exceptionally significant to New Castle County, in addition to meeting one or more of 14 criteria outlined in the Historic Resources code. These districts have a unique set of regulations as established by the county to preserve the character of the resources while also supporting adaptive reuse and prevention of demolition by neglect. The 49 Historic overlay zoning districts span 335 parcels that include historic resources, vacant land that contribute to the character of an area, and even a major subdivision.

In addition to designated regulations, Historic Overlay zoning districts offer other incentives for owners, including development incentives and tax credits. Historic Overlay zoning has remained an important planning tool that ensures enhanced community character and design, as well as a creates economic development opportunity. Properties with Historic Overlay zoning have the opportunity to utilize the adaptive reuse provisions, which promotes economic development through the continued utilization of existing structures that have historic value. The adaptive reuse provisions permit commercial uses that are appropriate on a neighborhood scale, such as hair salons, antique stores, bakeries, small restaurants, and offices and allow historic structures to remain a viable asset to the community. Examples of successful adaptive reuse sites in New Castle County include the Institute Collegiate Studies Institute located near the Hoopes Reservoir and the Holladay-Harrington House located on Kennett Pike.

See *Map I-1* displaying the current Historic Overlay Zoning Districts within New Castle County.

New Castle County Historic and Cultural Resource Design Guidelines

The county established Historic and Cultural Resource Guidelines in 2006 to assist in the review of applications for modifications and new developments within the Historic Overlay zoning districts. Similar to the Secretary of the Interior Standards for the Treatment of Historic Properties, the New Castle County Historic and Cultural Resource Design Guidelines is a helpful tool for all projects that may impact an historic resource. Because Historic Overlay zoning districts are not concentrated in one area of the county, there was an identified need for flexible and diverse guidelines on the local level. The resources included

¹ For a full definition of the Historic Review Board's responsibilities, visit Section 40.30.330 of the Unified Development Code.

in the county's Historic overlay zoning districts span more than 200 years and include more than 15 historic architectural styles. Therefore the guidelines provide the flexibility for property owners to make changes that are appropriate to each building's particular style. The design guidelines provide the principles of the county's preservation approach, but do not dictate required styles, regulate the interior use of the properties (beyond the existing base zoning of the area), or require a single treatment that should be applied to all buildings in a district. When making determinations on proposals in Historic overlay zoning districts, the Historic Review Board consults the design guidelines.

Demolition By Neglect Provisions

The County's Property Maintenance Code and Unified Development Code address "demolition by neglect." This term refers to allowing a property to deteriorate by lack of care and maintenance to a point that demolition is the only safe or financially feasible option. This is often done by owners of historic properties who do not want or are unable afford maintaining the property to meet historic guidelines. New Castle County is required to inspect properties within the Historic Overlay zoning districts annually to ensure that this does not occur. These inspections are reported to the HRB, and County Council and any property owners found to be neglecting their property will be notified and given an opportunity to respond to the claim.

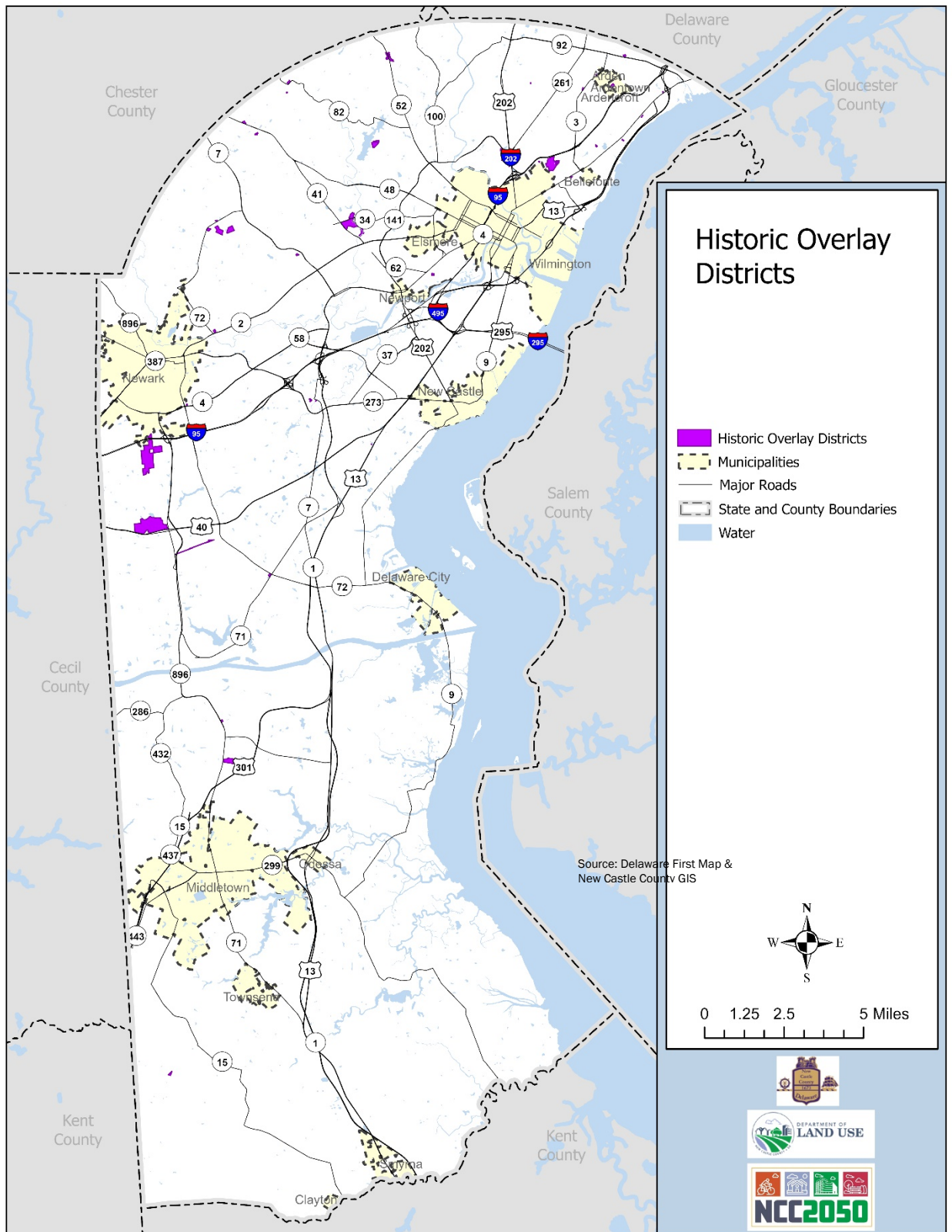
New Castle County Historic Marker Program

As a way of celebrating New Castle County's historic resources and appreciation of the stewards of the county's historic buildings, the Historic Marker Program was implemented in the winter of 2020. The program allows owners of properties located within a Historic Overlay zoning districts to place a marker identifying that a structure is an officially designated New Castle County historic resource. So far, three historic markers have been placed on County historic resources since the program's implementation (See *Figure I-1*).



Figure I-1: Example of County historic marker

Map I-1: Historic Overlay Zoning Districts



Certified Local Government Program

The [State of Delaware's Certified Local Government Program](#) (CLG) provides technical and financial assistance while encouraging preservation programs and practices at the local level. The CLG Program is a federal program administered in Delaware by the State Historic Preservation Office (SHPO) in partnership with the National Park Service. Local governments pursue CLG status to be eligible to receive this technical assistance and eligibility for grants to enhance the local government's historic preservation activities. CLG status requires the local government to enforce a preservation ordinance, establish a preservation committee, provide adequate public participation, review local National Register of Historic Places (NRHP) nominations, and maintain a publicly available list and map of local historic properties.

As a participant in the CLG program, New Castle County has the opportunity to apply for annual grant funds to promote various preservation activities in the county. In recent years, the county has partnered with the University of Delaware Center for Historic Architecture and Design (CHAD) to complete various documentation projects and nominations to the NRHP. Of those recent projects, New Castle County recently saw four resources added to the NRHP through participation in the CLG Program:

Parkers Dairy Palace

Listed October 15, 2019, Parker's Dairy Palace (See **Figure I-2**) is the best-known surviving example of a 1950s drive-in/walk-up soft serve ice cream stand remaining in New Castle County, Delaware.



Figure I-2: Historical photos of Parkers Dairy Palace

Florence and Isaac Budovitch House

Listed on January 30, 2020, the Florence and Isaac Budovitch House was constructed between 1955 and 1956 (See **Figure I-3**). This Contemporary style dwelling was designed by New York architect Edgar Tafel, an apprentice of Frank Lloyd Wright, and features distinctive Prairie School/Wrightian influences. The Budovitch House is significant at the local level as the only known Tafel-designed commission in the State of Delaware and as an excellent example of well-preserved mid-20th century Contemporary residential architecture.



Figure I-3: Florence and Isaac Budovitch House

Newark Union Church and Cemetery

Listed on February 6, 2020, Newark Union Church and Cemetery (See **Figure I-4**) served a wide range of religious groups for a total of nearly 300 years including Quakers, Methodists, Presbyterians, Anglicans and non-denominational Christians. Both the cemetery (founded in the late-17th century and still accepting burials) and the surviving Newark Union Church (built in 1845 and remodeled in 1906) represent the evolving religious demographics of residents north of Wilmington.



Figure I-4: Newark Union Church and Cemetery

(St. Daniels) African Union Church and Cemetery of Iron Hill

Listed on September 9, 2021, St. Daniels Church was constructed between 1852 and 1856 and is locally significant as the oldest known surviving, free Black church in northern Delaware that was built as part of Peter Spencer's African Union Church movement (See *Figure I-5*).



Figure I-5: (St. Daniels) African Union Church and Cemetery of Iron Hill

Byways and National Historic Trails in New Castle County

In addition to historic structures and sites, New Castle County also contains historically significant thoroughfares referred to as byways. There are two types of byways found in New Castle County, federally designated byways and state byways. The National Scenic Byways Program is overseen by the United States Department of Transportation's Federal Highway Administration in cooperation with state departments of transportation and other related agencies. The Delaware Byways Program began with the passing of Senate Bill 320 in 2000. This bill allowed DelDOT to establish a scenic byway advisory committee that is comprised of a variety of state and local agencies, which select byway locations throughout the state. The major differences between the two programs are funding sources and availability, as well as the level of local involvement as the state program allows for more local input than the federal program.

Designated byways in both programs possess certain intrinsic qualities that contribute to the history and historic landscape in New Castle County that should be continually preserved. The county is currently exploring a legislative approach to enhance protection of the byways through scenic viewshed protection paired with existing historic resource regulations. There are currently four byways within New Castle County:

- The Brandywine Valley National Scenic Byway (federal)
- The Red Clay Valley Scenic Byway (state)
- The Harriet Tubman Underground Railroad Byway (state)
- Delaware Bayshore Byway (state)

National Trails

The National Trails system was established by the National Trails System Act of 1968 and includes scenic, historic, and recreational trails maintained by the National Park Service (NPS). The Washington-Rochambeau Revolutionary Route runs through northern New Castle County and is enjoyed by residents and visitors wishing to learn more about the movements of General Rochambeau's French Army and the Continental Army to Yorktown, Virginia, which ultimately led to the end of the Revolutionary War.

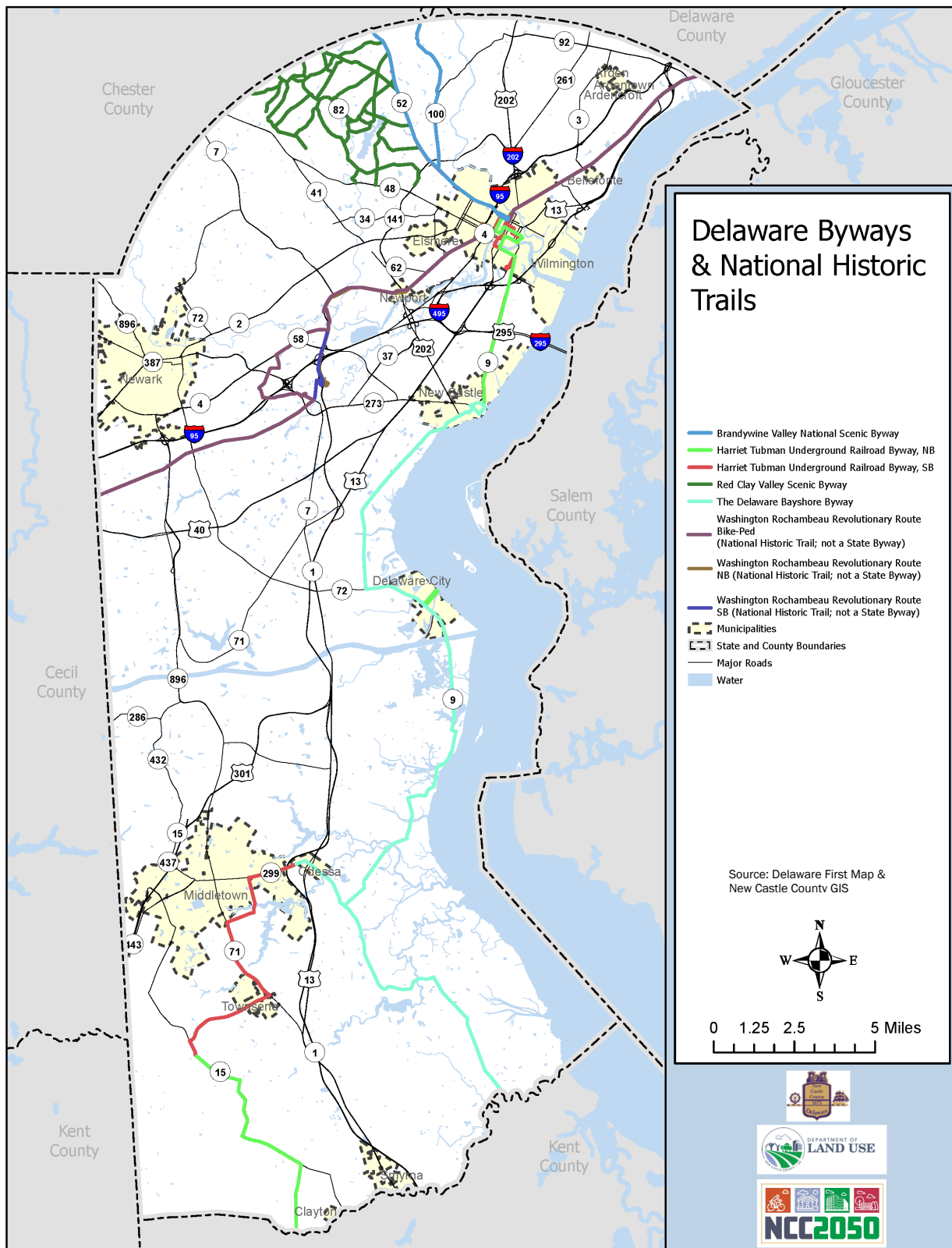
See *Map I-2* for the byway and National Historic Trail locations throughout New Castle County.

Historic Areas and Related Community Efforts

In addition to scenic byways and national trails, New Castle County contains contiguous [areas / lands] of regional significance that include historic, scenic, recreational, and environmental resources that define the character of a particular area. Often times, these character areas extend beyond county jurisdiction lines and present opportunities for intergovernmental coordination between neighboring counties and states. The recognition and preservation of these areas not only provides residents and visitors of New Castle County the ability to enjoy recreational activities, preservation also provides the county with economic development opportunities through heritage tourism and agrotourism. In conjunction with heritage tourism, land preservation provides for crucial environmental resource protection; therefore, it is imperative that the county prioritize partnerships and involvement in efforts that seek the preservation of these character areas. Examples of these ongoing efforts include but are not limited to:

- First State National Historic Park
- Brandywine Creek Greenway
- Mason-Dixon / Arc Corner Heritage Interpretation Connectivity Plan
- Brandywine Battlefield Task Force

Map I-2: Byways and National Historic Trails



National Register of Historic Places

New Castle County is home to hundreds of historic buildings, sites, structures, and resources that are listed on the National Register of Historic Places (NRHP). While Historic Overlay zoning districts are regulated locally by the Historic Review Board, the resources on the NRHP are listed nationally through the National Park Service (NPS).

The NRHP coordinates and supports both public and private efforts to identify, evaluate, and protect America's historical and archeological resources. In order to qualify for the National Register of Historic Places, a resource must meet one of more of four criteria.

- A. Is associated with events that have made a significant contribution to the broad patterns of our history; or
- B. Is associated with the lives of persons significant in our past; or
- C. Embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Has yielded or may be likely to yield, information important in history or prehistory.

The [National Historic Preservation Act \(NHPA\)](#) defines a resource as any “prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on, the National Register of Historic Places, including artifacts, records, and material remains related to such a property or resource.” According to the NPS, NRHP Historic Districts include “a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.” *Map I-3* illustrates National Register Districts & Resources.

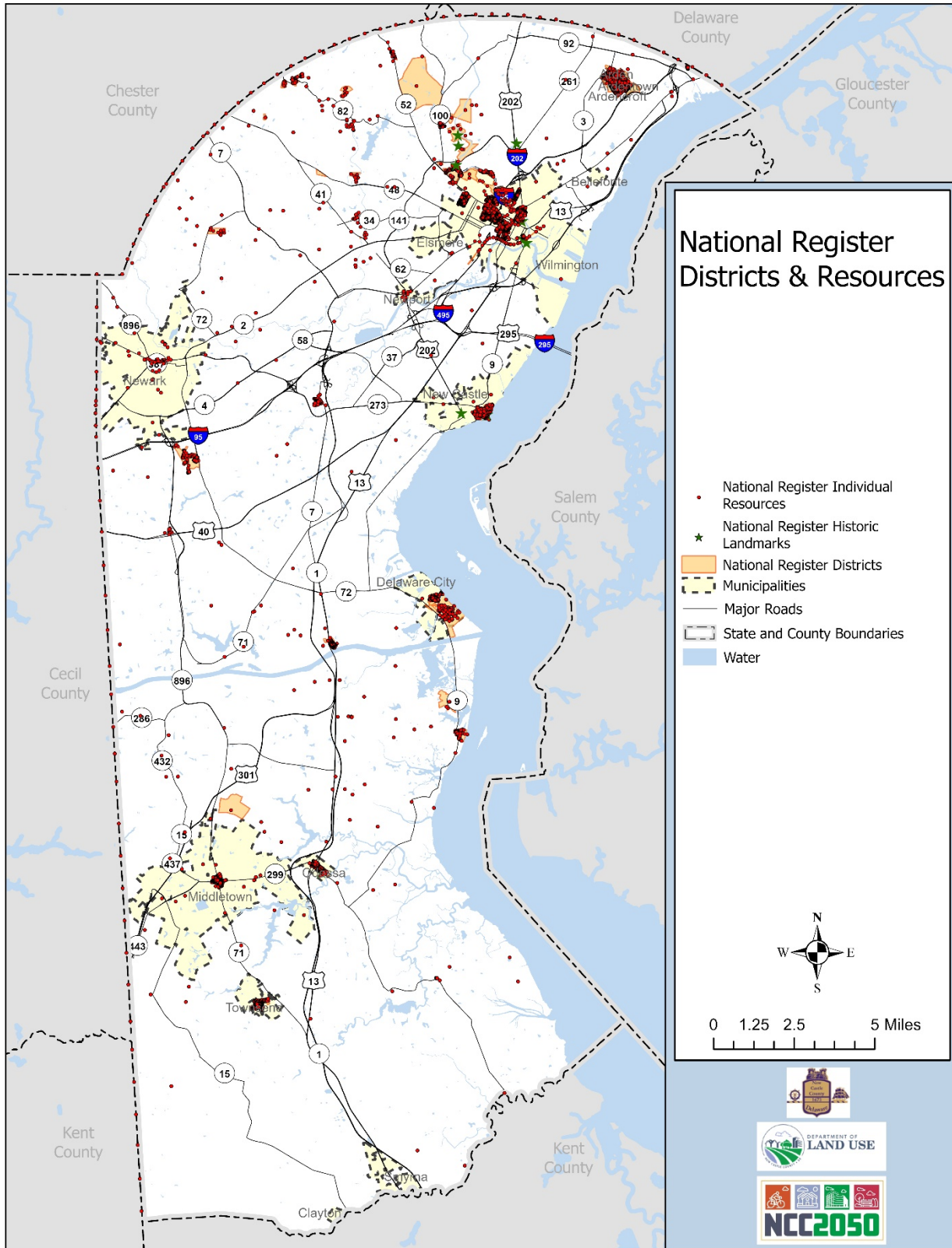
The National Register of Historic Places program remains a crucial planning tool for preservation on the local, state, and federal level. Resources listed on the NRHP automatically qualify for County Historic overlay zoning and therefore are immediately flagged when part of building project or land development proposals. Properties listed on the NRHP qualify for incentives such as federal, state, and local tax credits. Section 106 of the NHPA requires that each federal agency identify and assess the effects its actions may have on historic buildings and must consider public views and concerns about historic preservation when making project decisions. The Advisory Council on Historic Preservation, which is the regulatory body to determine nationally designated resources, regulates the Section 106 process. The county is often a consulting party in this process as part of intergovernmental coordination and historic preservation planning activities on a regional and federal level.

Currently, New Castle County along with its incorporated municipalities has over 5,000 resources individually listed on the NRHP, as well as 42 National Register Historic of Places Districts.²

Similar to the National Register of Historic Places, the National Historic Landmarks Program (NHL) is a list of historic buildings, sites, structures, objects, and districts that represent an outstanding aspect of American history and culture. There are currently 12 National Historic

² Data source: Delaware Historical and Cultural Affairs

Map I-3: National Register Districts & Resources



Landmarks in New Castle County. While unincorporated New Castle County has 4, many of the designated NHL's are located within the County's municipalities.

See Map I-3 for National Register of Historic Places sites in New Castle County.

Tax Incentive Programs

New Castle County Tax Credit Program

New Castle County properties listed on the National Register of Historic Places or within an Historic overlay zoning may be eligible for [historic tax credits](#) that are applied to County property taxes.

State Tax Credits

Delaware's [Historic Preservation Tax Credit Program](#) provides assistance for preservation or rehabilitation of historic buildings. Buildings must be listed on the NRHP or certified in another way as contributing to an historic district.

Federal Tax Credits

Listing in the NRHP, as described below, makes historic properties eligible for [federal preservation tax credits](#) from the National Park Service which has distributed more than \$45 billion in private investment and National Park Service grant programs like [Save America's Treasures](#) and [Preserve America](#).

Future Historic Preservation in New Castle County

While much work is occurring to further the preservation of historic resources in New Castle County, demolition by neglect remains a relevant issue throughout the county. The National Register of Historic Places and County Historic Overlay zoning district should be used to effectively preserve many of the places facing potential threats. Through these programs and careful planning, New Castle County must continue to encourage and reward preservation efforts, enhance community character, and enrich the lives and surroundings of residents.

A similar issue exists south of the Chesapeake and Delaware Canal. Agricultural lands that have played a vital role in the advancement of New Castle County are threatened by development. This not only affects the natural environment but threatens the preservation of historic features linked to New Castle County's rich farming heritage. Continuing to incorporate historic resource protection into the planning and development process is vital to preserving the past while promoting an innovative and successful future.

The county is evaluating and targeting areas where growth should occur, which includes designating historic districts and resources that are appropriate and compatible for development and "placemaking," as well as identifying other opportunities to preserve historical resources. For example, Christiana Village is in an area with sufficient infrastructure, property density, and a rich heritage that should grow and be celebrated through appropriate community design and planned growth. Another preservation opportunity is Port Penn, just south of the canal on Route 9 with similar attributes, where growth should be concentrated to preserve the vibrant surrounding agricultural land.

Related Goals, Objectives, and Strategies

12. Goal: The value and significance of the historic, prehistoric, and cultural resources in the county are known and promoted; significant resources are preserved for the benefit of residents and visitors.
 - 12.1. Objective: Increase awareness of the county's historic/prehistoric/cultural resources, including tourism promotion.
 - 12.1.1. Strategy: Create opportunities for the community to learn about historic preservation and participate in research and preservation efforts, such as an outreach program.
 - 12.1.2. Strategy: Promote educational programs for the public, business, and development communities regarding the history, prehistory, and architectural history of the County, and the process and benefits of historic preservation.
 - 12.1.3. Strategy: Digitize and publish New Castle County historic property inventory records for public use.
 - 12.1.4. Strategy: Work with educational institutions and community organizations to feature the stories and resources.
 - 12.2. Objective: Increase preservation and adaptive reuse of the county's historic/prehistoric/cultural resources.
 - 12.2.1. Strategy: Develop a County-wide historic preservation plan, that is consistent with the statewide historic preservation plan, *Partners in Preservation: Planning for the Future, Delaware's Historic Preservation Plan 2018-2022* (<https://history.delaware.gov/pdfs/2018-2022DelawareSHPOPlan.pdf>). The plan should include inventorying and prioritizing existing historical sites and sites of historical significance that will be eligible for protection. The plan will have goals and strategies for protecting specific historic buildings, contexts, areas, landscapes, and resources, with emphasis on broadening the concept of historic resource preservation in the County Code to include landscapes and context.
 - 12.2.2. Strategy: Preserve in our neighborhoods and across our county that which is meaningful and supports our quality of life by protecting and enhancing environmental, historical, and cultural assets.
 - 12.2.3. Strategy: Define and incorporate greater protections for historic landscapes and contexts.
 - 12.2.4. Strategy: Inventory and survey abandoned/neglected properties with potential historic significance.
 - 12.2.5. Strategy: Develop a comprehensive approach to historic preservation in New Castle County that proactively incentivizes and rewards residents for engaging in historic preservation activities, including Historic overlay zoning.
 - 12.2.6. Strategy: Establish a program to work with property owners to preserve historic properties, with a focus on endangered resources and threats of demolition by neglect, in complement to more stringent enforcement of "demolition by neglect" laws.
 - 12.2.7. Strategy: Create a grant or loan program to assist the owners of historically significant properties in maintaining the structural integrity and historic character of their structures.

- 12.2.8. Strategy: Strengthen the development incentives for preserving and rehabilitating historic structures as part of the land development process.
- 12.2.9. Strategy: Encourage adaptive reuse historic structures to preserve the character of existing neighborhoods, while providing options for small business owners.
- 12.2.10. Strategy: Be the example of careful preservation for residents, property owners, and developers by working to develop uses for historic properties owned by the County and by partnering with vocational high schools and college preservation trade programs.
- 12.2.11. Strategy: Continue supporting implementation of Byways efforts in the county.

See Also:

Community Planning and Design Element, Goal 10



ELEMENT J

Community Planning & Design

J.Community Planning & Design Element

Element Defined

New Castle County has an assortment of land use issues and development types, ranging from older urban areas, post-World War II subdivisions and shopping centers to newer development, some scattered in previously rural areas. Much of the county has been developed, particularly north of the C & D Canal. Trends show an emerging interest in concentrating new suburban growth, redeveloping older developed areas, and repurposing economic centers and former industrial sites that are no longer supported in today's economy. Community planning efforts in the county are also focused on improving the quality of new and existing development, place-making, planning for infill, redevelopment, and revitalization/repurposing where appropriate. However, current zoning regulations and land use policies have not always been sufficient to address the unique needs of different areas throughout the county.

Community design is focused on the creation and management of environments for people. This process should be applied from the neighborhood to the regional scale and aims to meet community needs through participatory decision-making at all levels.

Many components make up a community's overall design and sense of place, including:

- Streetscapes that are safe, comfortable, and a beneficial part of the public realm for the whole range of users;
- Green infrastructure, such as trees and other planted stormwater infiltration areas that create beauty, moderate temperatures, and mitigate flooding;
- Quality design and maintained buildings and the relationship between buildings and other built form; and
- Historical and cultural assets.

New Castle County has made progress toward this participatory decision making in the recently-completed Community Area Master Plan efforts, and this progress should be continued in future planning and development efforts.

A key theme for the NCC2050 plan is *Thriving Places and Community Character: The places we live, work and play are well designed, accessible, and vibrant, with active locations for people to gather. Our communities reflect important aspects of our past and are places in which we take pride.*

These principles support our goals of promoting compact development, infill development, and reuse and redevelopment to strengthen communities while protecting our existing open space and natural resources. When applied in coordination with other efforts outlined in this plan, community design is an important part of creating a New Castle County where everyone thrives—from residents and homeowners to visitors and employers.

What We Heard

"I would like to see us incorporate into the building code requirements for preserving an equal amount of open space for every piece of developed land." – Public Participant, Open Space, Conservation, Recreation, Environment Deep Dive Session, February 3, 2021

"Considering zoning to create buffers between industry and our neighborhoods and preserve the open space that already exist..." – Public Participant, Open Space, Conservation, Recreation, Environment Deep Dive Session, February 3, 2021

A majority of Youth Planning Board members agreed on Goals related to Community Design including:

- Promote a convenient, but active lifestyle by increasing park accessibility
- Expand public transportation to smaller cities to benefit residents and promote a sense of interconnectedness
- Create bus stops in smarter locations where injury is less likely
- Modernize local parks with new or refurbished equipment from recycled materials
- Restore vacant properties including homes and stores

– Youth Planning Board Meeting, May 26, 2021

After Public Forum #1 in November 2020, attendees were invited to participate in an Image Preference Survey to select their three most and least favored images, related to elements of the images that they do or do not want to see in the future of New Castle County. Areas of agreement included: open space and trees; affordability; maintenance; aesthetics and appearance; underground utilities; and accessibility. There was a lack of consensus related to suburban/urban balance; parking; density; balance of planned design and control; balance of modern and traditional design. The images that received the highest scores are included below.



Select Positive Comments



Select Negative Comments



- ✓ A place you want to be
- ✓ Bustling market place - Lots of nice small shops
- ✓ LOVE LOVE LOVE the brick pavers/sidewalk
- ✓ Healthy trees, shade - Flowers in trees

- ✗ Bricks look uneven - could be dangerous or trip hazard
- ✗ Would like a bench for resting, sitting
- ✗ Limited parking space
- ✗ Could be busy



- ✓ Don't let it change!
- ✓ Lots more of this - LOVE IT!
- ✓ Green is good
- ✓ A place I can take my friends and family... good place to bring friends/family/tourists. Walk along a trail and have a good time

- ✗ Phragmites? Non-native species plants are a concern
- ✗ Is there a pathway? Want people to be able to walk safely
- ✗ Is this walkable from anywhere?



Select Positive Comments



Select Negative Comments



- ✓ The wave of the future - Like the EV chargers and autonomous vehicle all still at pedestrian scale
- ✓ Porous pavement
- ✓ Native grasses, greenery, visible nature
- ✓ Very walkable

- ✗ Doesn't look like Delaware
- ✗ Too futuristic/modern
- ✗ Everything - Don't like the structure or charging stations - adding more traffic; don't like the building behind
- ✗ Driving on cobblestone not fun



- ✓ Cozy! Cute! Love this!
- ✓ Family friendly - Could be a senior living area
- ✓ Sense of community, welcoming, neighborly
- ✓ Compact, walkable
- ✓ Porches, landscaping, car free

- ✗ Where is the parking?
- ✗ Requires respectful neighbors
- ✗ Bad stormwater drainage
- ✗ Not much room for children to play - pretty tight
- ✗ Too high density - ok somewhere, but not everywhere

New Castle County Today

County Zoning & Unified Development Code

A comprehensive plan and zoning ordinances are two ways that the county ensures that development is orderly, environmentally appropriate, and in alignment with community priorities and concerns. The Future Land Use Map outlines the proper placement of housing, economic activity, community services and resources, recreation facilities, government buildings, and much more. The [Unified Development Code](#) (UDC), New Castle County's zoning code, provides the regulatory framework and specific density for each land use type, site design requirements to protect our environment, and quality and safety requirements for all buildings and structures. The UDC regulates and controls several aspects of land use and development in the unincorporated areas of the County:

- The planning and subdivision of land
- The use, bulk, design, and location of land and buildings
- The creation and administration of zoning districts
- The general development of real estate

The UDC is intended to protect the health, safety, prosperity, convenience, and general quality of life of current and future residents, visitors, and neighbors from potential adverse impacts of different land uses, while also respecting landowners' rights to use their land in a beneficial way. The UDC was originally created in 1997 with a focus on achieving greater flexibility regarding mixed use and overall design. It includes a variety of topics related to land use and development, many of which are also found in this comprehensive plan:

- Land Use Patterns and Community Character
- Natural and Cultural Resources
- Economic Development
- Public Infrastructure
- Growth Management
- Affordable Housing
- Justifiable Expectations

Zoning Districts

New Castle County is divided into zoning districts that help to achieve a compatibility of land uses and community character consistent with the vision and goals outlined in the comprehensive plan. Zoning districts fall into four major "community character classes:" urban, suburban transition, suburban, and special. More detail about the zoning districts and the additional classifications is found on the New Castle County [Department of Land Use website](#). In addition to these basic classes, the County also uses three special overlay districts — Historic Overlay, Hometown Overlay, and Neighborhood Preservation Overlay District (NPOD). In addition, there is one special zoning district, Economic Empowerment District (EED).

Hometown Overlays and Design Review Advisory Committees

The [Hometown Overlay District](#) seeks to perpetuate and enhance the unique character of early settlement areas, hamlets, villages, and pre-World War II subdivisions. These areas often do not conform to modern zoning standards but are viable and attractive places to live and work. This overlay district is intended to ensure infill, redevelopment, and changes to the zoning patterns are compatible with the existing community character.

Four communities have successfully undertaken the Hometown Overlay Process:

- Centreville Village
- Claymont
- Hockessin Village
- North St. Georges

Each Hometown Overlay district requires its own community redevelopment plan and design guidelines, which future development should conform to, rather than strictly following the modern zoning guidelines.

Each Hometown Overlay district also has a Design Review Advisory Committee (DRAC), which is responsible for reviewing any land development applications to ensure they comply with the community redevelopment plan and other community standards and guidelines. The DRAC also makes recommendations for revisions to the community redevelopment plan and/or design guidelines manual based on community standards.

Historic Overlay Districts

It is necessary to preserve and protect buildings, structures, sites, objects, districts, and landscape features of historic, architectural, cultural, archeological, educational, and aesthetic importance. The county preserves these assets because it is in the interest of the health, safety, and general welfare of all residents of the county.

The Historic Overlay District outlines specific standards to protect these assets within the district. Historic zoning identifies properties where renovations and changes should be carefully planned. Only exterior alteration and new development of land within the overlay districts require historic review. The general philosophy behind the Historic Overlay Districts is to respect the original character of the historic property by making repairs and renovations as seamless as possible. County Historical Overlay Districts are distinct from other historic designations, such as the National Register of Historic Places.

Historic Overlay Districts are not concentrated in a single area of the county which creates the need for flexible and diverse guidelines. The historic properties in New Castle County span more than 200 years and include more than 15 historic architectural styles, so the guidelines provide the flexibility for property owners to make changes that are appropriate to each building's particular style. The design guidelines provide the principles of the County's preservation approach, but does not dictate required styles, regulate the interior use of the properties (beyond the existing base zoning of the area), or require a single treatment that should be applied to all buildings in a district.

In 2020, the Department of Land Use undertook a comprehensive update to the portions of the UDC related to historic preservation to ensure consistency and clarity. This update modified and reorganized existing code sections to provide uniformity across various chapters of the code; provided a clear path for the evaluation, identification, and documentation of historic resources; and provided new incentives for historic preservation activities. Since the passing of Ord. 20-071 in November of 2019, New Castle County has prioritized through legislation the preservation of historic structures when a major land development is proposed. The preservation of these historic structures provides enhanced community design and character for the built environment and allows residents to enjoy a unique experience while living, working, and playing in New Castle County. More information is found in the [Historic Preservation element](#) of this document.

Neighborhood Preservation Overlay Districts (NPOD)

The NPOD is an overlay zoning designation that is intended to maintain the distinctive physical qualities of existing neighborhoods. An NPOD designation is intended to provide a regulatory tool for communities concerned with issues of incompatible infill development and structural alteration that could inappropriately change the appearance or character of residential neighborhoods. An NPOD must include at least one residential zoning district (Neighborhood Conservation (NC), Suburban Reserve (SR), Suburban Estate (SE), Suburban (S), Suburban Transition (ST), and Traditional Neighborhood (TN) districts)

and may include all or part of any nonresidential zoning district. However, at least 50 percent of the parcels within the proposed overlay district must be a residential use.

To establish an NPOD, a conservation plan that identifies the designated boundaries, establishes regulations for the specific NPOD overlay district, and demonstrates consistency with the Comprehensive Development Plan shall be prepared. The final approval of an NPOD must be adopted via an ordinance approved by County Council. Currently there have not been any NPOD designations in the county. Applications for an NPOD were limited to during the first three (3) years after the effective date of adoption of the NPOD provisions into the UDC, January 24, 2017.¹

Economic Empowerment Districts (EED)

The EED is a special district established to facilitate the approval of employment uses (and complementary accessory uses) in a master planned, campus-like setting. Proposed uses in an EED must consist of targeted industries as identified by the New Castle County Economic Development Strategic Plan, dated September 2014, as may be amended, or updated, and shall consist of corporate headquarters, high technology offices, research and/or light assembly centers, or master planned employment centers.

A proposed EED must have a minimum parcel size of ten (10) acres. The area or site within the proposed district must take access from a collector or arterial street or be located within one quarter (1/4) mile of a bus stop or within one half (1/2) mile of a commuter rail station. Between 80% to 90% of the proposed gross floor area (GFA) for a proposed EED must be allocated for a targeted industry. The percentage of GFA that must be allocated for a targeted industry is dependent on the total proposed GFA. The approval of an EED must also include design guideline standards, which includes elements related to site design, building massing, landscaping, and building materials. A proposed EED must include trip reduction or transportation demand management (TDM) measures where possible to reduce the number of vehicle trips to and from the site. Once an EED is approved, proposed land development projects within the EED are processed as a Minor Land Development Plan demonstrating compliance with the development and design standards adopted for the district. Currently there have not been any EED designations in the County since the adoption of the EED provisions into the UDC on January 24, 2017.

Smart Code

The Smart Code is a form-based code incorporating Smart Growth and New Urbanism principles. Form-based codes focus more on the physical form of a place rather than specific land uses or statistical information. Smart Code was created in response to the development patterns of the mid- to late-20th century, when there was an increase in zoning codes that separated residential development from employment, shopping centers, schools, and other land uses, which caused people to rely almost entirely on automobile travel. The Smart Code encourages mixed land uses within walking distance of residential areas and a connected transportation network. By focusing development on areas where people already live, work, or shop, Smart Codes and other form-based codes also help to preserve open space, environmentally sensitive areas, and agricultural land.

New Castle County has applied Smart Code principles in the UDC within the Suburban zoning district, which permits hamlets and village as a development option. Hamlet and village developments follow design standards located in Article 25 of the UDC, which are based on Smart Code principles. Hamlet or village development currently must be located in areas of southern New Castle County designated as growth areas in the previous comprehensive plan. Proposed land developments must be located south of the C&D canal, west of US 13, east of the Norfolk and Southern Railroad spur and generally north of Marl Pit Road and be served by public sewer. It also provides for a balance between green space and structures. "The highest densities are permitted in designed communities, hamlets and villages, through

¹ Until January 24, 2020 only areas identified in the New Castle County Department of Land Use Action Plan & Work Program, 2014/2015, dated October 7, 2014 (areas include: Pike Creek, Concord Pike, Route 9, Kirkwood Highway, Newark/Route 273 Corridor, and Claymont) or where a WILMAPCO study had been conducted were eligible to establish an NPOD.

the use of Smart Code techniques.” (New Castle County Unified Development Code, Section 40.02.232, Section 40.25.121)

The Village of Whitehall is a development in southern New Castle County, which utilizes this development option.

In lieu of traditional zoning categories, transect zones are used. The transect zones are administratively similar to the land use zones in conventional codes, except that in addition to the usual building use, density, height, and setback requirements, other elements of the intended habitat are integrated, including those of the private lot and building and public frontage.



Figure J-1: The Village of Whitehall



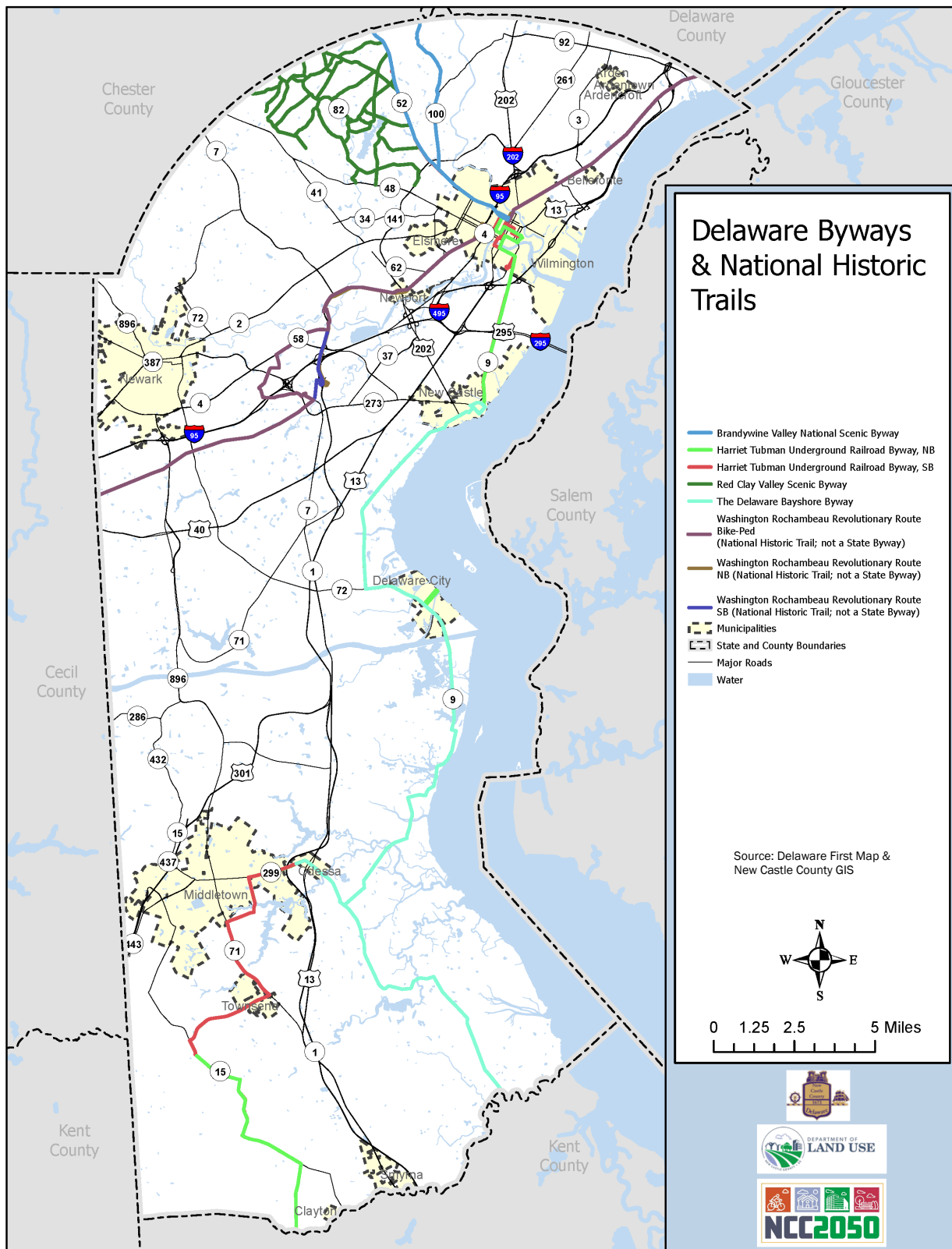
Figure J-2: Transect Zones, Source: Duany Plater-Zyberk

Byways and Heritage Areas

The Delaware Department of Transportation was authorized in 2000 to develop the [Delaware Byways Program](#). According to DelDOT, the purpose of the program is to “identify, promote, preserve, and enhance Delaware roadways with scenic, historic, natural, cultural, recreational, or archaeological qualities.” It is a collaborative effort of the community members and local, state, and federal governments. DelDOT’s effort was initiated following the creation of the [National Scenic Byways](#) program in 1991. There are six byways designated in Delaware, and four of those pass through New Castle County (see *Map J-1*). Other details related to byways in New Castle County is found in the [Historic Preservation element](#).

In addition to scenic byways, New Castle County contains areas of regional significance that define the character of the community. Preservation and community design in these areas should be prioritized to enhance and preserve local character while also providing for context-sensitive economic development.

Map J-1: Delaware Byways and National Historic Trails



In 2018, the County began a process of examining and updating methods for preserving scenic byways in the county. This work is part of the county's ongoing work to identify the unique assets of the landscapes and features seen from public roads. Also known as "intrinsic qualities," these assets include scenic, natural, cultural, historic, archaeological, and recreational features, which contribute to the overall beauty and quality of life in the county. There are four state or federally designated Byways in New Castle County.

- **Brandywine Valley National Scenic Byway** – Extending from Rodney Square in Wilmington along Routes 52 and 100 to the Pennsylvania state line, the significance of the byway is related to its role in 18th- and 19th-century American industrial history.
- **Red Clay Valley Scenic Byway** – Following an interconnected and interdependent network of 28 roads, this byway is intimately linked to the Red Clay Creek and its watershed, including Red Clay Ravine, Red Clay Creek, Burrows Run, Coverdale Woods, and Red Clay Reservation.
- **Harriet Tubman Underground Railroad Byway** – A continuation of the Maryland Harriet Tubman Underground Railroad Byway, the route traverses Underground Railroad sites in Camden and Dover, through Smyrna, Middletown, and Odessa. It then follows Route 9 along the Delaware River to Wilmington to Kennett Pike to the Pennsylvania state line.
- **Delaware's Bayshore Byway** – This byway begins near the City of New Castle and extends to the beaches just outside Lewes in Sussex County.

One outcome of the 2018 process seeks to modify existing code language and create a new Article 18 in the UDC, which is intended to preserve, protect, and enhance the resources associated with county, state, and federal scenic byways in the county. The goals of this effort include:

- Preservation and enhancement of character-defining features
- Scenic watershed protection
- Conservation design²
- Context-sensitive solutions³

The ongoing effort to preserve and enhance the county's byways and associated resources continues with focus on updating the existing structure of the UDC. New development along designated scenic byways should be oriented around the preservation of these scenic aspects of the property. The proposed language includes standards related to building placement, visible building height, facades, landscaping, and buffering. As of fall 2021, the proposed language is under development at the county.

Responsible Subdivision and Land Development Design

The UDC outlines the principles and provisions the county uses in the review and approval of proposed subdivisions and new land developments. In this case, "subdivision" refers to the creation of new smaller parcels from a large piece of land. Article 20 of the UDC outlines the county's requirements to ensure new developments preserve or enhance neighborhood or community character. Some key principles and standards which New Castle County looks for in all subdivision plans include a safe and well-planned transportation network; preservation of or provision for open space and the protection of natural resources; and the integration of drainage and utility systems to avoid impacts to the environment or neighboring properties.

² A design system that takes into account the natural landscape and ecology of a development site and facilitates development while maintaining the most valuable natural features and functions of the site. It includes a collection of site design principles and practices that can be combined to create environmentally-sound development. (Conservation Design Manual, Northeastern Illinois Planning Commission and Chicago Wilderness, March 2003,

<https://www.cmap.illinois.gov/documents/10180/49967/Resource+Manual.pdf/b7cc9d90-d47b-4bb0-99a3-c28dbc0608f9>

³ An approach integrating land use and transportation decision-making and design that considers the communities and environment where the roadways or developments are planned. It is a collaborative, interdisciplinary approach leading to preserving and enhancing scenic, historic, community, and environmental resources.

These provisions and the additional standards included in the UDC help to ensure that development occurs in context with existing land uses and does not have adverse effects on existing residences, schools, community resources, environmental features, and economic activity.

In addition to the ordinances in the UDC, the County created general design guidelines which developers are encouraged to follow when submitting subdivision and land development plans, called Guiding Principles for Development in Appendix 7 of the UDC. The Guiding Principles establish five Character Areas, which correspond with future land use categories: Residential Neighborhood, Mixed Residential Neighborhood, Center, Corridor, and New Community Development. Character Areas designations correlate with the zoning category, State Strategies Level, and the Future Land Use categories of the Future Land Use Map. With the completion of NCC2050 it will be important that the Guiding Principles be updated to correlate with the new Future Land Use Categories, as outlined in the [Future Land Use and Implementation element](#) of the plan. Likewise, the design guidelines of the Guiding Principles should be updated for consistency with community design and desired built form.

Sub-area Plans and Special Studies

For many decades, New Castle County has also used more localized, fine grain planning efforts. Previous sub-area plans are incorporated into the New Castle County Comprehensive Development plan as Special Study Areas (1997) and Sub-Regional Corridor Plans (2012). These plans have been an essential tool for guiding land use decisions for nearly 25 years. The most recent sub-area planning efforts, which have taken place roughly over the last five years, are important continuation of this long-standing practice.

These sub-area plans help to achieve one of New Castle County goals to maximize the beauty, functionality, and unique features of the county by developing strategies for special areas, activities, and public interests. Partnering with state, county, and municipal agencies; organizations; and non-profits, the Department of Land Use identifies corridors or designated areas on which to focus, holds public workshops and solicits input, presents data and drafts objectives for discussion, and develops the best path forward for reaching the shared objectives. These sub-area studies support planning at a more local scale where specific community ideas and concerns should be more fully vetted, which is important in a county as large and diverse as New Castle County.

In recent years, these studies and plans have included park surveys and plans; corridor studies and master plans; a county-wide bicycle plan, and flood and stormwater studies.

Completed plans:

- [Ardentown Paths Plan](#) (November 2017)
- [Churchmans Crossing Land Use and Transportation Plan](#) (January 2022)
- [Concord Pike Master Plan*](#) (November 2020)
- [Glasgow Avenue Planning Study](#) (Sept 2017)
- [Governor Printz Corridor Study](#) (January 2021)
- [Marshallton \(March 2014\)](#)
- [New Castle County Bicycle Plan](#) (May 2020)
- [Newport Train Station Feasibility Study](#) (July 2013)
- [Newport Transportation Plan](#) (January 2021)
- [North Claymont Area Master Plan*](#) (January 2017)
- [Port Penn Flood Study](#) (April 2016)
- [Red Clay Valley Scenic Byway Design Standards Overlay](#) (Nov 2016)
- [Route 141 Corridor 20-Year Land Use and Transportation Plan](#) (August 2016)
- [Route 40](#) (September 2014)
- [Route 9 Corridor Master Plan*](#) (May 2017)

- [Route 9 Paths Plan](#) (September 2021)
- [Southern New Castle County Master Plan*](#) (September 2020)
- [SR 141 Transportation and Land Use Plan](#) (August 2017)

*Community Area Master Plans

Community Area Master Plans (CAMPs)

The Community Area Master Planning effort seeks to provide a community-based, finer grained planning approach in specific geographical areas within the county. These are generally areas that are experiencing, anticipating, or desiring more significant change, whether due to population growth, market pressure, or desired revitalization. In a place as socially, economically, and geographically diverse as New Castle County, conducting long-range, sub-area planning is especially important to address issues and land use at a localized level sensitive to the area's context and conditions.

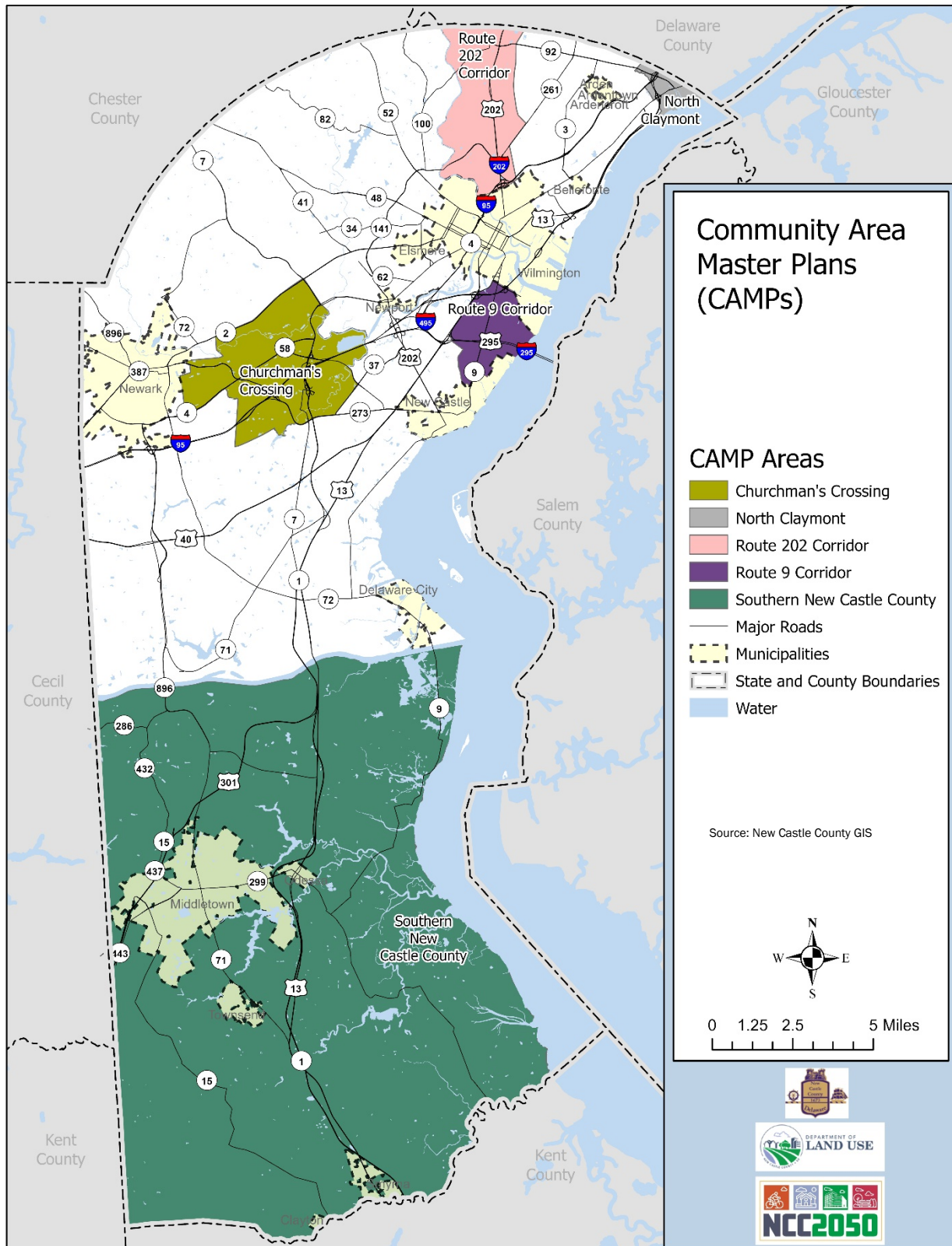
Notably, the planning process is a key component of success—the process enables critical issues to emerge, be vetted, and ideas get developed and refined. Plan products such as a future land use map and principles for development are also imperative to establish policy, inform decision making, and help achieve plan goals over time. Community Area Master Plans are distinct from other community planning documents as they formalize the great efforts of local communities toward planning and achieving the vision for their local community by officially adopting the essential recommendations from the plans as County policy under the current countywide comprehensive plan and documented on the Future Land Use Map.

Four CAMPs are defined at this point and shown in *Map J-2* along with the Churchman's Crossing area, which is anticipated to become a CAMP as community planning moves forward there:

- [Route 9](#)
- [North Claymont](#)
- [Concord Pike \(US 202\)](#)
- [Southern New Castle County](#)

Each are summarized in the following pages. Key recommendations for each Community Area Master Plan is found in Appendix F, which identifies recommendations and their location that were incorporated throughout the NCC2050 Comprehensive Plan elements. Any Land Development Plan, Rezoning, Variance or Special Use within one of these study areas should consider the impact and effect on meeting the vision, goals, objectives, and strategies of the Community Area Master Plan.

Map J-2: Community Area Master Plans



Route 9

Overview

The Route 9 Corridor Land Use and Transportation Plan (also known as the Route 9 Master Plan) addresses several important issues including Social Justice, Environmental Justice, and neighborhood revitalization. Funded and managed by WILMAPCO with support from project partners DelDOT and New Castle County, the plan was the product of more than two years of community-driven planning. Since the plan's completion and endorsement by WILMAPCO in May 2017, the Route 9 Monitoring Committee formed and has proceeded implementing multiple plan recommendations. During fall 2021, the Committee submitted written comments to the county in support of the plan with several clarifying and content recommendations including additional objectives and strategies regarding public engagement, Social Justice, Environmental Justice, and multifamily housing. Those points were reviewed and factored into the following content, are integrated in relevant elements and recommendations throughout the plan and are reflected in more detail in Appendix F: Essential CAMP Recommendations.

The Plan

Much of the Route 9 area is an older suburb of Wilmington that was originally developed during the mid-20th century. It includes many residential neighborhoods, with a mix of housing types, detached homes, duplexes, townhomes, and some apartments. To the south, Route 9 contains a few strip shopping centers and smaller commercial properties and becomes more industrial closer to the City of Wilmington and the Port of Wilmington. Residential developments were at times developed in a piecemeal or disconnected manner. In addition, industries were built too close to homes; roads were built too wide; commercial activity became decentralized; healthy food and routine healthcare became difficult for those without a car; and the construction of I-295 and I-495 divided communities. Like many older communities throughout the county, the area has struggled particularly with issues of vacancy, poverty, environmental justice, and associated problems. In addition, and more uniquely, public health concerns have grown among residents in the area, particularly those in Eden Park Gardens and Hamilton Park. These neighborhoods are located adjacent to, and insufficiently buffered from, active heavy industry. The air quality and particulate matter associated with that heavy industry and its associated truck traffic, as well as the presence of two major interstates, pose a serious concern to area residents. In 2014, the County prepared the Route 9 Innovation District Plan as part of an application to the State of Delaware seeking a Downtown Development District designation. While the designation was not granted at the time, the Plan helped organize residents and inspire the Route 9 Master Plan. This designation could be pursued in the future.

The Master Planning process included detailed market analysis to understand the demand and feasibility for industrial, office, retail, and residential growth. It is important to ensure that the plan's vision aligns with market feasibility and to communicate and maximize the economic potential while preserving the local character. The Master Planning process also included a traffic analysis. This analysis assessed existing and future traffic conditions along Route 9, including road design, vehicular traffic, bike and pedestrian movement and facilities, accident data and safety issues. The Master Planning process also included robust and continuous community engagement. The plan identifies four centers, which are targeted areas for investment or redevelopment. The main area for redevelopment is around Center 3, which encompasses the Route 9 Library. The community engagement process established the Plan's vision, identified, and prioritized the top community needs, and provided guidance in developing and refining the plan's scope and recommendations. Together, the market analysis, traffic analysis and community input, form the basis of the recommendations for this Master Plan, which focus on concentrating development (and redevelopment) in one of four centers along the corridor. The center-specific recommendations target four key intersections that are well-positioned for growth based on the existing zoning, current use, and surrounding development. Each of these centers addresses major intersections in need of streetscape improvements and key parcels within a 1/4-mile walking radius (equal to an average 5-minute walk) that are prime opportunities for investment or redevelopment. Key parcels identified in the study area include any underutilized land within 200 feet of Route 9. The center-specific

recommendations are broken down into Land Use and Zoning Recommendations and Transportation Recommendations.

The four centers identified are (see Figure 3):

A. Center 1: Terminal Avenue:

Center 1 is situated at the intersection of Terminal Avenue and Route 9, directly north of Interstate 495. This area consists primarily of the Eden Park neighborhood and recreational facility, directly adjacent to the Port of Wilmington, large industrial properties, and I-495 making the public health impacts of dust, emissions, noise, and heavy truck traffic a significant concern for residents and officials. A majority of the industrial properties along this stretch of Route 9 are heavily utilized, causing incompatibility issues with the residential properties.

B. Center 2: Rogers Road:

Center 2 is situated at the intersection of Rogers Road and Route 9 just south of I-495. In this area, a mix of smaller commercial and industrial properties line the western edge of Route 9. On the east side, a mix of single-family detached and attached homes are directly adjacent to the corridor and surrounded by large industrial properties. The Hamilton Park neighborhood and Rose Hill Gardens community are two neighborhood pockets currently located directly adjacent to industrial development. Hamilton Park is situated between I-495 and Pyles Road, a major truck route to the Port of Wilmington and various industrial sites. A majority of the commercial and industrial properties along this stretch of Route 9 are underutilized, poorly maintained, and incompatible with the neighborhood fabric that exists around it. Center 2 has the potential to be a neighborhood center that could benefit from strategic investment along the Route 9 Corridor.

C. Center 3: Hillview Avenue:

Center 3 is situated at the intersection of Hillview Avenue and Route 9. A prominent intersection along the corridor, this center encompasses large commercial parcels with surface parking that are ideal for redevelopment, undeveloped land that is currently underutilized, and several hotels that are outdated and poorly maintained. Conveniently located adjacent to the Route 9 Library, the intersection is strategically positioned for additional development spurred by the library's new investment and is envisioned as the heart of the Route 9 Corridor.

D. Center 4: Stamm Boulevard:

Center 4 is situated at the intersection of Stamm Boulevard and Route 9 just south of I-295. In this area, a mix of commercial, institutional, and single-family detached homes front Route 9. The neighborhoods of Collins Park and Swanwyck Gardens are established communities immediately adjacent to this segment of the corridor. The Crossroads Plaza and New Castle Plaza shopping centers, the CVS, and the Rite Aid stores are fairly new and primarily surface parked. These commercial properties provide the opportunity for future redevelopment that better utilizes the land and with new buildings that face Route 9.



Figure J-3: Four Centers in Route 9 Plan

North Claymont

The North Claymont Area Master Plan (NCAMP) area is in the northeast part of the county abutting the Pennsylvania state line, with access to I-95 and I-495, as well as the SEPTA Claymont train station (part of Amtrak's Northeast Corridor). The train station will be relocated to a site northeast of the existing location upon completion of the Claymont Regional Transportation Center (scheduled to open in summer 2023). While these factors have historically helped the area become an important job center, several major employers, including the Tri-State Mall and Claymont Steel, have ceased operations in recent years. Both sites have recently undergone demolition with the intent of redevelopment. An important industrial employer is the Sunoco Logistics Plant, located in the eastern portion of the area extending into Pennsylvania, which is a former oil refinery repurposed for natural gas storage, processing, and distribution.

The combination of geographical location, accessible transportation infrastructure and soon to be shovel ready sites provide an opportunity for large-scale re-development with a focus on placemaking. The plan sought to create a vision of areawide redevelopment centering on the built environment along a multimodal transportation corridor. Establishing appropriate form, scale, and massing, as well as a multimodal transportation system that has the Claymont Regional Transportation Center as its anchor, are fundamental to achieving the goals of the plan. While not intended to be prescriptive, the plan examined a mix of uses, in specific focus areas, that if developed with a focus on design and scale could achieve the community's vision. The North Claymont Area Master Plan, completed in 2017, provides important guidance regarding transportation improvements and land use policy that should help revitalize the area and serve as an example for surrounding communities.

When developing a concept scenario depicting the community's vision, the plan examined seven focus areas (*Figure J-5*). The first four of these areas; the Train Station, Waterfront, Central Node and Tri-State Mall Area are likely to see significant changes in land use in the near future and were noted as "Redevelopment Focus Areas." The other three focus areas are more stable and are unlikely to see significant land use changes in the short term. All focus areas should benefit from improvements recommended in the Master Plan.

Focus Areas:

1. Train Station
2. Waterfront
3. Central Node
4. Tri-State Mall Area
5. Naamans Road from Hickman to US 13
6. West of I-95
7. Existing Active Industrial



Figure J-4: North Claymont Focus Areas Map

Concord Pike (US 202)

Overview

The Concord Pike (US 202) Corridor Master Plan represents an area along the US 202 corridor that stretches from the City of Wilmington to the Pennsylvania state line. The planning process began in the Summer of 2018. In addition to public visioning sessions, a WikiMap (an online mapping tool) gave the opportunity for people to provide additional input based on specific locations along Concord Pike. The plan was completed and endorsed by the Wilmington Area Planning Council (WILMAPCO) November 12, 2020.

The Plan

Historically constructed as a private toll road in the early 1800's, Concord Pike was a major route that provided access to several farms and smaller factories that developed along Brandywine Creek. Completed as a state highway in the early 1920's, Concord Pike was a two-lane road surrounded by a patchwork of farms. It was designated as US 202 in 1934, connecting New Castle County to Maine. This section of the roadway in Delaware was subsequently widened to a six-lane major thoroughfare. Today, Concord Pike (US 202) Corridor is primarily a six-lane north/south commercial arterial connecting Wilmington, DE to the Pennsylvania state line.

The Concord Pike Corridor Master Plan focuses on a six-mile portion of US 202 with mixed commercial and office uses surrounded by mixed residential uses (primarily single-family neighborhoods) and open space. The corridor was designed for multi-lane vehicular traffic and lacks pedestrian and bike friendly facilities such as: continuous sidewalks, crosswalks, and landscaped areas. The study area is also characterized by sprawling commercial and suburban development which creates situations where land is underutilized. Land use recommendations focus on improvements and redevelopment in the areas of Fairfax, Talleyville, Widener and Brandywine Town Center. These improvements are examples of various facilities, designs, and amenities that should be implemented to improve corridor by making it more attractive, providing more services, more bikeable and walkable, and by enhancing community and economic development opportunities.

Key land use recommendations are summarized below and also addressed in Appendix F and through other NCC2050 elements:

Zoning Recommendation 1: Develop Land Use Policy That Encourages Context Sensitive Commercial Redevelopment in the Identified Redevelopment Areas (TRA)

Design elements were identified that would: establish a mix of vertical and horizontal land uses; promote active storefronts at the street level; accommodate pedestrian-friendly multimodal streets; encourage upper story residential and office uses; and provide guidance in parking lot design and location. These reflect existing elements in the Unified Development Code (UDC), Appendix 7 – Guiding Principles for Development. New Castle County should revise the redevelopment provisions of the UDC to encourage redevelopment consistent with the principles of the Concord Pike Corridor Master Plan.

Zoning Recommendation 2: Encourage Neighborhood Preservation through Land Use Policy

A number of neighborhoods are identified in the Concord Pike (US 202) Corridor Master Plan that are adjacent to the commercial areas. These residential areas are zoned Neighborhood Conservation, which New Castle County calls for these areas to be protected or conserved. The County should continue land use policy that encourages conservation of the existing neighborhood character. The UDC empowers these communities to pursue a Neighborhood Preservation Overlay District should these neighborhoods seek to further integrate adjacent non-residential development.

Zoning Recommendation 3: Identify Potential Historic Properties

New Castle County is a Certified Local government and administers the Department of Interior's grant program, which has enabled the County to prepare seven National Register Nominations over the last two years. The National Register of Historic Places does not provide protection to resources, but the Unified

Development Code provides historic resource protections through the Historic Overlay Zoning District (H-Overlay). The Historic Review Board (HRB) must approve plan and permits that could potentially impact a historic resource within an H-Overlay.

Within the Concord Pike (US 202) Corridor Master Plan study area, there are a number of historic resources. Some areas fall within established H-Overlay Zoning Districts while others do not currently have these protections. The New Castle County Department of Land Use should work with these property owners to encourage the pursuit of establishing Historic Overlay Zoning Districts. Additionally, the County should continue to evaluate properties along the corridor for historic significance and consider providing additional protections for historic resources through the land development process.

Southern New Castle County

Overview

Planning for southern New Castle County began in late 2018 as part of a Wilmington Area Planning Council (WILMAPCO) funded transportation and land use plan update. WILMAPCO, DelDOT, and the County jointly managed the process, which involved extensive public engagement and aimed to create a 30-year vision and plan for land use and infrastructure in the county south of the C and D Canal. The plan guides development, preservation, infrastructure, and policy decisions in the study area, based on growth patterns and strategies tied to population growth, housing needs, environmental protection, preservation efforts, and transportation improvements. It connects past planning efforts with a clear set of objectives for the future to establish a sustainable path forward for existing and future residents that preserves and enhances the environment.

The full plan draft was published in late summer 2020 and the plan's transportation element was completed and endorsed by WILMAPCO Council in late 2020. In fall 2021, as part of planning board public hearings associated with this and the sub-area plans, further planning and engagement was requested by community members who had not yet participated in the process. Through the planning process for NCC2050, additional meetings were conducted to get those community members up to speed with plan specifics, ranging from the technical and analytical aspects of the plan to community feedback and policy recommendations.

Key Land Use and Zoning Recommendations from the planning process are found in Appendix F.

The Plan

For the purpose of this plan, the Southern New Castle County planning area is divided into the east and west wings as well as the central core. These subsets are based on current development patterns, sewer service area, (defined in the 2012 Comprehensive Development Plan), and the predominately southern agricultural area with several agricultural easements.

Between 1954 and 1970, 2% of new housing units were in southern New Castle County. Since then, the share of new single-family dwellings has more than doubled every 16 years. These growth trends have transformed southern New Castle County from several small towns, surrounded by agricultural and natural resources, into a suburban bedroom community. The current landscape of Southern New Castle County is characterized by a predominance of single-family homes, auto-oriented retail and expanding roads, with limited local employment and transit options.

Non-residential growth has not had the desired diversity with the majority being local retail and service-oriented business. Growth in other economic sectors has not been complimentary to the new residential growth as evidenced by about 86% of Southern New Castle County residents commuting to jobs outside of the area (65% to northern New Castle County). Trends in online retail locally and nationally have and will continue to significantly impact this area resulting in development of warehousing and freight/logistics centers such as the Middletown Amazon logistic center.

Moving forward, the Southern New Castle County area has tremendous opportunities while also facing vexing challenges. The area continues to be sought after for its high-quality schools; relatively low cost of

land and housing; proximity to regional destinations, resources, amenities; and agricultural, natural, and historic character.

The Southern New Castle County plan seeks to:

- Better manage growth and clarify the confusion between what are growth areas and what are areas for rural preservation*
- Enhance existing and developing new policies and mechanisms to preserve agricultural and natural resources*
- Increase coordination between the municipalities and the county*
- Better plan for infrastructure and strongly link that to growth policy*
- Focus on enhancing and infilling existing towns and other growth areas, with an emphasis on economic development*
- Prepare for the shift in the age of the population toward a greater share of people 65 and older, including housing, local community services, and multi-modal transportation infrastructure.*

(See also Appendix F)

Community planning efforts in the county are focused on improving the quality of development, planning for infill, redevelopment, and revitalization/repurposing; however, current regulations and policies have not always addressed the unique needs of different areas throughout the county. New Castle County seeks to preserve and enhance the parts of our communities that are meaningful and support our quality of life through the protection and enhancement of the built and natural environment, including natural, historical, and cultural assets. Key themes for this plan are to create livable communities that are vibrant and reflect the important aspects of our past where we will thrive into the future.

Design and Implementation Concepts

While the Community Area Master Plans provide more specific design guidelines for the planning area. The following examples outline more generally how the vision for community design should be fulfilled.

Shopping Centers and Malls

The retail landscape continues to evolve, moving away from traditional bricks and mortar shopping, as more people shop online. With less need for brick-and-mortar shopping, many aging shopping centers, sometimes referred to as “greyfields”⁴ will need to be reimagined. Spaces occupying former shopping centers could be redeveloped into mixed-use or residential development, which containing a variety of housing units, including multi-family units, townhomes, and single family-detached homes.



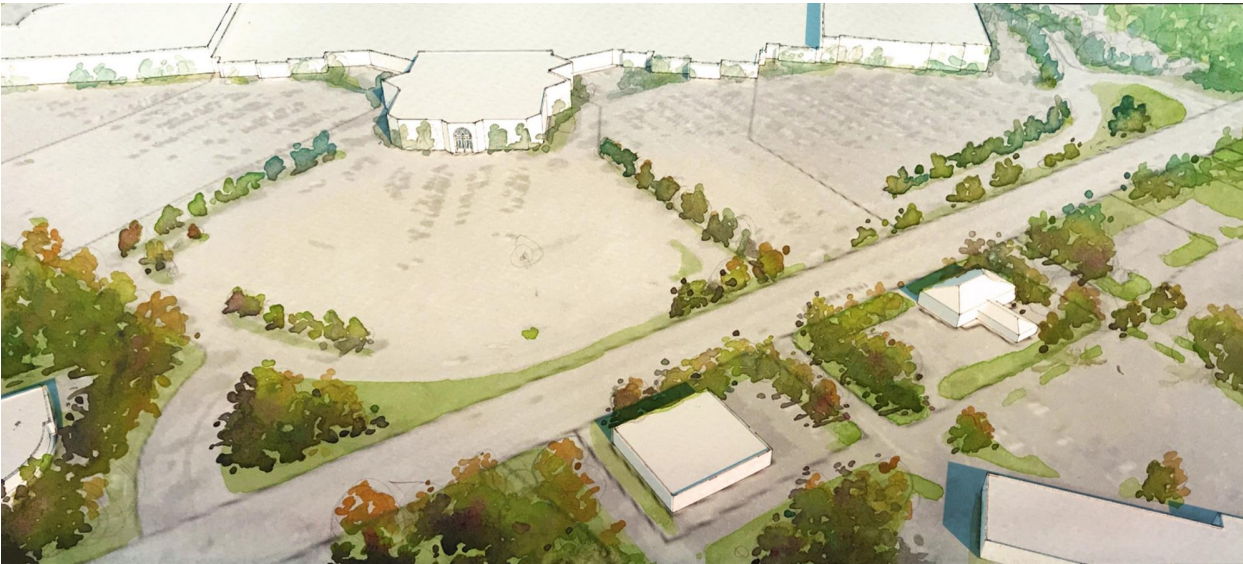
Source: Dover Kohl and Partners Town Planning

⁴ Greyfields are abandoned or underutilized commercial properties, like older shopping centers or malls, which are opportunities for infill and redevelopment.



Source: Dover Kohl and Partners Town Planning

Like shopping centers, changes in how people shop, especially with the rise of online shopping, shopping malls will also need to be reimagined. The large swaths of parking, surrounding a shopping mall, will no longer be needed, and therefore could be developed, while still maintaining elements of the existing shopping mall.



Citadel Mall, Charleston, South Carolina; Source: Dover Kohl and Partners Town Planning



Source: Dover Kohl and Partners Town Planning

Streetscape Design

Old New Castle is an example of an attractive, walkable community. Buildings are close to the street along the sidewalk. Elements of this traditional design should be incorporated into newer sites around the county.



Source: New Castle County

Below is an example of a commercial property located along a fast moving, multi-lane road. There are no sidewalks or bike lanes, and community character is lacking. Placing a frontage street along the existing busy road, creates an opportunity for buildings to be build closer to the street, thereby enhancing the environment for pedestrians and bicyclists. The addition of street trees and landscaping buffer the frontage street from the busier road. In addition, the landscape buffer area provide space to incorporate green infrastructure into the design.



Source: Dover Kohl and Partners Town Planning, Beaufort, South Carolina

Transit Oriented Development

There is an inherent relationship between land use and transportation. Transit Oriented Development (TOD), which is compact mixed-use development around a transit station encourages the use of transit, while also creating an environment that is walkable and bikeable. Incorporating a variety of uses like multi-family development, retail uses, pharmacies, grocery stores, shops and restaurants, etc., foster the creation of a community where residents live, work, and play, without the need for a car.



Source: Dover Kohl and Partners Town Planning, El Paso, Texas

Related Goals, Objectives and Strategies

10. Goal: Land uses, transportation, and other infrastructure complement each other, and neighborhoods and areas across the county are distinctive, attractive, functional, comfortable, and human scale. The physical environment is high quality, retains value, and is fiscally sustainable.

10.1. Objective: Redevelop and infill key areas of the county (identified in Community Area Master Plans and other studies/analyses) and struggling industrial land, strip malls, office parks, and other “greyfields” to achieve connected places, continuity of design, and sense of place.

10.1.1. Strategy: Incentivize/encourage growth and redevelopment in those targeted areas through public investment and flexible policies that work toward achieving other goals (e.g. preservation, environmental enhancements, watershed improvements, placemaking, walkability/bikeability, etc.).

10.1.2. Strategy: Establish flexible/hybrid zoning in designated areas to support flexibility and creativity for redevelopment/infill and economic development, including consider amending the Unified Development Code to expand opportunities to employ Smart Code principles.

10.1.3. Strategy: Increase use of universal design in public space.

10.1.4. Strategy: Ensure that as change occurs, communities and neighborhoods evolve intentionally toward the community’s vision; change aligns with local needs as well as part of the broader countywide vision.

10.1.5. Strategy: Focus on implementation in areas where local, community plans exist (master plan, corridor plan, etc.)

Implementation process:

As suggestions and/or requests for additional community planning and implementation come through, the following actions represent the overall intended approach:

- a. Conduct a community planning process.
- b. Plan product—the completed community plan is on file/available on the web
- c. Council resolution—attaining a resolution in support of a community plan gives it an additional level of recognition than a or b.
- d. Formalization of plan (become formal policy) incorporate into Future Land Use Map (FLUM) (at the regular update of FLUM interval).

A community may proceed with actions a, b, c, and d, but the later steps imply and result in greater formalization of the plan as official County policy (see the CAMPs explanation above).

10.1.6. Strategy: Prioritize physical form and design, not just land use and density in policies and decision, with plans, regulations, and incentives.

10.1.7. Strategy: Identify and preserve cultural and historical resources, to contribute to the character, quality, and function of communities.

10.2. Objective: Increase compact development in places where it is appropriate and will support the range of community goals (like transit, affordable housing/lifestyles, non-motorized accessibility, enhancement of place, etc.).

10.2.1. Strategy: Achieve optimal balance of land use mix (and fees structure)

10.2.2. Strategy: Support the creation and enhancement of transit-oriented development. (See [Mobility element](#))

- 10.2.3. Strategy: Direct residential development in and around existing job centers in a manner that is complementary with county and municipal development patterns. (See [Housing](#) and [Economic Development](#) elements)

See Also:

Conservation Element, Goal 2

Recreation and Open Space Element, Goals 1

Mobility Element, Goal 8, 9 & 11

Historic Preservation Element, Goal 12

Economic and Community Development, Goal 5

Intergovernmental Coordination Element, Goal 17

Housing Element, Goal 4



ELEMENT K

Economic & Community Development

K. Economic and Community Development Element

Element Defined

Economic development is an essential element of what makes vibrant communities. A strong and stable economy provides for job growth, thriving businesses, and resources for developing and preserving the other important aspects of our communities, like green space, education, and infrastructure. Economic development is key to increasing employment opportunities and reducing unemployment and poverty rates. Strong economic development policies and a collaborative and innovative economic development network allowing New Castle County to attract high quality jobs and support startups, small businesses, and minority-owned businesses.

New Castle County must be ready to adapt and maintain a robust economy no matter how the markets change. Diverse industries and redevelopment of brownfields¹ and greyfields² contribute to an economy that must be responsive to changing conditions while supporting our existing communities. Efforts should be made to ensure that county residents have access to the education and training necessary to secure jobs that pay a living wage to support their families and their communities into the future. New Castle County's future economy requires an innovative, entrepreneurial business environment and a workforce that is prepared for new industries and jobs that will arise.

A strong and stable economy is just one piece of a vibrant community. It is important to ensure that a strong economy's benefits reach all county residents equitably. To ensure that county residents take advantage of employment opportunities, housing should be located near employment centers, with [transportation infrastructure](#) in place to link residential and employment centers. Amenities, community resources, and employment opportunities in areas where people live improve quality of life and contribute to the success of overall economic development efforts. Good [community design](#), with a combination of safe housing, employment opportunities, convenient transportation options, and vibrant streetscapes, creates an environment where businesses, large and small, want to relocate and remain. As industries and employment opportunities evolve with changing technology, education and training will need to evolve, as will infrastructure for transportation, energy transmission, and internet access will need to be updated to support a robust and resilient economy into the future.

¹ As defined by the EPA a brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

² Greyfields are abandoned or underutilized commercial properties, like older shopping centers or malls, which are opportunities for infill and redevelopment.

What We Heard

New Castle County residents weighed in on economic development during the NCC2050 process. In these discussions, residents highlighted the need for thoughtful planning regarding where diverse economic opportunities are located and encouraging new businesses and industries. The public agreed that there should be more job growth where there is available housing, including opportunities for more density and mixed use.

"We need to understand that NCC is part of a regional economy that includes the City of Wilmington and Philadelphia. This means we should create sites and facilities where regional businesses can employ residents independent of their location." – Kurt Foreman, CEO, Delaware Prosperity Partnership

"Opportunity only exists if there are anchoring investments in the neighborhood." – Public Participant, NCC2050 Deep Dive Session, 2/24/2021

"Thinking outside of the box is needed by government officials, developers, planners, college students and even elementary, middle and high school students. One little spark can light a big idea." – Public Participant, NCC2050 Deep Dive Session, 2/24/2021

"I would like to see us have a strong new business concierge service that guides businesses through the process of locating in NCC." – Public Participant, NCC2050 Deep Dive Session, 2/24/2021

New Castle County Today

The County Gross Domestic Product (GDP)³ has fluctuated since 2010, from a low of \$43,625,435 in 2013 to a high of \$48,281,554 in 2015. Federal Reserve data through 2019 (**Figure K-1**) showed a more consistent GDP around \$45,000,000 and growing slightly before the COVID-19 pandemic. GDP is a traditional indicator of the size of the economy and how it is performing. According to the International

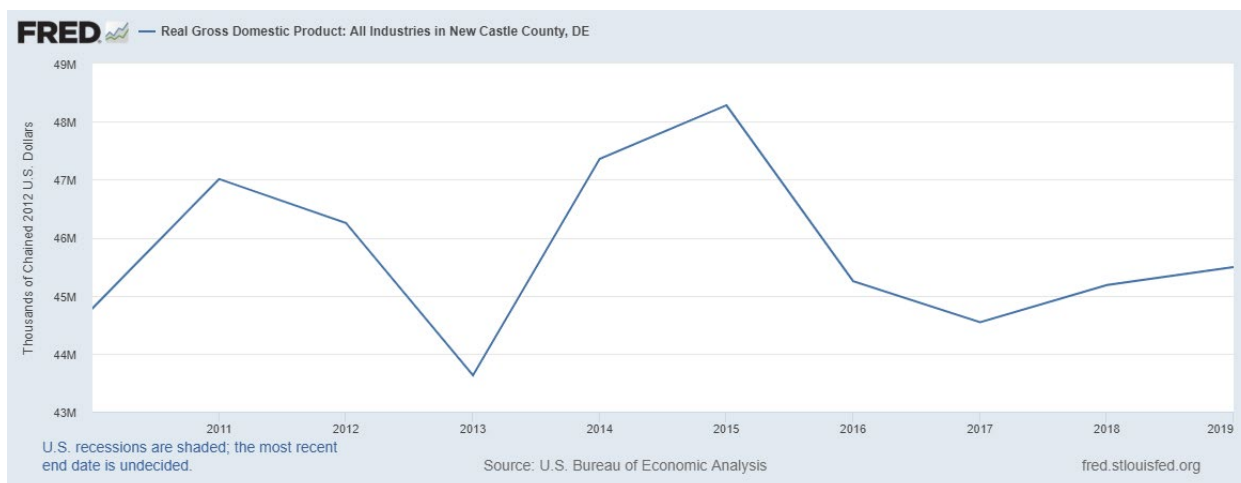


Figure K-1: Real Gross Domestic Product: All Industries in New Castle, DE

³ GDP is the market value of the goods and services produced by labor and property in a particular location. (Source: U.S. Bureau of Economic Analysis: <https://fred.stlouisfed.org/series/GDP>)

Monetary Fund (IMF), a growing GDP is typically a sign that employment is increasing, and residents have more money to spend. If the GDP is not growing or dropping, it may be a sign that businesses need additional support.

Economic Base and Major Employers

New Castle County is an affordable option to start and grow a business compared to the rest of the region, due to affordable housing prices, low property taxes, no state-level property taxes, and tax-free shopping. Jobs in New Castle County are mainly focused in leisure and hospitality, wholesale and retail trade, finance, insurance, real estate, business services, health, and education (**Figure K-2**). Delaware is known as one of the top states in the nation for business tax climate and low business costs. More than 50% of all U.S. publicly traded companies and more than 60% of Fortune 500 companies are incorporated in Delaware. This has created a strong cluster of local business and financial companies which provide support services for these larger corporations.

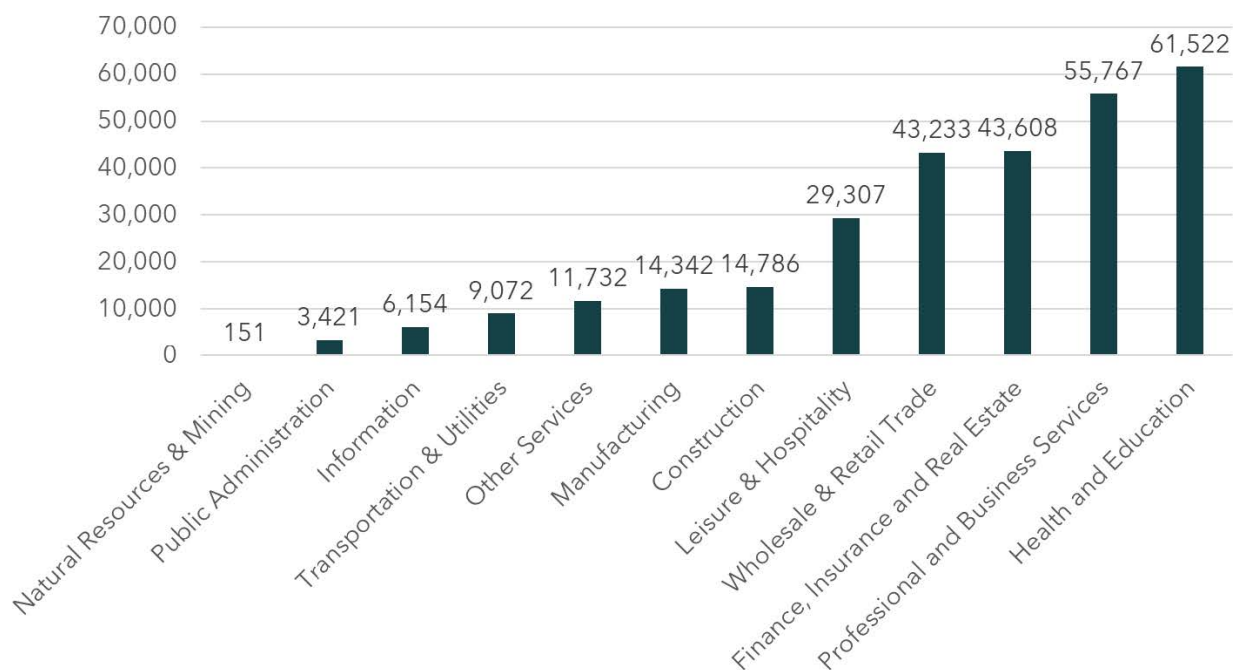


Figure K-2 Top Employment Sectors in New Castle County: Source: WILMAPCO jobs by industry 2020 estimates

Located along one of the nation's busiest metropolitan corridors, between New York and Washington D.C., New Castle County is home to some of Delaware's largest employers and industry hubs. The top 10 employers in New Castle County are also among the largest employers in the state of Delaware. Among the top 50 employers in the state, 41 are located in New Castle County (**Table K-1**).

Table K-1: New Castle County Top 10 Employers

New Castle County Top 10 Employers

Name	Estimated Employment	Sector
ChristianaCare*	12,181	Education & Healthcare
JPMorgan Chase*	11,000	Business & Financial Services
Bank of America*	6,400	Business & Financial Services
University of Delaware*	4,493	Education & Healthcare
Nemours*	3,795	Education & Healthcare
DuPont*	3,400	Science & Technology
Amazon*	3,000	Manufacturing & Logistics
Delaware Technical & Community College	2,623	Education & Healthcare
Integrity Staffing Solutions	2,500	Business & Financial Services
Capital One	2,000	Business & Financial Services

**Also included in top 10 employers in Delaware*

According to Moody's, the Wilmington Metropolitan Division's industrial diversity is lower than that of other large metropolitan areas. Industrial diversity gauges the extent to which an area's economy resembles the economy in the United States as a whole. It is important for New Castle County to diversify its business ecosystem, as diverse regional economies are better equipped to weather future economic downturns.

Labor Market

Since 2015, the total labor force in New Castle County has consistently remained around 300,000. (Total population based on US Census Bureau 2019 American Community Survey data is 556,000.) Education levels in the county are slightly higher than in Delaware as a whole and across the United States, according to the 2019 American Community Survey (ACS) data (*Figure K-3*). In New Castle County, 91.6% of the workforce has at least a high school degree, compared to 90.3% in Delaware and 88% in the United States. Thirty-six percent (36%) of New Castle County's workforce has a post-secondary degree (bachelor's degree or higher), compared to 33.2% in Delaware and 33.1% in the United States. In general, those with advanced degrees are located near Wilmington and the border with Pennsylvania.

Education Attainment in New Castle County, Delaware

High School or equivalent degree - 30.8%

Some college, no degree - 17.6%

Associate's degree - 7.0%

Bachelor's degree - 20.9%

Graduate or professional degree - 15.3%

0 5 10 15 20 25 30 35

Figure K-3 Education Attainment in New Castle County, Delaware;
Source: 2019 American Community Survey, US Census Bureau

Unemployment was relatively consistent between 3% and 5% from 2015 until the COVID-19 pandemic in early 2020, when it reached a high of 25% in May 2020. By February 2021, the unemployment rate dropped to 6.5%, nearing the pre-pandemic levels (See **Figure K-4**).

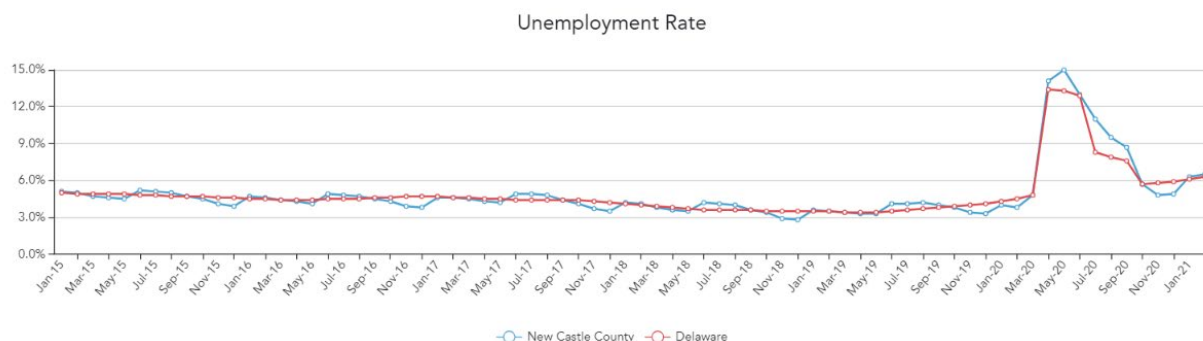


Figure K-4 Unemployment Rate; Source New Castle County Office of Economic Development

Jobs

The most common occupation in New Castle County is “Sales and Office,” comprising 27% of the workforce, according to the 2019 ACS, as shown in **Figure K-5**. Business and financial operations accounts for 8% of the workforce.

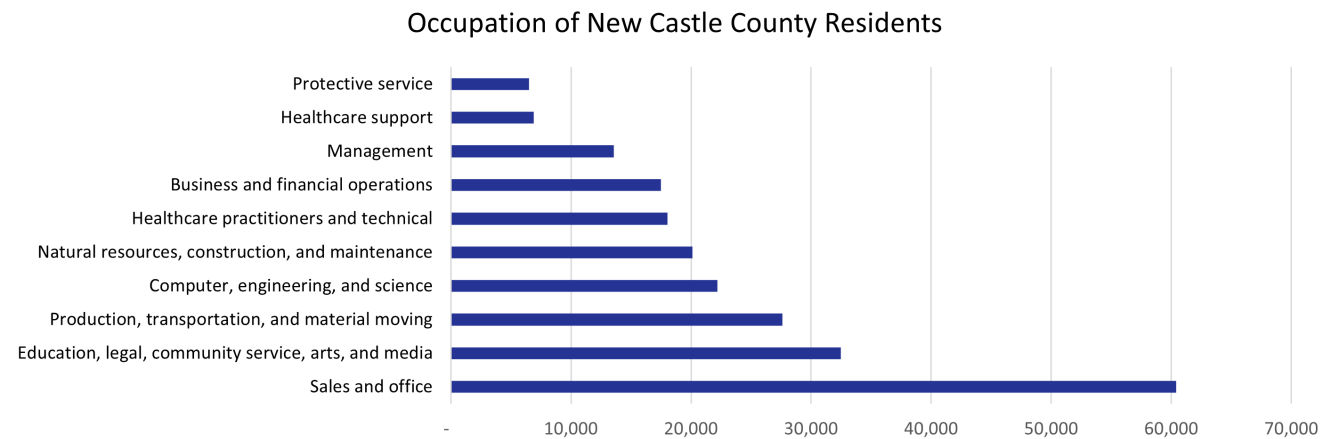


Figure K-5 Occupation for Civilian Employed Population 16 Years and Over in New Castle County; Source: 2019 American Community Survey, US Census Bureau

Based on data and projections from the Delaware Population Consortium in 2019, New Castle County’s population is expected to grow just slightly through 2050, but employment will drop slightly (See **Figure K-6**).

Forecasts for 2050 indicate that jobs and population are mismatched geographically. Population growth is concentrated in the middle of the county in areas like Newark, Glasgow, and Middletown, while jobs are expected to decline, especially in the northern portions of the county. (The darker areas in **Figure K-7** show job losses.)

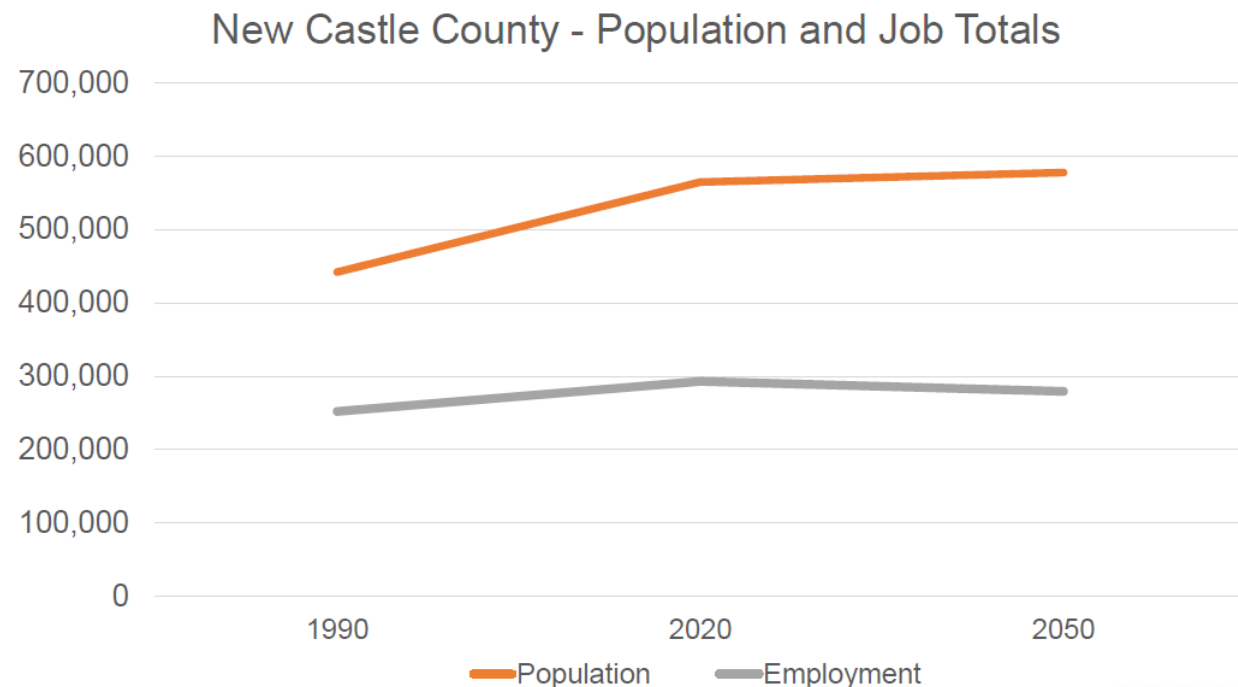


Figure K-6 New Castle County - Population and Job Totals; Source: Delaware Population Consortium



Figure K-7: New Castle County Future Population and Job Growth; Source: Delaware Population Consortium

Worker Inflow and Outflow

According to the US Census Bureau, more employees (98,664 in 2018) travel from outside New Castle County to work than residents of New Castle County (68,661) who travel outside the county to work. Increased development and job growth in areas with quality transportation and transit infrastructure could improve the commuting conditions for the large number of commuters traveling into the county for work. More than 200,000 employees in New Castle County also live in the county. **Figure K-8** shows the inflow/outflow analysis accessed from the US Census Bureau.

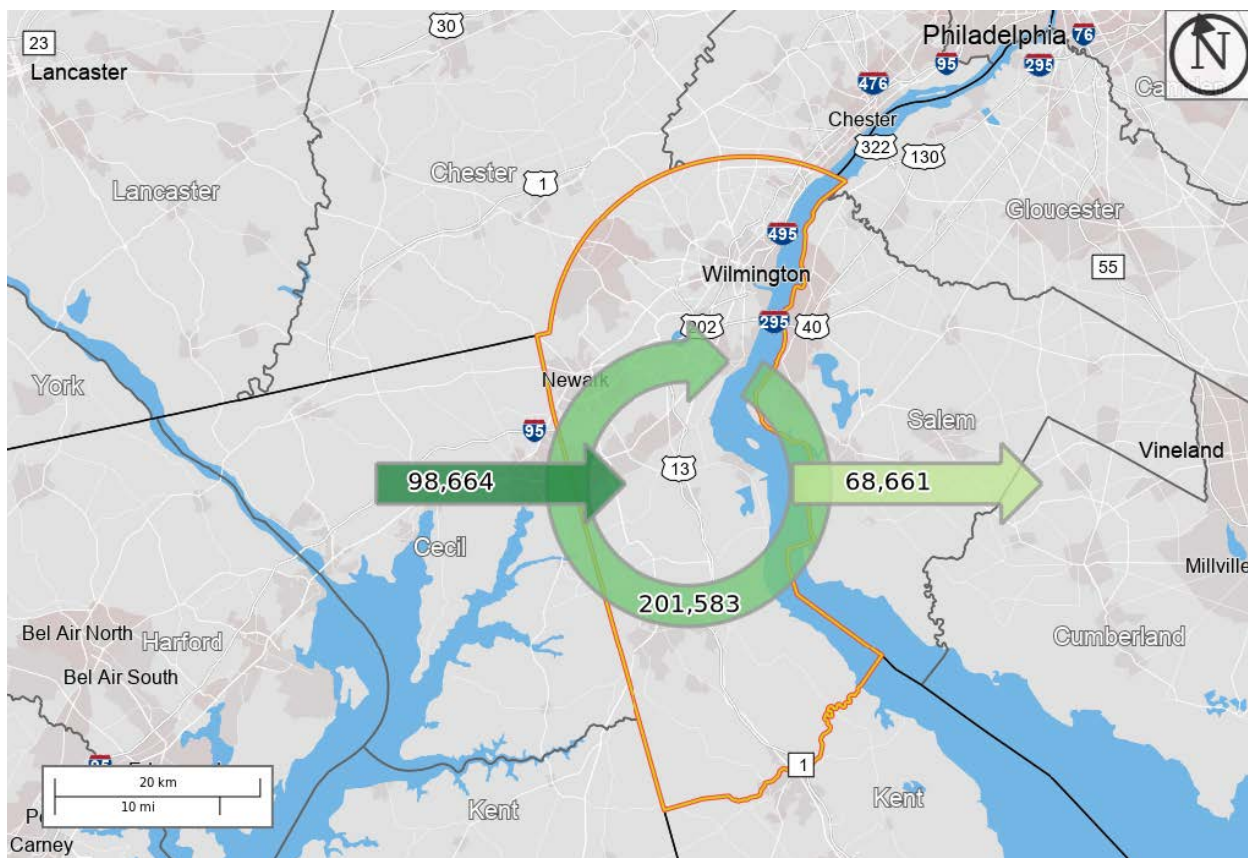


Figure K-8 Employee Inflow/Outflow Analysis; Source: LEHD, US Census Bureau

Income and Poverty

According to the 2019 ACS, the median annual income in New Castle County is \$73,892, more than \$10,000 higher than the median income for the United States (\$62,843) and slightly higher than the median income in Delaware (\$70,176). The poverty rate in New Castle County is 11.4%, almost identical to the rate in Delaware (11.3%) and slightly lower than the 12.3% across the United States. Over the last two decades, Census data shows a slight peak in the poverty rate in 2010, but according to the 2019 American Community Survey, the rate is trending down (see *Figure K-9*).

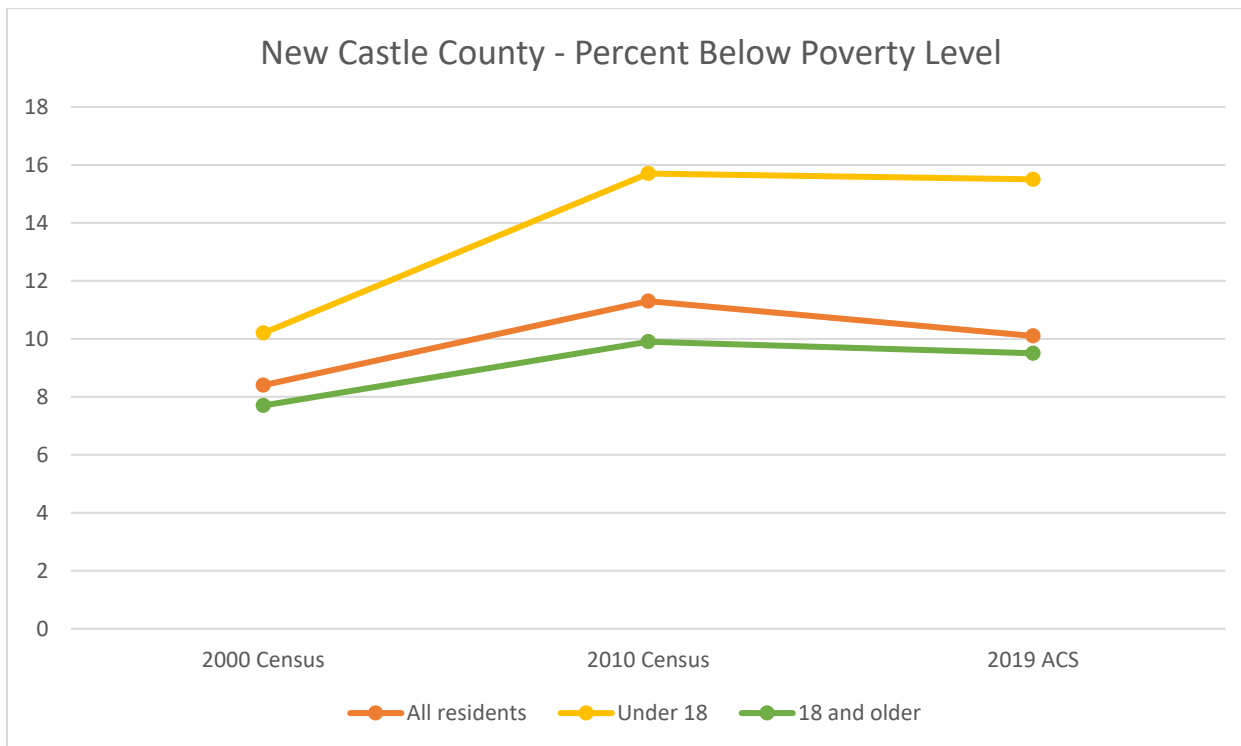


Figure K-9 New Castle County Residents Percent Below Poverty Level; Source: U.S. Census Bureau

Living Wage Jobs and Workforce Training

Beyond building a stable economy, it is important to ensure that all residents participate in and benefit from the County's economic activity. New Castle County needs to build a workforce that is ready for emerging industries and jobs and able to apply innovative strategies to existing jobs and industries.

According to the [Living Wage Calculator](#) from the Massachusetts Institute of Technology Department of Urban Studies and Planning, the living wage in New Castle County for an adult in a family of four with two working adults is \$22.91 per hour (\$47,000 annually) and \$15.91 per hour (\$33,000 annually) for a single adult. The Living Wage Calculator defines the living wage as the hourly rate that an individual in a household must earn to support themselves and their family. The U.S. Bureau of Labor and Statistics (BLS) calculates employment and wage statistics for the [Philadelphia-Camden-Wilmington metropolitan area](#), which shows that many occupations, especially in recreation, food service, child care, and retail sales sectors, do not earn a living wage even for a single adult. Some of these occupations include those that require at least some post-secondary education, such as Nursing Assistants (\$32,000/year) or Pharmacy Aides (\$28,000). The Housing element further expands on the challenges faced by households which do not earn a living wage. Refer to the [Housing Element](#).

In 2021, with remote work and school so prevalent, it is important to ensure that infrastructure is available for all to access high-speed internet to complete education and training programs and work efficiently—remotely or in-person. This access provides education and advancement opportunities for more New Castle County residents to gain living wage employment.

Delaware ranks highly among all states for fastest internet. According to a [HighSpeedInternet.com report](#), Delaware has the third fastest internet speeds in the nation. The Delaware Broadband Initiative is working to further increase access to high-speed internet to support economic growth and social advancement. In New Castle County, more than 98% of residents have access to internet speeds over 100 mbps, according to [BroadBandNow](#), and the top five cities for broadband connectivity are located in New Castle County (Newark, Wilmington, Middletown, Bear, and New Castle).

Initiatives to leverage and enhance technology and internet resources with educational, workforce and economic development will be key to ensuring thriving business and living-wage jobs into the future,

especially in a post-pandemic environment. New Castle County used some of its Coronavirus Aid, Relief, and Economic Security (CARES) Act funding for DE Relief grants, which assist small businesses and nonprofits impacted by the COVID-19 pandemic, and the [Rapid Workforce Training and Redeployment Initiative](#), which helps jobseekers find training to enhance or gain skills and employers connect with a qualified workforce in the healthcare, construction and trades, hospitality and food service, logistics and transportation, and computer and information technology industries.

The [Delaware Skills Center](#) and [Adult Education Division](#) of the New Castle County Vo-Tech School District are two providers of workforce training and education for adults seeking rewarding and reliable careers. These programs prepare adult students for careers in business, healthcare, and trades and provides job placement services to ensure that students use their skills in the real world.

Local efforts also support job-training for at-risk youth. In 2018, a collaborative effort between the New Castle County Department of Community Services, [West End Neighborhood House](#), and local businesses received a \$250,000 grant to provide work experience and on-the-job training for 150 young people in New Castle County. This program and others help youth learn skills that will translate to any job or workplace, including being dependable, communication, learning from mistakes in addition to the skills specific to their workplace.⁴

The New Castle County Hope Center is a 192-room former hotel turned emergency shelter, which was bought by the County using CARES Act funding, and opened in December 2020. The New Castle County Hope Center is an emergency shelter that with the goal of helping people transition into permanent housing. In addition to connecting residents to social and health services, there are opportunities for workforce development and job training.

Jobs Near Transit and Mixed-Use Centers

New Castle County strives to increase employment opportunities near transit and existing services, which are primarily found in Investment Level 1 areas, as determined by the Delaware Cabinet Committee on State Planning Issues in the [Strategies for State Policies and Spending](#) document. More details about the State Strategies are found in the [Intergovernmental Coordination element](#). Increasing jobs near transit should decrease household commuting costs and expand access to jobs for people who do not have access to a vehicle.

In New Castle County, Level 1 areas include areas near Wilmington, Newark, and Middletown. To increase opportunities in these areas, strategies should encourage mixed uses and promote transportation options to allow for efficient use of public and private investments and enhance community identity. Public-private partnerships are key to redevelopment and economic revitalization.

Efforts must be made to expand housing options in communities with existing transportation networks, community resources and employment, allowing residents to more easily access services and jobs near their homes. Local policy should be coordinated with state and county efforts to encourage redevelopment of existing but disused or underused “greyfields” like industrial parks and strip malls. This type of redevelopment not only helps to improve local community cohesion and quality of life by reducing vacant or underutilized property, but it also provides additional housing, community resources, and/or employment in those communities easily accessible without a personal vehicle.

Shipping, Warehousing, and Logistics

Shipping, warehousing and logistics play a huge role in the county’s economic activity. The Wilmington, DE-MD-NJ Metropolitan Division’s share of warehousing employment is 50% higher than the state’s. According to DelDOT’s [Delaware Freight & Goods Movement Plan](#), the New Castle County region alone generates nearly 37 million tons of freight annually, making freight one of the largest contributors to the region’s economic success. In addition to the freight generated in the county, more than 72 million tons pass

⁴ New funds to bolster youth job training in Delaware, Mark Eichmann, WHYY, November 10, 2018, <https://whyy.org/articles/new-funds-to-bolster-youth-job-training-in-delaware/>

through the region each year, which also impacts our economy. Nationally, these industries are changing, and these trends will affect the way trucks, ships, and trains travel, the number of vehicles on our roads and rails and in our ports, and how Delaware homes and businesses receive and move their goods.

Trends identified by DelDOT that could impact New Castle County include:

- Online/catalog purchasing is booming, requiring additional local delivery trips, accelerated by the COVID-19 pandemic and an associated decrease in in-person shopping.
- Chronic driver shortages, increasing fuel costs, and growing roadway congestion affecting the ability to provide reliable and cost-effective delivery service.
- Most of Delaware's rail system is served by the Amtrak-owned Northeast Corridor route, which prioritizes passenger service over freight.
- Nationally, trends show that railcars are getting heavier (286,000+ lbs), which existing rail infrastructure cannot accommodate, and in general, Delaware's rail lines are under-utilized.
- Intermodal traffic (truck trailers or shipping containers on rail flatcars) is the fastest growing sector of the national rail industry, but these connections have been long been neglected by policy choices and priorities. They will need to be considered if freight facilities are to continue to develop in the state.
- The Port of Wilmington has room to expand, as long as efficient landside access should be maintained, and this opportunity may arise as other nearby ports like New York reach capacity.

Warehousing and Logistics

According to an August 2021 article on delawareonline.com, "In the largest buildings being constructed today in Delaware, nothing is made or sold. The need to store, sort and deliver products to customers is driving the state's latest building boom." The same article states that the amount of warehouse space under construction in New Castle County at the time of the article is more than the amount of warehouse space built in the whole state of Delaware in the last 20 years. Demand is outpacing supply of this type of space and the land to build it on, and rents are higher than they have been in the last decade.

Until recently, large distribution companies opted to find warehousing space in nearby New Jersey and Pennsylvania, where there was more population density and industrial infrastructure. As those areas filled, developers began looking to Delaware, where sites are already filling up and supply is dropping, especially in northern New Castle County. Development is pushing further south. For example, the recent construction of Route 301 in Middletown provides opportunities for easy access to the Washington D.C. and Baltimore markets to the west and Route 1 and the I-95 corridor to the east, increasing the appeal of Middletown and nearby areas.

Port of Wilmington

The Port of Wilmington is a full-service, deep-water port and marine terminal strategically located on 308 acres at the confluence of the Delaware and Christina Rivers, along the I-95 corridor. With overnight access to 49% of the population in North America, the Port of Wilmington will continue to support jobs in warehousing in the future. The location of the Port of Wilmington with access to warehousing and other logistical facilities is another advantage for the county in the larger logistics industry. For example, the Port is a major fresh fruit importer; it imports more bananas than anywhere else in the country, thanks in part to the extensive cold storage facilities nearby.

Starting in September 2018, GulfTainer USA (GT USA) was granted rights to operate and develop the Port of Wilmington for 50 years. GT USA's concession includes the full management and development of the Port's existing container volumes of 350,000 TEUs (Twenty-foot Equivalent Units) per year, which is forecasted to more than double in the future.

GT USA is planning to invest \$580 million in the port to fully develop the cargo terminal's capabilities and enhance the overall productivity of the port. The port expansion will be a major boost to the local economy

providing additional jobs and goods movement in and out of the region; however, increased port operations will potentially increase emissions in the area, which may have a negative impact on human health and accelerate the effects of climate change.

As of fall 2021, WILMAPCO is in the process of conducting an [Impact/Benefit Analysis of Proposed Truck Access Improvements in the Port of Wilmington Area](#). In partnership with DelDOT, this project is evaluating and recommending a series of improvements to truck circulation in and around the Port of Wilmington. The analysis will evaluate the recommendations of previous studies and port expansion plans including the [Route 9 Corridor Master Plan](#), [2008 Southbridge Circulation Study](#), and [2028 Wilmington Comprehensive Plan](#).

The study will review several possible roadway improvements that have been proposed by recent plans and evaluate them based on their effectiveness in addressing the needs of the community and businesses in the area around the Port.

Agriculture

Farming and agriculture continue to be an important contributor to economic resiliency and healthy communities. According to a U.S. Department of Agriculture (USDA) Census of Agriculture in 2017, sales of agricultural products are split roughly equally between crops (55%) and livestock, poultry, and related products (45%) in New Castle County. In 2017, more than 67,000 acres of land were farmed (up 5% from the previous Census in 2012), while the number of farms dropped 3% to 361. Ninety-six percent (96%) of New Castle County farms are family farms.

By far, the most widely grown crops in New Castle County fall into the USDA category of grains, oilseeds, dry beans, and dry peas (including items like corn and soybeans). Poultry and eggs dominate the livestock, poultry and products segment.

As development continues in New Castle County, there is a need for more intentional farmland preservation. Beginning in 2019, the County convened a Land Preservation Task Force to recommend goals and strategies to increase the County's role in identification, protection and management of certain land uses for the county and its residents. One goal of the [resulting plan](#) was: "Preserve farmland in New Castle County to support a thriving agricultural economy, maintain local community character, protect associated natural resources, and help manage growth." Related recommendations include the establishment of an Agricultural Preservation Council, prioritization of county funding for agricultural land preservation, development of differential tax rates for farm structures and improvements, policy adjustments and purchase options to enable/support farming, and several others. Implementation of the task force's recommendations will provide valuable support to existing farm operators and those interested in beginning new farm operations.

The Delaware Department of Agriculture's Agricultural Lands (Aglands) Preservation Program allows landowners to voluntarily preserve their farms. The first phase of the program is known as an Agricultural Preservation District, a 10-year agreement where landowners agree to continue to use their land for agricultural purposes only. The second phase, Agricultural Conservation Easements, allow landowners to permanently preserve their farmland by selling the development rights to the land, replacing the 10-year preservation district agreement. One recommendation of the Land Preservation Task Force was to coordinate with the Department of Agriculture to develop viable options to improve the effectiveness of the program for farmers in the county.

The Department of Agriculture offers other funding to assist farmers across the state. The Young Farmer Loan Program offers a 30-year, no interest loan to purchase farmland. The Century Farm Program recognizes families who have owned the same farmland for 100 years or longer.

The University of Delaware Cooperative Extension offers a variety of support programs to Delaware residents, many of which include support for existing and new farmers, as well as youth development programs to inspire and train young people to take part in the local agricultural industries. Kent County's

proposed Food Innovation Districts (Kent County 2018 Comprehensive Plan), if successful, could be an interesting approach for increasing the viability of farms.

Coordination among all entities providing support to farmers and the agricultural industry, including increasing connections between consumers to farm producers, should help maintain and enhance the existing agricultural industry as a key contributor to the overall economy in the County.

Bioscience

An [October 2021 report](#) from the Delaware Prosperity Partnership (DPP) and the Delaware BioScience Association (Delaware Bio) shows that bioscience is a leading economic driver in Delaware. The report stated that Delaware’s location in the heart of the mid-Atlantic region gives it distinct business advantages, in addition to low property taxes and overall favorable tax policies. Delaware also has the fourth highest concentration of employed PhDs in health, science, and engineering, influenced by strong degree and training programs at higher education institutions including the University of Delaware, Delaware Technical Community College, Wilmington University, and others. Delaware is also the number one state for patents per capita.⁵ The diversity of the bioscience sector is growing with support from venture capital and federal funding, as well as multiple industry organizations providing additional support to the sector. For example, Delaware has a new [lab space grant program](#) to ensure that existing small companies are able to grow here and that the state attract new companies by increasing its inventory of “ready-to-go” lab space.

The Philadelphia-Camden-Wilmington metro area—which includes New Castle County—ranks 4th in current life sciences employment, following major life sciences markets of Boston, San Francisco, and San Diego. More than one-third of all chemical engineers in the metro area work in New Castle County, while New Castle County accounts for only 9% of the total metro area population. New Castle County is also home to the largest density of life scientists who work in Delaware (*Figure K-10*).

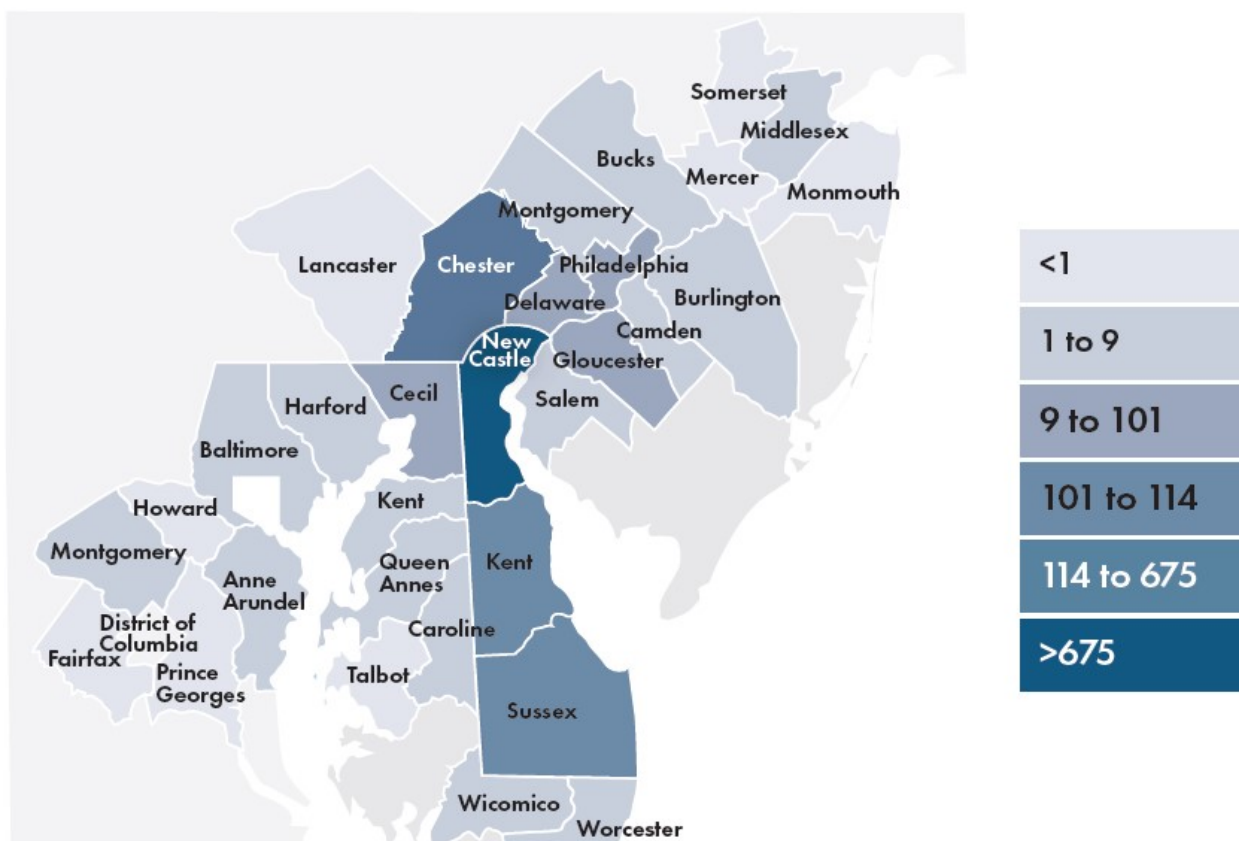


Figure K-10 Life Scientists Employed in Delaware and Where They Live, 2021; Source: Chmurma JobsEQ ERSI, Life Sciences in Delaware Report

⁵ <https://www.choosedelaware.com/why-delaware/innovation/#>

Economic Policies

The Greater Wilmington Convention & Visitors Bureau highlights the benefits for businesses in New Castle County in their [New Castle County Relocation Guide](#). Taxes and cost of living in New Castle County and Delaware are low compared to nearby counties and states. There is no statewide sales tax or property tax. Real property taxes in New Castle County are among the lowest in the nation.

Property taxes are assessed by local governments and school districts. The average county portion of property taxes is \$503 per year. The corporate income tax rate is 8.7%. Taxes are not paid on dividends of foreign corporations that qualify for, and claim, foreign tax credit on federal returns. Investment and holding companies maintaining and managing intangible investments and collecting and distributing income from such investments or from tangible property outside Delaware, are exempt from State corporate income tax. Partnerships, sole proprietorships and shareholders of S Corporations are not subject to State corporate income taxes. Delaware also has no tax on inventories and no tax on process machinery or equipment.

Economic Development Incentives

There is planned development activity in locations throughout the county, and state- and federally-sponsored programs are encouraging additional growth. Opportunity Zones, a federal program aimed at encouraging long-term investments in distressed communities to encourage economic growth and job creation. The program in turn provides tax benefits to investors. Qualified Opportunity Zones (QOZ) consist of census tracts containing distressed communities, identified by the State. There are US Opportunity Zones near Wilmington and Newark, which encourage investment in distressed areas to spur economic growth and job creation while providing tax benefits to investors.

The State of Delaware is encouraging development utilizing their own Downtown Development Districts program. The Downtown Development Districts Program is intended to encourage private investment and improve commercial growth in business districts and neighborhoods while building stable residential communities with improved housing options. The goal is to strengthen neighborhoods while attracting businesses and residents to vibrant downtowns. **Table K-2** lists county and state incentives.

Table K-2: Investment Incentives

New Castle County Incentives
<p>Bond Financing New Castle County offers tax-exempt bond financing for projects relating to infrastructure, energy, community development, and other economic development purposes.</p> <p>Partial Property Tax Exemption Businesses that invest at least \$50,000 in new construction of commercial or manufacturing facilities in unincorporated areas of the County are sometimes be eligible for a three-year partial property tax exemption for the increase in property assessment due to the new development.</p> <p>Qualified Energy Conservation Bonds Qualified Energy Conservation Bonds (QECB) are designed to provide low-interest financing for green energy and energy efficiency projects for qualifying businesses. Projects must be located in qualifying districts, and over 90% of the County is eligible.</p>
State of Delaware Incentives
<p>Delaware Prosperity Partnership (DPP) The Delaware Prosperity Partnership (DPP) works to promote the expansion of existing industry, assist small and minority-owned businesses, promote, and develop tourism, support employment creation, and recruit new business and investment to the state.</p> <p>State Small Business Credit Initiative (SSBCI) Under the Small Business Jobs Act, Delaware is able to access \$13.1 million in funds for new small-business lending to lower the borrowing rate and credit risk.</p> <p>Delaware Access Program The Delaware Access Program is private-public match program that provides access to bank financing for qualifying Delaware businesses that may have difficulty obtaining financing.</p> <p>New Jobs Infrastructure Program The New Jobs Infrastructure Fund provides flexible funding for public infrastructure projects that are critical and immediate for large businesses locating or expanding in Delaware. This fund should be used for projects relating to transportation, sewer, water, energy, land stabilization and other infrastructure.</p> <p>Delaware Rural Irrigation Program (DRIP) A revolving loan fund is available to qualified Delaware farmers to add new irrigation systems to increase the amount of irrigated.</p> <p>Brownfield Assistance Program Encourages the redevelopment of environmentally distressed sites within the state by helping to reduce related capital expenditures.</p> <p>Encouraging Development, Growth, and Expansion (EDGE) Grants The Encouraging Development, Growth, and Expansion grant program is a first of its kind program in Delaware, focusing on startups and small businesses. Businesses must be in business for five years or less, have 10 full time employees or fewer, and a majority of their workforce and infrastructure must be located in Delaware.</p> <p>Graduated Lab Space Grant This program intends to create additional lab space for companies in order to continue thriving in Delaware. It focuses on early stage and small to medium sized coming that are growing out of their existing space within the state or companies interested in relocating to Delaware.</p> <p>Workforce Training Grant This grant program provides match funding to assist companies in providing specialized training programs, up to \$100,000 per project.</p> <p>R&D Tax Credits This incentive program promotes research and development by lowering payments on taxable expenses.</p>

Brownfields

Remediation projects, either past or current (including brownfields), exist within the unincorporated New Castle County. A brownfield is a property for which the expansion, redevelopment, or reuse may be complicated or hindered by the presence or potential presence of a hazardous substance, pollutant, or contaminant. New Castle County supports the productive use of these idle properties as they provide "new" areas for economic development, primarily in former industrial/urban areas with existing utilities, roads and other infrastructure. Prior to the transfer of property ownership, a Phase I Environmental Site Assessment should be conducted by the developer. A Phase I Assessment investigates past uses on the property and seeks evidence of possible contamination. If a Phase I Assessment raises reason for concern, then a more detailed investigation should be conducted. DNREC's Remediation Section can aid in investigating, remediating, and redeveloping brownfield sites.

Land Use and Fiscal Impact

New Castle County Department of Land Use retained the services of the fiscal and economic evaluation firm, Tischler Bise, to conduct a fiscal impact study. The study used land use and fiscal data along with population and service standards data to understand the net fiscal impact of land uses and development types. This type of study helps identify the types of land uses and patterns are more or less fiscally sustainable. In other words, a land use may generate a lot of revenue for the local government, for example, but if the services it requires cost the government even more over time, it will end up costing local taxpayers (*Figure K-11*).

Sprawling development patterns with large swaths of parking versus compact mixed-use design near transit have a different fiscal impact and implications for the County's public expenditures and revenues, as well as population and number of jobs. Using the fiscal impact analysis and scenario planning, a case study evaluation of the Churchman's Crossing area of the county was conducted. The evaluation looked at estimated fiscal impacts of development under current development patterns and zoning ("business as usual"), as well as incorporating different ratios of residential unit types and mixes of uses. The Churchman's Crossing area of the county includes some of the county's largest employers (Christiana Hospital, Christiana Mall), has rail access via the Churchman's Crossing SEPTA station, and contains large areas of land that are undeveloped or likely to redevelop in the future (Delaware Park). The following development scenarios were examined:

1. Base Scenario — This scenario shows what would happen if development through 2040 follows the same patterns and trends as currently happening in the study area ("business as usual"), such as big box retail and large office developments.
2. Alternative A — This scenario depicts development in 2040 as embodying more mixed-use development but not fully capitalizing upon the transit center located in the Delaware Park/Fairplay parcel. It is assumed that other parcels in the study area will be redeveloped into mixed use, however, the Delaware Park/Fairplay parcel will continue to develop as hotel and casino resort destination.
3. Alternative B — This scenario illustrates development in 2040 as embodying mixed-use development, including transit-oriented development around the transit center in the Delaware Park/Fairplay Transit Center. It does not include an expanded hotel and casino on the site.

After running a fiscal impact analysis, which looked at the different development types described above, as well as the associated County expenditures, scenario Alternatives A and B resulted in a greater net positive fiscal impact for the County. While scenario Alternative A and B both required higher county expenditures, both county revenues and the projected number of jobs were significantly higher (*Figure K-12*).

Base Scenario			Alternative A			Alternative B		
Residential		Increase	Residential		Increase	Residential		Increase
Single Family (units)	203	28%	Single Family (units)	159	0%	Single Family (units)	159	0%
Townhouse (units)	86	26%	Townhouse (units)	68	0%	Townhouse (units)	68	0%
Multifamily (units)	747	47%	Multifamily (units)	1,545	204%	Multifamily (units)	1,758	246%
SF Age-Restricted (units)	258	27%	SF Age-Restricted (units)	203	0%	SF Age-Restricted (units)	203	0%
Other (units)	38	0%	Other (units)	288	658%	Other (units)	288	658%
Total Population	2,572	35%	Total Population	4,180	120%	Total Population	4,545	139%
Nonresidential		Increase	Nonresidential		Increase	Nonresidential		Increase
Retail (sq. ft.)	1,807,138	-1%	Retail (sq. ft.)	2,204,790	20%	Retail (sq. ft.)	1,923,612	5%
Office (sq. ft.)	1,907,654	-1%	Office (sq. ft.)	3,544,917	84%	Office (sq. ft.)	3,544,917	84%
Industrial (sq. ft.)	0	0%	Industrial (sq. ft.)	0	0%	Industrial (sq. ft.)	0	0%
Institutional (sq. ft.)	2,354,977	-1%	Institutional (sq. ft.)	3,381,619	42%	Institutional (sq. ft.)	3,381,619	42%
Casino (sq. ft.)	296,652	-1%	Casino (sq. ft.)	821,231	174%	Casino (sq. ft.)	300,000	0%
Hotel (sq. ft.)	192,852	-1%	Hotel (sq. ft.)	857,016	340%	Hotel (sq. ft.)	147,991	-24%
Total Jobs	16,397	-1%	Total Jobs	27,078	63%	Total Jobs	24,616	48%

Source: Wilmington Area Planning Council (WILMAPCO) traffic analysis zone (TAZ) data; New Castle County Land Use Department; June 28, 2019

Note: The residential development type Other are dormitory units at DelTech Community College. The loss of hotel square footage results from the lower total of assumed square footage of hotel use at University Plaza Office Park and Delaware Park.

Figure K-12: Fiscal Impact Study Scenarios

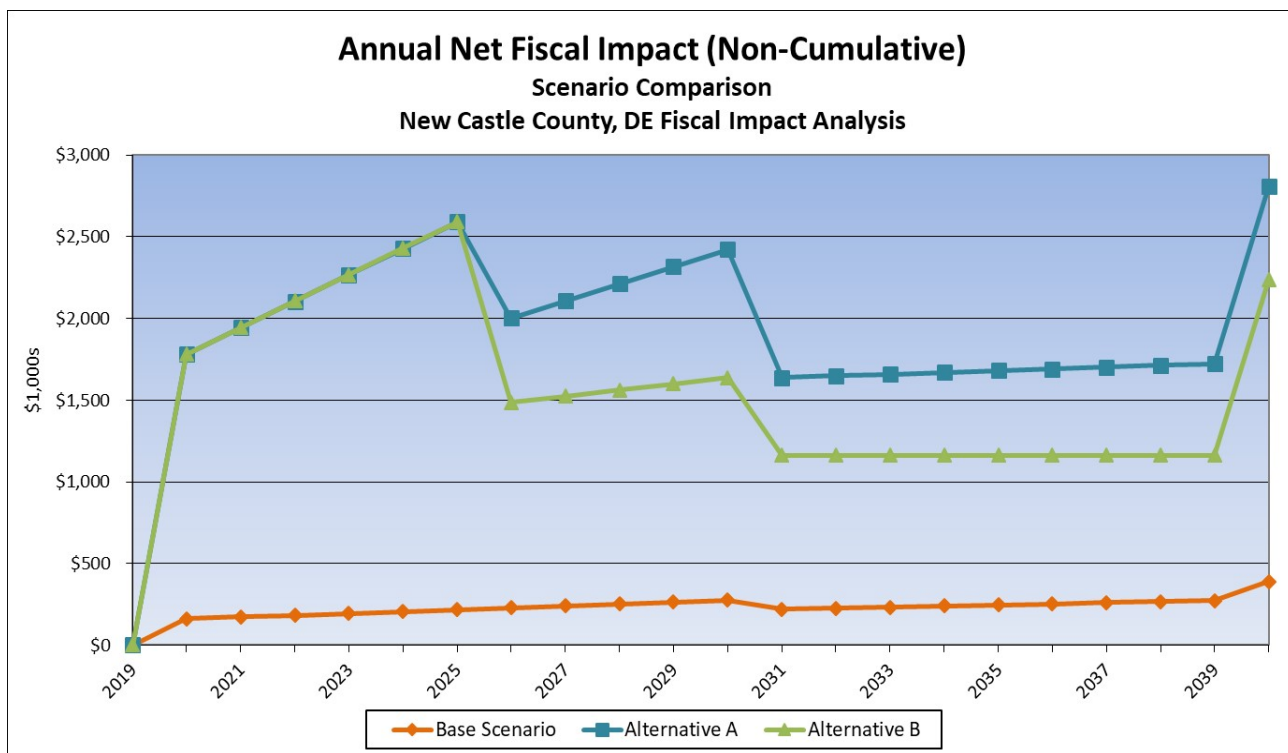


Figure K-11: Annual Net Fiscal Impact Scenario Comparison; Source: TischlerBise Analysis August 30, 2019

Additional analysis indicates that more dense development types have a higher land value per acre in the county (**Figure K-13**). For example, the value per acre of multi-family development is nearly three (3) times more than that of a single-family home.⁶ Likewise, in addition to land value, denser development patterns correlate to productivity. Areas with higher concentrations of economic activity and jobs correlate with higher land values, which in-turn results in higher tax revenues. Therefore, it will be important to consider these fiscal implications in our land use policy. Land use policies that allow for mixed use development or compact development in suitable areas of the

⁶ September 14th, 2020 presentation by Urban3

county, should be considered as areas of the county redevelop. A healthy fiscal environment fuels the ability to reinvest, provide quality public services, and maintain and enhance quality of life in of our communities.

Economic and Community Development Tools and Resources

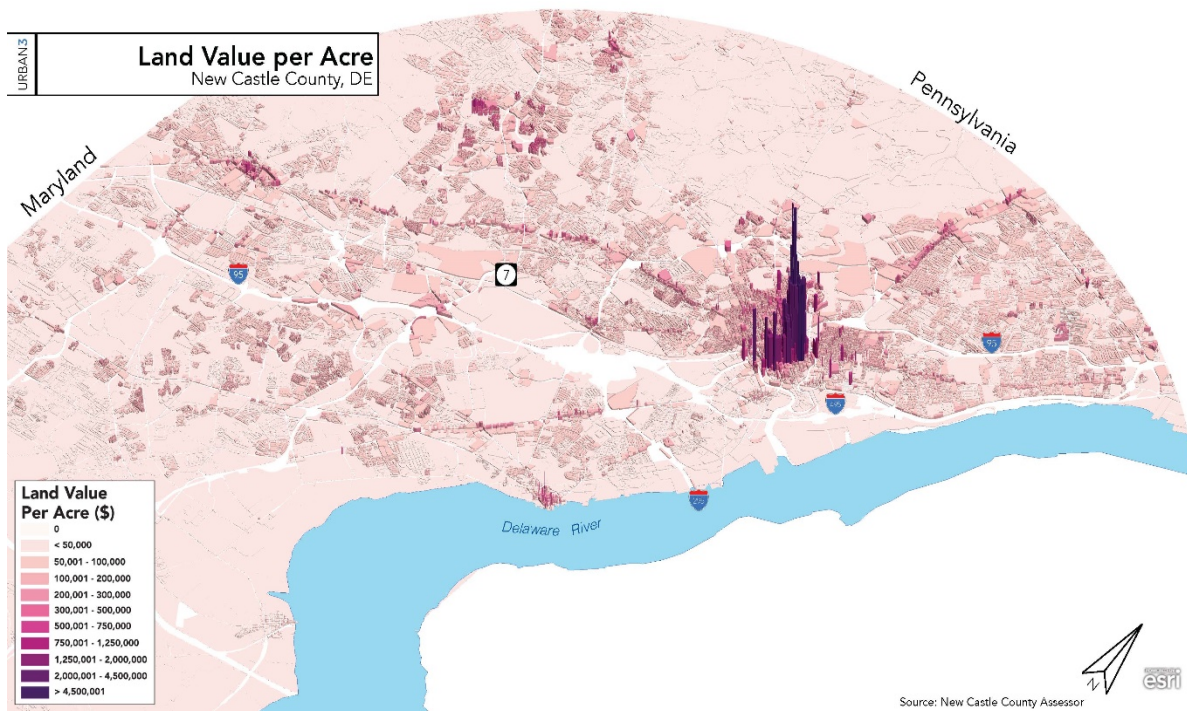


Figure K-13: Land Value per Acre; Source: Urban3

At the time of this draft, New Castle County is slated to receive funds from the [American Rescue Plan Act \(ARPA\)](#) to spur recovery from the COVID-19 pandemic. The county will receive approximately \$108 million. A Task Force was convened, with topic-focused committees established to identify recommendations for ways to spend these funds. Committees included: economic and community development; workforce development; and early childhood learning. More specifics on how these funds will be invested in community recovery efforts will be included as the draft plan advances.

New Castle County developed the [Jobs Now](#) program, which provides accelerated plan review for development projects that bring new or expanded employment opportunities into New Castle County. To prioritize this type of development, the Department of Land Use's plan reviews are completed within five business days, including coordination with other agencies to expedite their own reviews.

In 2019, New Castle County Council approved an ordinance enabling the creation of Transportation Improvement Districts (TID). [Defined by DelDOT](#), TIDs outline a geographic area to secure required improvements to transportation facilities in the area of a new development. They will provide the ability to proactively plan transportation improvements to support economic development in locations appropriate for economic development as identified in local comprehensive plans. Benefits include focusing transportation improvements in high-priority growth areas, supporting complete communities, and complementing local master plans. TIDs also encourage developers to make "fair share" contributions to transportation improvements, foster market-ready development, and promote intergovernmental coordination.

New Castle County also enacted legislation to implement [Complete Community Enterprise Districts \(CCED\)](#), another DelDOT initiative. CCEDs encourage development that maximizes economic value of both new and

existing transportation infrastructure; strategically deploy transportation funds to meet mobility needs of the communities at the lowest total economic cost; and encourage transportation solutions that do not require personal vehicles. CCEDs are contiguous, compact areas between one and nine square miles. Within these areas, there are no parking minimums and a mix of zoning and land uses. Development within a CCED should be walking-, cycling- and transit-based. An area defined as a CCED must also have a master plan to formalize the goals and requirements for local development.

Another tool used for economic development in New Castle County is the [Economic Empowerment District \(EED\)](#). EEDs facilitate employment uses and complementary uses within a specific compact, campus-like setting, such as those for corporate headquarters, technology offices, research, light assembly centers, or master planned employment centers. Establishing an EED requires an ordinance from County Council and a unique set of guidelines to accommodate development or reuse of land within the EED.

Future Projections

Looking into the future, the total workforce is expected to grow slightly to roughly 320,000 (0.6%) in 2026, according to the Delaware Department of Labor. The top industries expected to see growth are: Management (2.1%), Health Care & Social Assistance (1.2%), and Finance & Insurance (1.1%). Among the industries expected to see slight decline by 2026 are Retail Trade (-0.2%), Manufacturing (-0.5%), and Wholesale Trade (-1.3%). Increased economic development will help to offset job losses and other effects of the industries projected to decline into the future.

As Delaware is a hub for credit card companies and back-office operations for many national banks, financial services accounts for a greater share of employment than in any metro area with a population of more than 500,000. In the future, banks will continue to incorporate technology and automation into their operations, which means financial services payrolls will reach pre-pandemic levels by the end of 2022 but are not expected to expand much beyond that.

The COVID-19 pandemic and resulting stay-at-home orders and social distancing guidance encouraged people to shop online more than in the past. [Survey data from McKinsey & Company](#) shows that most people plan to continue shopping online more even after COVID-19 protocols are lifted. This trend began before the pandemic, but it was greatly accelerated by the health crisis. This creates the need for businesses to change everything from their logistics and supply operations to their website and online stores. It also creates challenges in land use and transportation infrastructure. Traditional retail locations like shopping malls or big box stores may be less utilized and require re-use for other purposes. Retail companies also may need to implement additional drive through and curbside pickup areas at their brick-and-mortar locations. As online orders continue to increase, it will also require increased delivery vehicles on the road and additional spaces on local streets for those vehicles to pick up and drop off packages.

The federal government passed legislation creating the Coronavirus Aid, Relief and Economic Security (CARES Act) in 2020 to provide support to local governments and communities to assist in recovery from the pandemic and resulting impacts. New Castle County implemented [several programs](#) to create opportunities for county communities and businesses to recover and thrive into the future. These programs included a variety of grants, including the Innovation Grant, which supported businesses and entrepreneurs in innovating new programs and technologies to increase virus safety and establish foundations for a strong economy, healthy people, and a thriving community. Other grants were specifically targeted to support restaurants, distance learning, municipalities, fire companies, and food distribution and health organizations.

Economic development is an essential element of vibrant communities. A strong and stable economy provides for job growth, thriving businesses, and resources for developing and preserving the other important aspects of our communities, like green space, education, employment opportunities, and infrastructure. New Castle County must be ready to adapt and maintain a robust economy and job market no matter how the national and international markets change. Economic development efforts must also be

coordinated with other development initiatives and implemented in a way that is sustainable, efficient, and beneficial to all community members. This plan includes strategies to promote existing and new industries, encourage employment near housing centers and housing near employment centers, and establish New Castle County as a hub of the regional economy to support the quality of life of our residents.

Related Goals, Objectives, and Strategies

5. Goal: New Castle County is a strong, resilient hub of the regional economy that provides a range of jobs and services to County residents.
 - 5.1. Objective: Promote business clusters by focusing resources and policies toward retaining and growing businesses in discrete sectors that advance the County's economic strengths.
 - 5.1.1. Strategy: Support emerging business (green jobs, warehousing/logistics, startups, other areas where demand from the market is growing) to complement traditional industry and business in the County (business services, agriculture, banking, chemical, healthcare, etc.)
 - 5.1.2. Strategy: Work with other agencies and partners to focus transportation and other investments in the built environment that support and attract local business, such as corridor reinvestment, streetscape enhancement, tech infrastructure, etc.
 - 5.2. Objective: Achieve a diverse and supportive business ecosystem.
 - 5.2.1. Strategy: Support small business and entrepreneurship
 - 5.2.2. Strategy: Encourage community-based economic development and revitalization
 - 5.2.3. Strategy: Grow a diverse portfolio of employers/businesses, especially those owned by female and minority entrepreneurs.
 - 5.2.4. Strategy: Create spaces where employees are able to connect to work (remote) for employers that are located beyond the county to reduce long commutes and foster access to employment.
 - 5.2.5. Strategy: Enhance and promote the County's high quality of life (schools, natural amenities, transportation, character, built environment) to retain and attract a skilled workforce and new businesses
 - 5.2.6. Strategy: Increase access to modern infrastructure and emerging/new technology (e.g. renewable energy transportation, Connected/Autonomous vehicles, microtransit, high speed internet, green energy, etc.)
 - 5.3. Objective: Increase the percentage of jobs located in Delaware Level 1 and 2 State Strategies Investment Areas, ensuring job centers are located near inclusive transit options and existing infrastructure/services.
 - 5.3.1. Strategy: Encourage redevelopment of industrial land, strip malls, office parks, and other "greyfields" to strengthen community cohesion, environmental quality, fiscal productivity, and quality of life
 - 5.3.2. Strategy: Enact land use policies and regulations that incentivize infill and redevelopment in and around job centers
 - 5.3.3. Strategy: Evaluate the existing Economic Empowerment District (EED) regulations in County code and update/enhance and promote. Consider identifying target areas for application.
 - 5.3.4. Strategy: Increase industries that generate green, quality jobs (toward addressing climate change, creating good jobs, employing locals)

6. Goal: All residents have the ability to participate in the economy and have access to living-wage jobs. Delaware's workforce is strong and positioned for emerging industry and jobs as well as applying innovation and adaptation in traditional industries.
- 6.1. Objective: Increase equitable access to educational and economic opportunities (see also [Housing](#) and [Environmental and Social Justice](#) elements).
- 6.1.1. Strategy: Require that new neighborhoods have access to internet at speeds adequate to facilitate education and occupational needs at home; address underserved areas.
- 6.1.2. Strategy: Work with a full range of stakeholders (traditional business leaders, community members, surrounding governments, and others) to strengthen the regional economy around our existing assets and incentivize investment in areas that have experienced disinvestment
- 6.2. Objective: As economic growth occurs, increase distribution of benefits across the community.
- 6.2.1. Strategy: Support the creation of Community Benefits Agreements to support residents voices in development/redevelopment
- 6.2.2. Strategy: As the retail economy shifts away from brick and mortar and toward delivery-based, ensure sufficient access to goods and services
- 6.2.3. Strategy: Evaluate the impact of nonresidential development on clean air, water, and soil to enact regulations where appropriate especially focused on the disproportionately larger impact in Environmental Justice communities

See also:

Conservation, Goal 7

Mobility Element, Goal 8

Historic Element, Goal 12

Community Planning and Design Element, Goal 10

ELEMENT L

Climate Change, Resiliency & Hazard Mitigation

L. Climate Change, Resiliency, and Hazard Mitigation

Element Defined

Climate change is and will continue to impact the daily lives of everyone in New Castle County, from downtown Wilmington to rural farms and everywhere in between. Greenhouse gases released into the atmosphere are trapping heat on the surface of the earth, causing rising temperatures and other changes in our weather and climate. As stated in the [Intergovernmental Panel on Climate Change \(IPCC\) Sixth Assessment Report](#):

It is unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred. Observed increases in well-mixed greenhouse gas (GHG) concentrations since around 1750 are unequivocally caused by human activities. Each of the last four decades has been successively warmer than any decade that preceded it since 1850. The scale of recent changes across the climate system as a whole—and the present state of many aspects of the climate system—are unprecedented over many centuries to many thousands of years.

In Delaware, heat waves are expected to become longer, and more frequent, intense storms will be more frequent with more precipitation, and sea levels are projected to continue to rise. These changes will affect New Castle County resident's daily lives, the economy, ecosystems, and overall quality of life in Delaware and New Castle County.

It is important to understand the potential impacts and effects of climate change to plan for a resilient New Castle County. [Transportation](#) and [land use](#), including industry and economic development, are major sources of greenhouse gas emissions, and we must take a balanced approach to address effects of climate change while also developing a vibrant economy and supporting our communities. We need to understand and identify the best practices on how to mitigate and adapt to these effects and protect the well-being of our people and our infrastructure under these changing conditions.

Beginning in 2020, the State of Delaware engaged residents, businesses, and organizations around the state, including New Castle County, to help develop a statewide [Climate Action Plan](#). According to the results of surveying conducted by the State during the process, most Delawareans support taking some action to address the causes and consequences of climate change. This sentiment was reflected in the NCC2050 public engagement process as well. Some strategies favored by survey respondents include increased conservation of undeveloped, forest, and agricultural land; stronger air pollution controls; and revised building codes and regulations in flood prone areas. See **Figure L-1** for additional strategies that received public support in survey responses.

The Delaware Climate Action Plan (2021) puts forth the following areas for action:

Action Areas to Minimize Greenhouse Gas Emissions:

- Clean and renewable energy expansion which has the greatest potential to reduce emissions in the long term.
- Energy efficiency measures which should be put in place relatively quickly and implemented through existing programs.
- Transportation sector transitions to zero-emission vehicles and more efficient transportation systems.

- High global warming potential emissions which include greenhouse gas emissions reductions and management of greenhouse gases other than carbon dioxide.
- Offsetting carbon emissions by preserving forests, croplands, wetlands and urban greenspaces that absorb (or sequester) carbon dioxide from the atmosphere, providing a cost-effective, temporary or long-term carbon storage solution.

Action Areas to Maximize Resilience to Climate Change Impacts:

- Update or create state regulations that address protection and conservation of vulnerable and impacted resources.
- Support communities and stakeholders in the form of trainings, resources and technical assistance.
- Create management plans for natural resources, emergency response, state facilities and agency equipment.
- Update facility design and operation that accounts for future climate conditions.
- Promote research and monitoring that studies the impacts of climate change and methods of adapting.
- Engage in outreach and education on climate change impacts and adaptation.
- Provide agency support that provides the resources to implement resilience actions.

New Castle County recognizes that addressing climate change will take action at all levels, including through local planning, land use policy and regulations, and strong coordination with stakeholders and the broader community. Taking part in implementing this statewide action plan will protect and strengthen agriculture, tourism, the economy, natural and recreation areas, infrastructure, and, moreover, our people and communities.

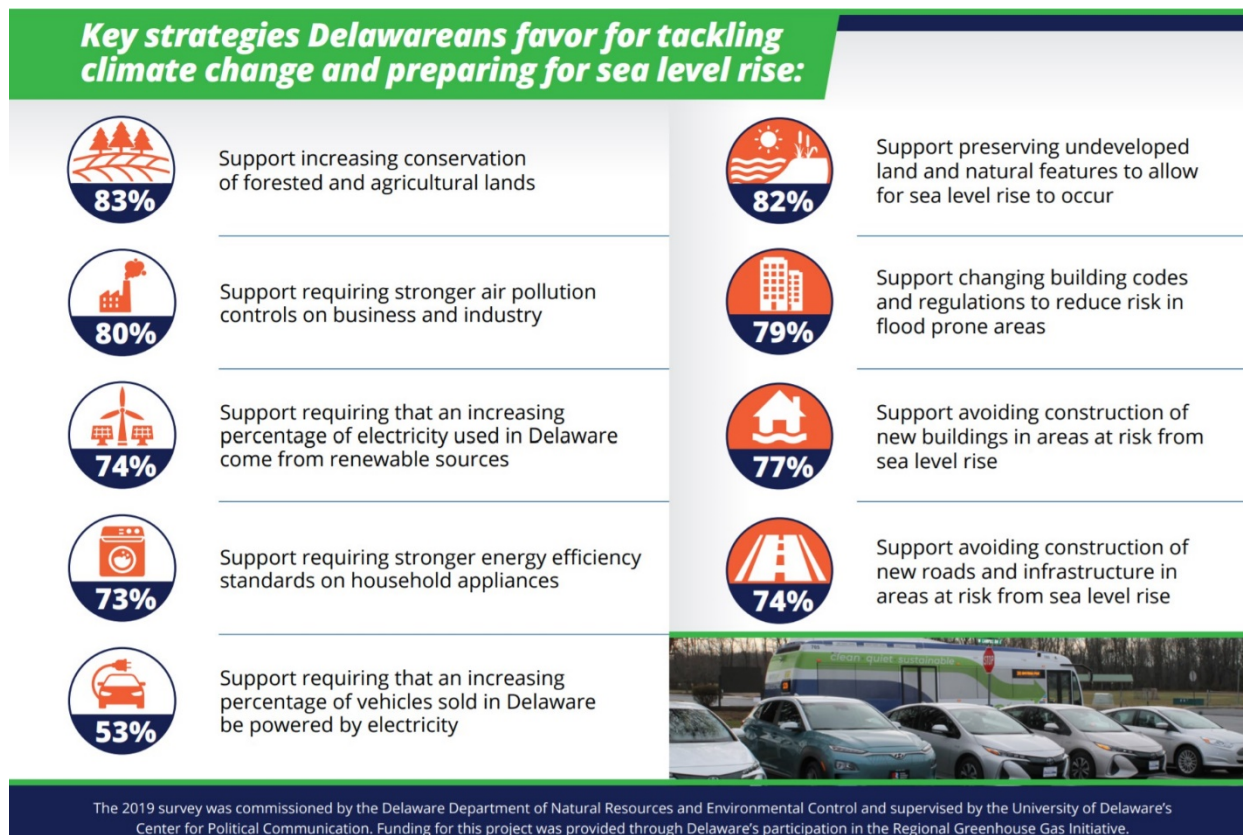


Figure L-1: Key Strategies Delawareans Favor For Tackling Climate Change and Preparing for Sea Level Rise (Source: Delaware Dept. of Natural Resources and Environmental Control/Delaware Climate Action Plan)

What We Heard

"It's also important to reclaim and conserve former industrial and/or brownfield properties along Rivers for climate adaptation purposes." – Public Participant, Let's Talk Workshop: Our Environment and Nature, November 9, 2020

What's the possibility of keeping residential development out of places expected to be in the way of sea level rise and storm surge? – Public Participant, Let's Talk Workshop: Our Environment and Nature, November 9, 2020

I am concerned about many things, but one big concern is the impact of climate change on agriculture, land use planning, redevelopment, and infrastructure. I don't have a sense that these large subject areas have aggressive plans in place to account for rapid climate change. – Public Participant, Let's Talk Workshop: Our Environment and Nature, November 9, 2020

"Recreation and all of our spaces provide benefits whether you live near them or not: filtering water, clean air, storing carbon in trees and soils, all of these things have value even if you do not interact with a parcel on a daily basis, including private parcels." – Susan Love, DNREC Division of Climate, Coastal and Energy, Deep Dive Session 1: Open Space, Conservation, Recreation, Environment, February 3, 2021

NCC Today

Sea Level Rise Analysis

According to the Delaware Department of Natural Resources and Environmental Control (DNREC), there are three major causes of sea level rise affecting Delaware:

- **Melting Ice:** Warmer global temperatures cause ice sheets on land to melt and drain into the ocean.
- **Subsidence:** The land in Delaware has been sinking since the end of the last ice age about 11,000 years ago, through a process called glacial isostatic adjustment.
- **Thermal Expansion:** As water warms, it expands and takes up more space, resulting in an ocean with greater overall volume.

Delaware is located in the mid-Atlantic coastal region, which is considered a sea level rise hotspot where levels are rising faster and higher than elsewhere. This is attributed to a combination of rising seas, subsiding land, and ocean currents. The Delaware Sea Level Rise Technical Committee estimated in 2017 that sea levels in Delaware could rise an additional 9-23 inches by 2050.

The Delaware Sea Level Rise Advisory Committee 2013 report, [*Preparing for Tomorrow's High Tide*](#), reports that statewide, between 8% and 11% of the state's land area (including wetlands) could be inundated by a sea level rise of 0.5 meters to 1.5 meters (approximately 1.5 to 5 feet), respectively. Inundation is the overland flooding of saltwater that happens during big storms or by tiny, incremental increases brought by daily tides. Saltwater inundation is also occurring more frequently due to sea level rise. Inundation of low-lying land and structures occurs when the sea level rises faster than natural forces are able to build up land or where shoreline protection structures are not constructed resulting in dry land

becoming flooded and cause wetlands to convert into open water. Additional detail is found in the [Conservation element](#).

DNREC and the Delaware Sea Level Rise Advisory Committee published [recommendations](#) for adapting to sea level rise in 2013. New Castle County has identified local adaptation strategies to coordinate and partner with statewide efforts.

The Salt Water Table and Effects on Environment and Agricultural Lands

As sea levels rise, salt water will make its way further inland and into the underground aquifers that supply water for drinking and agricultural uses. This is called saltwater intrusion, or the process of saltwater moving underground into areas of freshwater in an aquifer where water is present, as defined by [DNREC](#).

The salt line is the location where a stream or river is no longer considered to be salty (contains less than 250 milligrams per liter of chloride). It fluctuates each year depending upon tidal inputs and freshwater inflows from rain, snow melt, and dam releases. The line is moving farther upstream and affecting habitats as far inland as Route 1, according to DNREC.

As sea levels rise, shallow coastal groundwater aquifers and drinking water sources could be penetrated by salt water and become saline. Drinking water needs across Delaware are met in part through the use of surface waters in New Castle County. Increased salinity of the water near these water supplies could affect access to clean drinking water for residents across the County and the State. While impacts to drinking water are not anticipated at this time, monitoring is important.

Forests and wetlands in areas where intrusion is occurring are also affected. The existing plants and trees typically die, resulting in 'ghost trees' like those seen when crossing the bridges on Route 1 where trees stand along, bare of leaves or greenery. These freshwater plants and trees are replaced by plants that are more salt-tolerant. DNREC reports that in many cases, the invasive reed phragmites is moving in before native salt-tolerant species take root, leading to poor quality habitat. In other cases, the rising water has drowned all plants. DNREC wetland maps and aerial imagery suggest that many coastal wetland habitats are changing from freshwater wetlands to brackish or saltwater wetlands over time.

Changes in salinity also affect habitat for various aquatic animals. For example, native fish species like American shad, river herring, and striped bass live in salt water but return to freshwater rivers to spawn, and increased salinity reduces the available freshwater habitat and spawning areas, leading to population declines. Commercial fisheries may need to seek out alternative sources of freshwater in their processing operations, which could negatively affect production and the livelihood of the surrounding communities. This is also likely to affect natural resources tourism industry.

Data in the Sea Level Rise Vulnerability Assessment [report](#) show that approximately two to four percent of the state's highly productive soils will be exposed to sea level rise in the three studied scenarios. It notes that these impacts may vary across the state and could be significant in localized areas.

Increased salinity in groundwater could impact agricultural activities by decreasing crop yield, eliminating the capacity to grow certain crops, and impacting the health of livestock. The potential loss of productive agricultural areas and related losses in employment may cause farmers and farm workers to relocate, causing losses to the local agricultural economy and heritage as well as the population of some farming communities. While NCC's agricultural industry does not match that of the other two counties, its importance lies not only in its contributions to the local economy, but also its role in local food supply, land preservation, and rural community character and heritage.

The state Department of Agriculture currently uses two strategies to preserve farmland: agricultural preservation districts and agricultural conservation easements. (Additional information about these two initiatives are found in the Economic Development element of this plan.) Based on the scenarios studied in

the Sea Level Rise Advisory Committee report, approximately 8-11% of statewide agricultural preservation districts (in place at the time of the study, 2012) would be exposed to sea level rise, and the largest percentage of that impact will be felt in New Castle County, where 14-16% of preservation district land could be inundated. Similarly, 13-17% of the conservation easements could be exposed, and 25-31% of the easements in New Castle County could be inundated.

The [University of Delaware Cooperative Extension](#) is conducting studies related to salt water impact on agricultural land and crops. Part of these studies includes an investigation into a new salt-tolerant crop: seashore mallow. The crop has marketable products from the seeds and stems, and the plant is a valuable part of the coastal ecosystem.

Case Study: Port Penn Flooding Mitigation and Sea Level Rise Adaptation Study

In 2016, New Castle County received a grant to study flooding mitigation and adaptation to sea level rise in the Port Penn Area. The town is at risk of flooding during storm events and during high tides, which will increase as sea levels rise. The southern area of Port Penn will feel the largest impact of increased flooding. This area, shown in *Figure L-2*, is located near the marsh inland from the dike and features low-lying buildings, including residences and the sewage treatment plant.

The flood risk and vulnerability assessment showed that the existing dike system built in 1954 is not high enough to protect against the 10% and 1% annual chance storm events under current or future conditions. The dike system has not been maintained and, at the time of study, was covered in heavy vegetation.

The study concluded that “action must be taken to protect residents and structures in the town of Port Penn.” Some solutions proposed include reconstruction of the existing dike system and tide gates and structural mitigation measures such as elevation of buildings—including the sewage treatment plant—above base flood elevation, dry floodproofing buildings, retreat, and relocation of buildings outside the floodplain.

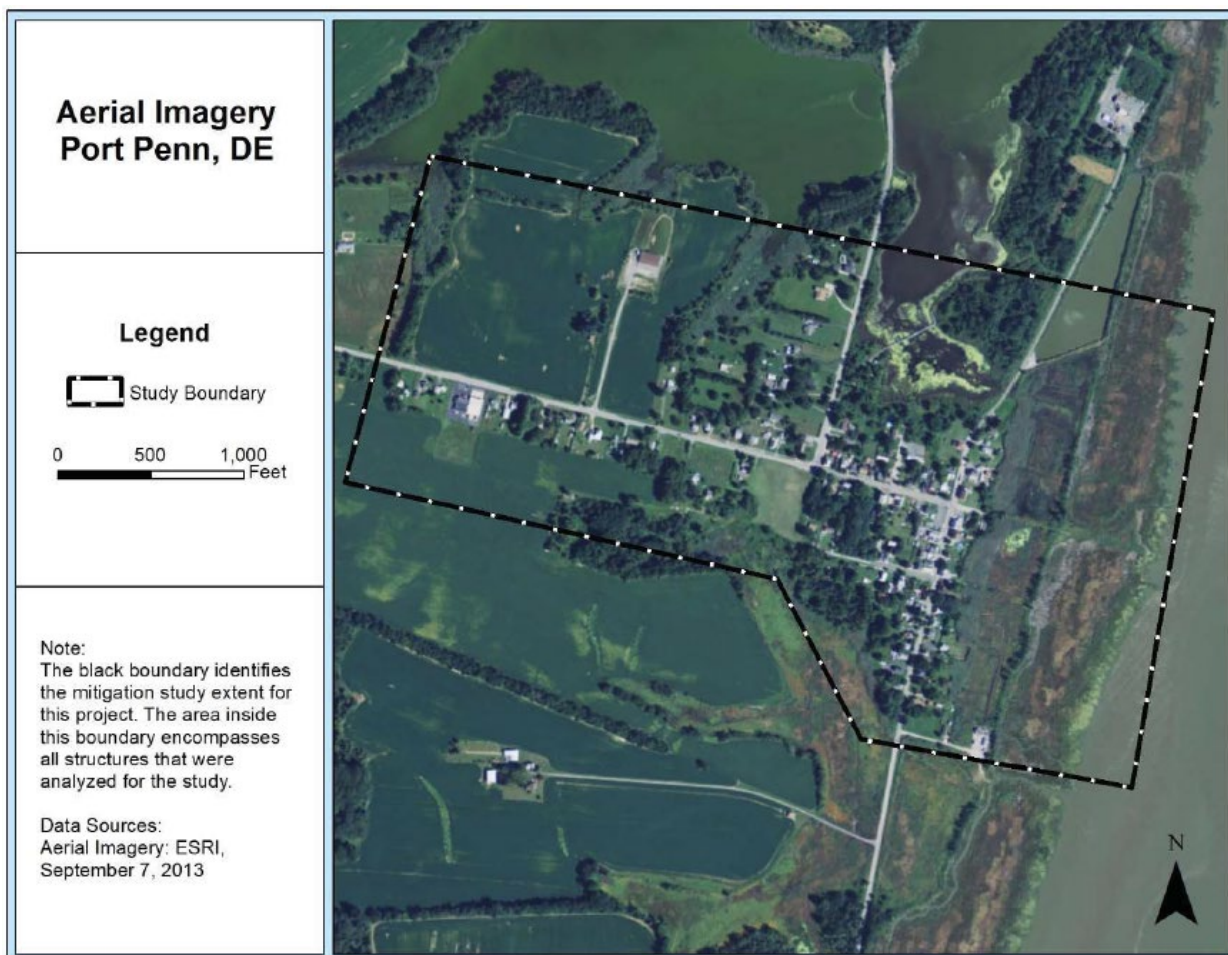


Figure L-2 Port Penn Study Area; Source: Michael Baker International, Port Penn Flooding Mitigation and Sea Level Rise Adaptation Study

Coastal Land Cover

As noted above, our coastal resources are at risk from sea level rise and inundation. These resources include rural coastal plains and tidal wetlands, especially in the southern portion of the county. Delaware's important coastal resources are preserved, protected, developed, and enhanced through the [Coastal Programs Section](#) of the DNREC Division of Climate, Coastal and Energy, the Department's research, education, and policy lead for coastal and ocean issues. It manages Delaware's coastal zone through the integrated efforts of the Delaware Coastal Management Program (DCMP) and the Delaware National Estuarine Research Reserve (DNERR).

Following the Coastal Zone Management Act of 1972, the DCMP was approved in 1979 with the intent of balancing coastal resource use, economic development, and conservation. DCMP addresses a variety of issues including coastal hazards, habitat protection, coastal development, water quality, public access, energy facility siting, and ocean planning.

The DCMP collaborates with state, federal, and local agencies to develop policies to manage and protect all of our coastal ocean resources. The team also supports research and monitoring projects to provide those agencies the best quality science to use in decision making.

The DNERR is one of 29 National Estuarine Research Reserves across the country whose goal is to establish, protect, and manage natural estuarine habitats for research, education, and coastal stewardship.

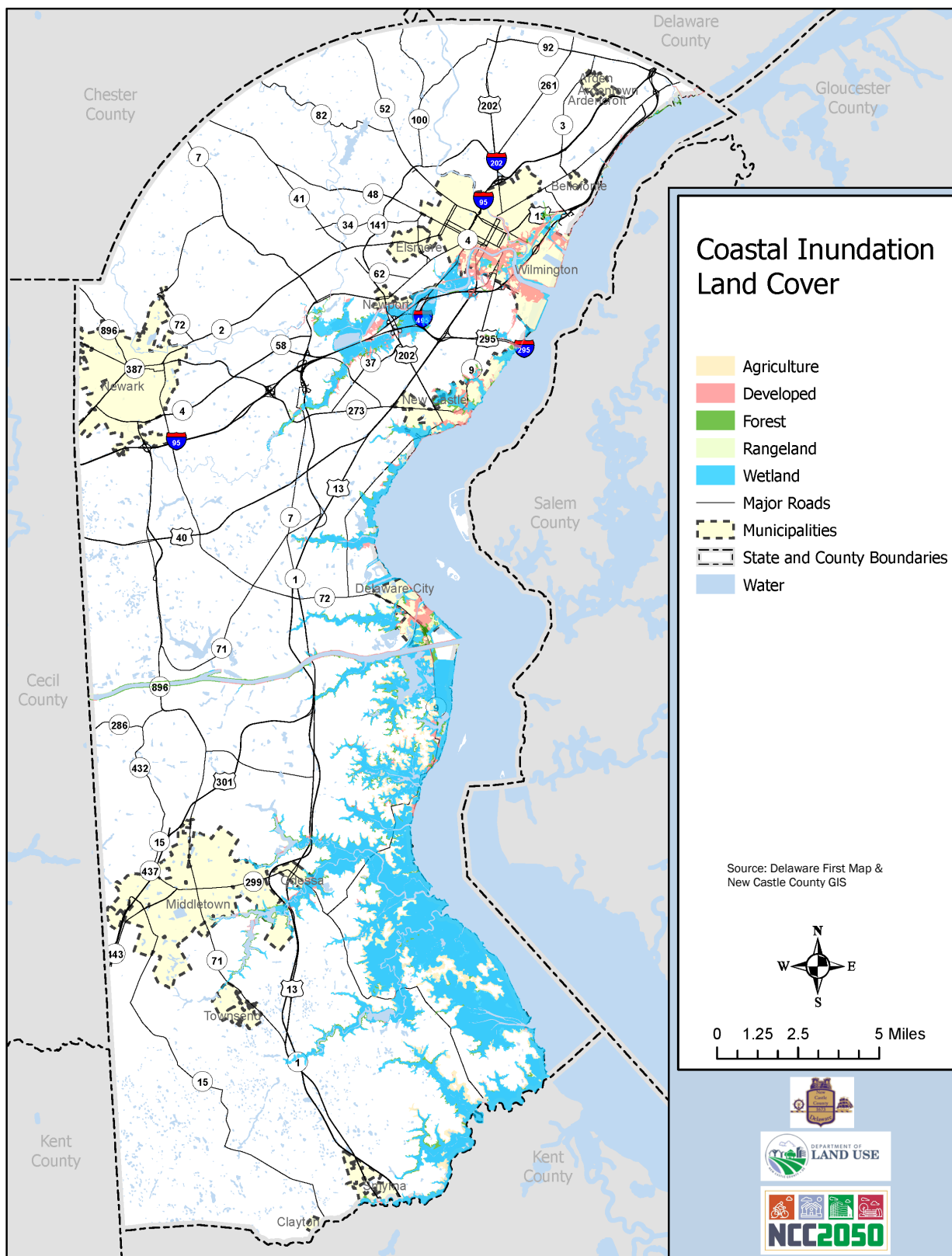
The DNERR has two main components, the Blackbird Creek Reserve in Townsend and the St. Jones Reserve in Dover. These sites include both brackish and freshwater estuaries, and represent the diverse estuarine ecosystems found throughout the Mid-Atlantic region. The mission of the DNERR is to preserve and manage natural resources through coastal stewardship within the Reserve as a place for research, and for providing education and outreach programs that promote better understanding of Delaware’s estuarine and coastal areas, and to promote informed coastal decision-making.

Table L-1 shows that nearly 78% of the land area within the five-foot inundation area consist of wetlands. Approximately 7% of the area is developed, and the remainder of the area is made up of agriculture, rangeland, and forested areas. **Map L-1** illustrates these general categories, while the table below provides more detailed land cover categories. Please refer to the [Conservation element](#) for more information.

Table L-1: Land Cover within 5-Foot Inundation Areas

Land Use Categories	Acres	Percent of Total
Agriculture	345	7.0%
Commercial	30	0.6%
Forest	63	1.0%
High Density Residential	19	0.4%
Industrial	77	1.0%
Institutional	37	0.7%
Low Density Residential	14	0.3%
Medium Density Residential	21	0.4%
Other	110	2.0%
Rangeland	86	2.0%
Transportation	375	7.0%
Wetland	4,095	78.0%
Grand Total	5,271	

Map L-1: 5-Foot Inundation Land Cover Map



Climate Change & Public Health

A changing climate affects the whole world, but it also has huge effects on the local level, including on the health of individuals and communities (see *Figure L-2*).

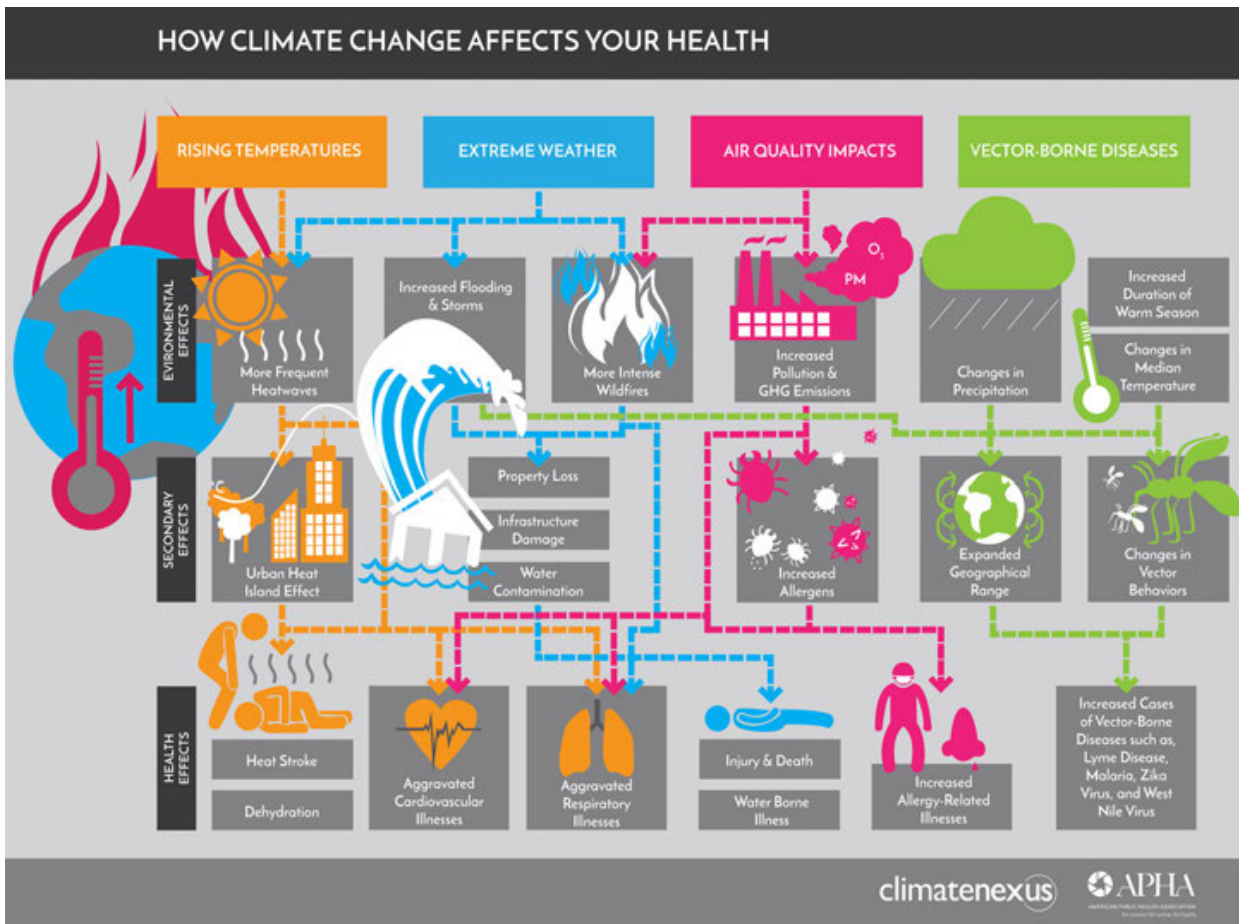


Figure L-2: Climate Change Effects on Health (Source: American Public Health Association)

According to a presentation by Susan Love, DNREC Division of Climate, Coastal and Energy, at the 2017 Delaware Climate + Health Conference, the two effects of climate change which have the largest impact on health are also the effects which are the most significant for Delaware: increasing temperatures and changes in precipitation.

Direct impacts of increasing temperatures are increasing heat-related illnesses, hospitalizations, and deaths, especially for vulnerable populations. Indirectly, increasing temperatures result in worsening air quality exacerbated by conditions that produce ground-level ozone, and longer warm seasons which increase the populations of disease-bearing insects, like mosquitos and ticks.

Increasing precipitation contributes to rising groundwater levels, which leads to failure of infrastructure like septic drain fields, and in combination with increased salinity of groundwater as noted above, impacts water quality and access to safe drinking water. Other infrastructure like roads and bridges may become impassable with rising water levels, which may prevent access in an emergency, including access for fire and ambulance services and the ability to travel to hospitals.

In the October 2017 issue of the Delaware Journal of Public Health, an article titled Climate Change and Population Health by Alan Greenglass, M.D. highlighted other potential health impacts related to greenhouse gases and air pollution: respiratory and cardiac health. With warmer and wetter weather, plants that cause many allergy symptoms like ragweed, tree pollen, and mold will thrive. Ozone (smog) and

particulate pollutants (soot) cause respiratory concerns. Ozone and particulates have direct effects on cardiac arrhythmias, angina, heart attacks, and strokes. DNREC Division of Air Quality provides localized data for New Castle County and the State of Delaware, including resources and reports such as the Annual Air Quality Report contain Delaware- specific monitoring data by location for ozone, PM2.5, and PM10 , which can be found at <https://dnrec.alpha.delaware.gov/air/quality/monitoring/>. The NCC2050 goals and objectives are aimed to create a built environment that protects our residents from impacts to their health in addition to protecting our infrastructure.

Tracking Environmental Health Data and Outcomes

In 2019, the Delaware Division of Public Health launched the [My Healthy Community data portal](#), allowing residents to view usable, actionable neighborhood-level data related to population health and environmental and social determinant data. Health indicator data is available at street, ZIP code, Census tract, neighborhood, town/city, county and state levels, and users are able to compare their community's health indicators with other communities as well as explore data in the areas of air quality, asthma incidence, public and private drinking water results, drug overdose and death data, community safety, maternal and child health, healthy lifestyles, health services utilization, infectious diseases, education, socioeconomic influencers, lead poisoning, suicide and homicide, and populations vulnerable to climate change.

Social Equity and Climate Change

Environmental justice and low-income communities are more likely to be impacted by the effects of climate change. The American Public Health Association (APHA) [cites](#) several of these impacts that affect communities in Delaware:

- Low income and communities of color are more likely to be located in “urban heat islands”—dense urban areas with fewer trees, less green space, more buildings, higher energy use, and more impervious asphalt and concrete.
- Those with limited financial resources are vulnerable to food and water insecurity from rising food and water prices associated with drought and crop loss. Food insecurity is associated with higher risks of chronic illness such as diabetes and hypertension.

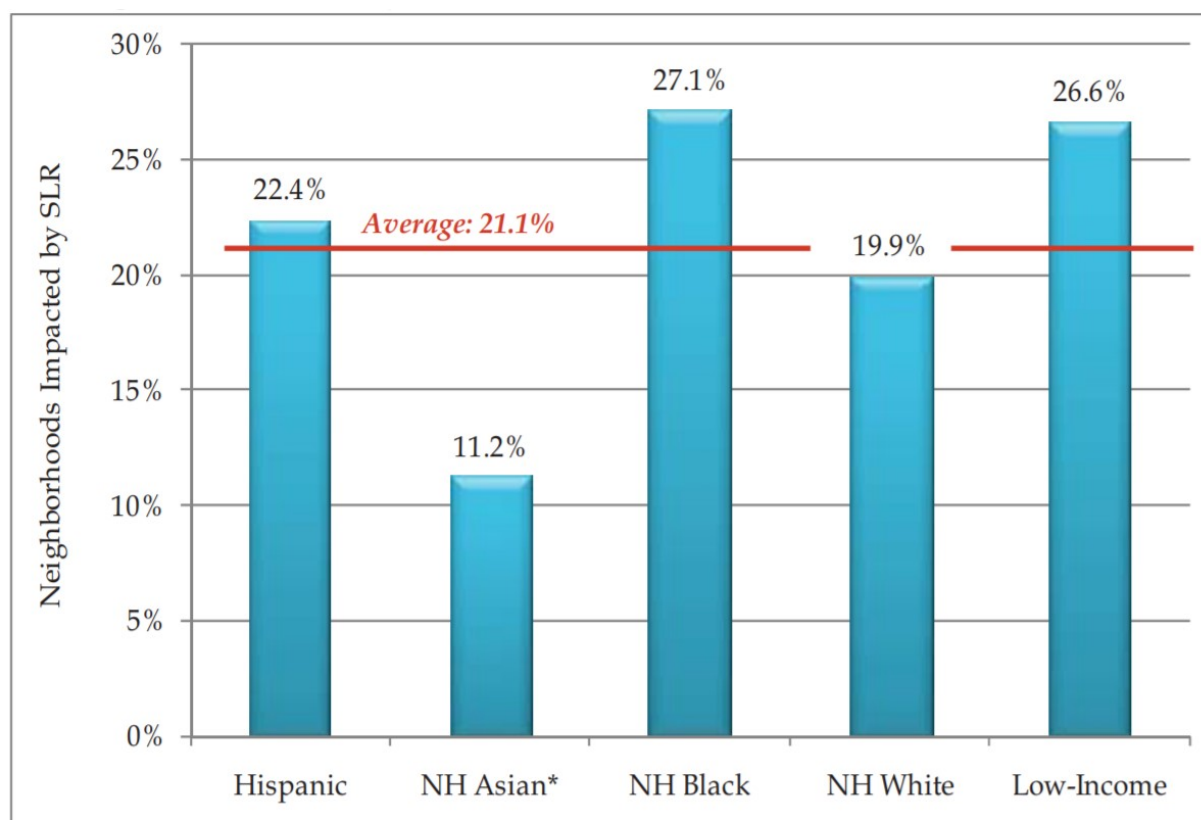
The Delaware Nature Society published a report titled [Climate Justice for Wilmington](#) in 2018, which was a companion piece to [Climate Justice: For a Prosperous & Sustainable Wilmington](#), a report with additional detail about Wilmington's vulnerabilities and possible solutions. The principle of climate justice is similar to environmental justice in that no one should bear disproportionate burdens from climate change.

According to the 2018 Delaware Nature Society report, nearly a quarter of Wilmington's residents live below the poverty level making it difficult to prepare for and respond to Climate Change consequences.

Environmental justice communities already spend a larger proportion of their income on energy costs, and as they are less likely to own their homes, they lack control over energy efficiency of their homes and appliances. These communities are more likely to be negatively impacted by extreme weather events because recovery often requires a majority of their resources to rebuild. Low-income households are also less likely to have disaster insurance and have fewer resources to relocate away from floodplains. In both east and south Wilmington, where poverty rates are as high as 32%, substantial inundation from sea level rise is expected.

Based on social equity studies by WILMAPCO, roughly 21% of census block groups identified as Environmental Justice neighborhoods would be impacted by a 1.5-meter (~5 foot) sea level rise in New Castle County, which is nearly the same as the overall average for the County. However, there are disparities in communities with concentrations of non-Hispanic Black and low-income communities, as

shown in **Figure L-3**. These communities are located along the Delaware River in the northeastern portion of New Castle County.



* NH = Non-Hispanic

Figure L-3: Sea Level Rise Impacts on Racial and Ethnic Concentrations; Source: WILMAPCO

Energy Sources/Emissions Standards

According to the U.S. Energy Information Administration (EIA), Delaware is the smallest energy-producing state. The state consumes nearly 100 times more energy than it produces. Delaware generates the majority of its electricity from natural gas (87% in 2019). In the previous decade, 28% of electricity was produced from natural gas while 59% was produced from coal-fired generation plants. Delaware has set a [renewable portfolio standard](#) requiring Delaware's utilities to derive 40 percent of their energy from renewable sources such as wind and solar by 2035. More details and resources related to renewable energy sources and land use are available at <https://www.nrel.gov/gis/solar.html>.

About 43% of Delaware households rely on natural gas for home heating, 33% use electric heat, about 11% use fuel oil, and nearly 10% use propane, according to the EIA.

Energy policy at all levels is changing the landscape for energy production, and New Castle County will need to make decisions about the facilities needed for new energy sources. Land use policy related to facility siting, resource extraction, energy generation, and distribution infrastructure are key issues which the County will need to be prepared to address as we move into the future.

In 2021, the State of Delaware recently updated state policy to require that all new residential buildings must be zero net energy capable starting in 2025 and new commercial building construction must be zero net energy capable in 2030 and beyond. It also requires that the Delaware Energy Office in consultation with the Green Building Council of the Home Builders Association of Delaware create programs to encourage construction of zero net energy homes. As defined in the [statute](#), "a zero net energy home or

building is defined as a residence or commercial building that, through the use of energy efficient construction, lighting, appliances and on-site renewable energy generation, results in zero net energy consumption from the utility provider. Therefore, a zero net energy capable home must be energy efficient enough that if the home or building owner chooses to add on-site generation, net zero energy consumption could be achieved.”

Several programs are available for residents and businesses in New Castle County to assist in achieving net zero emissions including:

- **Weatherization Assistance Program** - helps households improve home energy efficiency. Eligibility is based on household size and income. Additional information can be found at: <https://dnrec.alpha.delaware.gov/climate-coastal-energy/sustainable-communities/weatherization/>.
- **Energy Efficiency Investment Fund (EEIF)** - helps Delaware businesses, local governments, and nonprofit organizations pay for energy efficient upgrades that lower energy use and costs. Additional information can be found at: <https://dnrec.alpha.delaware.gov/climate-coastal-energy/efficiency/energy-efficiency-investment-fund/>.
- **The Green Energy Program** - provides grant funding for green energy projects to offset the cost of photovoltaic, solar water heating, wind, and geothermal renewable energy technologies. Additional information can be found at: <https://dnrec.alpha.delaware.gov/climate-coastal-energy/renewable/assistance/>.
- **Energize Delaware** - low-interest loans that help businesses including farms, nonprofits, congregations, schools, government, and residents convert to solar or install energy-efficient systems. Additional information can be found at: <https://www.energizedelaware.org>.

Locally, New Castle County is making concrete steps to increase the use of renewable energy. In 2019, the County highlighted efforts to “combat climate change, to improve water quality, to limit sprawl development and to preserve plant and animal ecosystems,” as County Executive Matthew Meyer wrote in an op-ed. The agenda included a variety of issues, with the following related to energy use and climate change:

- Incentives for commercial properties to transition to clean energy sources
- Forest preservation
- Updating stormwater regulations

This op-ed was part of the announcement of the [GreeNCC program](#) to improve the environment and enhance the quality of life in the County. Much of the legislation required to enact these policies have been passed or is under deliberation by County Council, as of mid-2021. Additionally, the County, in 2018, passed [legislation](#) establishing land use standards allowing solar energy systems to be installed in all nonresidential districts as well as the Suburban and Suburban Reserve zoning districts. This allows large scale solar energy systems as well as provisions for residential solar energy systems in the County. Since adopting these provisions, the County has received three applications totaling roughly 550 acres of land allocated to produce solar energy.

In June 2021, the County partnered with Constellation, a leading renewable energy solutions provider, for the purchase of renewable energy for 18 County facilities, including New Castle County’s Public Works headquarters, several pump stations and treatment plants, Rockwood Museum, the Public Safety Building, the New Castle County Government Center, and the Gilliam Building. The County will continue to use energy from the electrical grid and support renewable energy sources by buying renewable energy certificates (RECs) equivalent to all of the use for those facilities. These purchases will not only reduce the County’s greenhouse gas emissions, but it will also reduce operating costs by roughly \$77,000 annually through the end of the contract in 2024.

The County is implementing other ways to make New Castle County greener, such as: installing five public access electric vehicle (EV) charging stations, purchasing five Chevrolet Bolts in 2020 as part of an

electric vehicle pilot program with a plan to add another five EVs to the fleet, and incorporating a 3.25kW, 350 square foot solar array on the rooftop of the new Appoquinimink Library and solar-powered site lighting in the parking lot. New Castle County is additionally the first county or municipality in Delaware to implement EV-ready provisions in its building codes, demonstrating a commitment to sustainability. Moving forward, the county should consider phased conversion of its passenger and heavy-duty fleets to electric vehicles and charging infrastructure for those vehicles on county property, as well as upgrading landscaping equipment to electric.

Emergency Preparedness/Hazard Mitigation

Element Defined

New Castle County is vulnerable to a wide range of natural hazards including floods, tornadoes, tropical storms, hurricanes, winter storms, and earthquakes. The County is also vulnerable to human-caused hazards, such as hazardous material releases or spills and technological accidents or deliberate acts of terrorism. All of these hazards threaten the safety of our residents, damage property, disrupt the economy, degrade our natural ecosystems, and threaten our overall quality of life. While not all of these hazards are preventable, risks must be mitigated and prepared for.

Emergency preparedness and hazard mitigation are overarching issues that involve emergency service providers, infrastructure, communication, and land use planning. New Castle County coordinates teams from across County government to work together to promote the health, safety, and welfare of our community members.

From the Community

“New Castle County Council works with State Council to identify hazard mitigation actions/tasks that can be enacted. The plan is reviewed in coordination with comprehensive plans from the County and municipalities. It looks at those plans and integrates into the Hazard Mitigation Plan.” – Dave Carpenter, Jr., Coordinator of Emergency Services, New Castle County

“Development plans often greatly exceed the amount of parking required, and cumulatively this causes problems for stormwater and contributes to flood hazards due to more impervious area.” – Marc Cote, Director of Planning, DelDOT

NCC Today

Existing NCC Emergency Preparedness Plans & Measures

The New Castle County Office of Emergency Management manages all activities related to preparing County officials and the public for natural and technological disasters. The office employs the concept of comprehensive emergency management, addressing all types of hazards and relying on a partnership between all levels of government, private industry, community organizations, and the general public. The Office of Emergency Management operates under the four phases of Emergency Management: mitigation, preparedness, response, and recovery. Mitigation activities are undertaken to eliminate or reduce the chance of an occurrence or the effects of a disaster. Preparedness activities include developing plans to enhance response capabilities and conducting exercises to assess response efficiencies. Response activities are designed to provide the public with emergency assistance. Recovery activities are performed to return the community to normal or near normal through relief operations.

To best prepare all County residents, property owners, businesses, farmers, and government and community resources, the Office of Emergency Management develops and regularly updates several [plans and programs](#):

Comprehensive Emergency Management Plan (CEMP)

The Comprehensive Emergency Management Plan (CEMP), generally referred to as the Emergency Operations Plan, outlines the county's roles and responsibilities during any natural, technological, or man-made disaster and major emergencies. This plan pertains specifically to County Government operations and support agency disaster operations.

Threat Incident Management Plan

This plan notifies, evacuates, and accounts for the employees and public that occupy the 47 county-maintained facilities. County employees comprise the evacuation teams in the six major facilities and participate in annual exercises to test the plan. This plan is continually revised and distributed to 40 department/office representatives.

Hazardous Materials Response Plan

This plan outlines the efforts of the fire service, Department of Natural Resources and Environmental Control, emergency medical services, police jurisdictions, and non-governmental agencies to plan for and respond to chemical emergencies in New Castle County. This plan is continually updated and revised in cooperation with the New Castle County Local Emergency Planning Committee (LEPC).

Delaware City Community Awareness & Emergency Response (CAER) Plan

This plan outlines the responsibilities of the chemical facilities (located on Route 9 near Delaware City) during an incident at one of the eight plants in that complex. It also delineates responsibilities for outside response agencies.

Weather Monitoring

The Office of Emergency Management monitors approximately 30 weather storms threatening New Castle County annually. Its new weather satellite computer provides up-to-date forecast and radar maps.

State Radiological Emergency Preparedness (REP) Program

The Office of Emergency Management is currently assisting in the update of the Delaware Radiological Emergency Response Plan. New Castle County participated in the REP Full-Scale Federally Evaluated Exercise in May 2008 with no deficiencies or issues and the 2010 Plume / Ingestion Pathway federally graded exercise with no deficiencies or issues.

Delaware Emergency Operations Plan (DEOP)

The New Castle County Office of Emergency Management contributes and supports the DEOP planning process in cooperation with the Delaware Emergency Management Agency (DEMA).

State of Delaware Hazard Mitigation Plan

New Castle County Office of Emergency Management assisted with collecting data from 12 municipalities and eight County departments for a [statewide plan](#) identifying mitigation projects to help reduce the effects of disasters in the county.

National Incident Management System (NIMS) Compliance

The New Castle County Office of Emergency Management ensures that the County is National Incident Management System (NIMS) compliant. This is accomplished through the delivery of NIMS and Incident Command System (ICS) training to hundreds of county emergency responders, development and participation in numerous exercises, reliance on ICS to manage incidents, and continued maintenance and management of emergency management systems and equipment.

New Castle County Hazard Mitigation Plan

The New Castle County [Multi-Jurisdictional All-Hazard Mitigation Plan](#) is a mandatory plan that was first developed by New Castle County in 2005. The plan assessed the potential hazards which could occur within the County and detailed a list of "mitigation actions" that could be taken to prepare for these possible hazards. The plan is reviewed and updated every five years, including updates to the risk assessment of potential hazards and the list of mitigation actions, documentation of any progress that has been made towards completing these actions, and documentation of any new actions that should be taken and are not in the plan. The latest plan revision was approved by FEMA in 2020. The overall risk ranking for New Castle County is shown in *Figure L-4* (from the 2020 AHMP).

Several of these top hazards, as identified in the AHMP, are discussed in detail below.

Hazard	Rank
Flood	1
Haz Mat	2
Coastal Wind	3
Winter Storm	4
Tornado	5
Dam/Levee Failure	6
Public Health Incident	7
Earthquake	8
Drought	9
Hail	10

Figure L-4: New Castle County Risk Ranking

Existing Floodplains and Concerns

Flooding is a year-round and statewide threat in Delaware. Just a few inches of rainfall potentially results in significant damage to homes and businesses, and coastal areas are at risk of flooding from storm surge or tidal flooding during storms.

The University of Delaware Water Resources Center (WRC) tracks floodplains and related topics and provides information and resources to the public. According to the WRC, Delaware floods tend to originate in two areas: along the Piedmont streams in New Castle County and from the tidal bay and the ocean. The WRC states that 16% or 67 square miles of New Castle County is within the 100-year floodplain (or 1% annual storm chance) area. This includes 128 road miles and 2,431 structures. Most of these roads and structures are in the Christina River watershed. Flooding also occurs outside of the mapped 100-year floodplain. Pluvial or urban flooding caused by intense precipitation and insufficient drainage is an increasing risk.

The Delaware Geological Survey (DGS), in cooperation with the U.S. Geological Survey (USGS), has been [operating and maintaining continuous-record stream and tide gages](#) throughout Delaware for many years. Among other things, the data collected by these gages are used for flood forecasting, warning, and response. This includes early warning systems which are used by the DGS, Delaware Emergency Management Agency, county emergency management agencies, most municipalities, and the National Weather Service.

The DNREC [Floodplain Management Program](#) works to preserve public health, safety, and well-being and protect property by reducing flood hazard risks statewide. To accomplish this mission, the program works

with agencies across all levels of government as well as the public to support risk-informed decision making.

The program works to help communities enforce minimum floodplain management standards, in keeping with federal regulations. It promotes adoption of higher standards to reduce the risk of damage caused by flooding, to protect life and property and to ensure that all development in the Special Flood Hazard Area (SFHA) is reasonably safe from flooding.

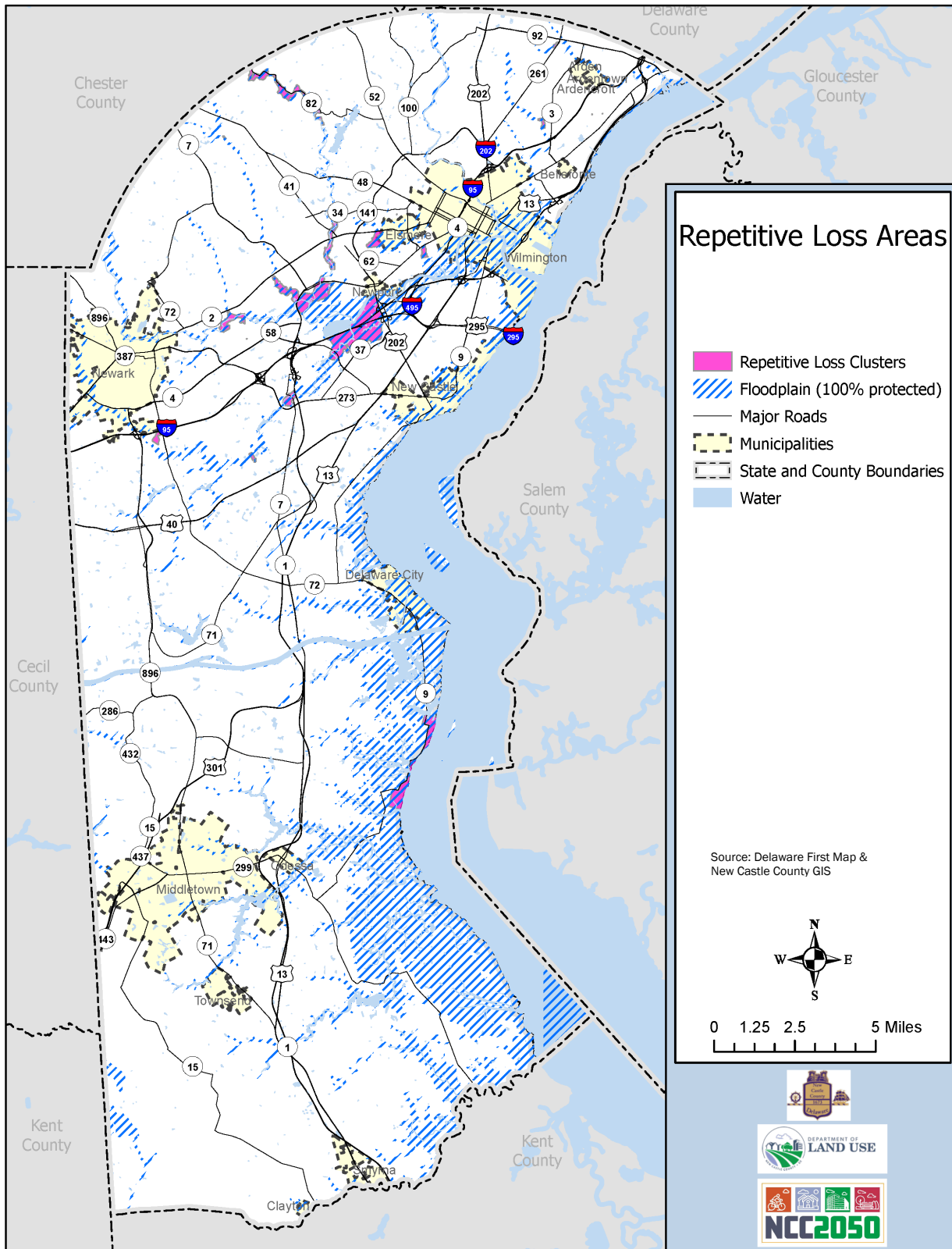
The Floodplain Management Program is also the [state coordinating agency](#) of the National Flood Insurance Program (NFIP) assisting Delaware's local jurisdictions and counties with the administration of their floodplain management ordinance requirements. The [National Flood Insurance Program](#) is administered by the Federal Emergency Management Agency (FEMA) which identifies and maps areas that are subject to flooding under certain conditions, establishes minimum criteria for development in identified flood prone areas, and underwrites flood insurance coverage.

FEMA works, partially through the NFIP, to reduce future flood damage and to break the cycle of repetitive flood damage by encouraging communities to adopt and enforce floodplain management regulations and by providing affordable insurance to property owners, renters, and businesses. FEMA maintains flood hazard mapping to define areas with the highest risk of flooding. These maps are used to help mortgage lenders and insurance companies determine requirements and help communities to understand flood risk and make informed decisions to manage flood risks.

In early 2020, DNREC coordinated with New Castle County and FEMA to revise the flood maps along more than 96 miles of non-tidal streams in New Castle County, mainly in the Brandywine-Christina watershed, according to [an article](#) in Delaware Public Media. The previous map was based on studies and data up to 30 years old.

This Comprehensive Plan includes a strategy to achieve a National Flood Insurance Program Community Rating System Class 4 Rating. The Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management practices that exceed the minimum requirements of FEMA's National Flood Insurance Program (NFIP). The CRS uses a class rating system that is similar to fire insurance rating to determine flood insurance premium reductions for residents. CRS classes are rated from 9 to 1. As a community engages in additional mitigation activities, its residents become eligible for increased NFIP policy premium discounts. Each CRS Class improvement produces a 5% greater discount on flood insurance premiums for properties in the Special Flood Hazard Area (SFHA). New Castle County currently has a rating of 6, which amounts to a 20% flood insurance discount. One important step that the county should take to improve our CRS rating is to address repetitive loss areas (See *Map L-2*). The clusters depicted in the properties identified in the 2017 application for the National Flood Insurance Program Community Rating System.

Map L-2: Repetitive Loss Areas



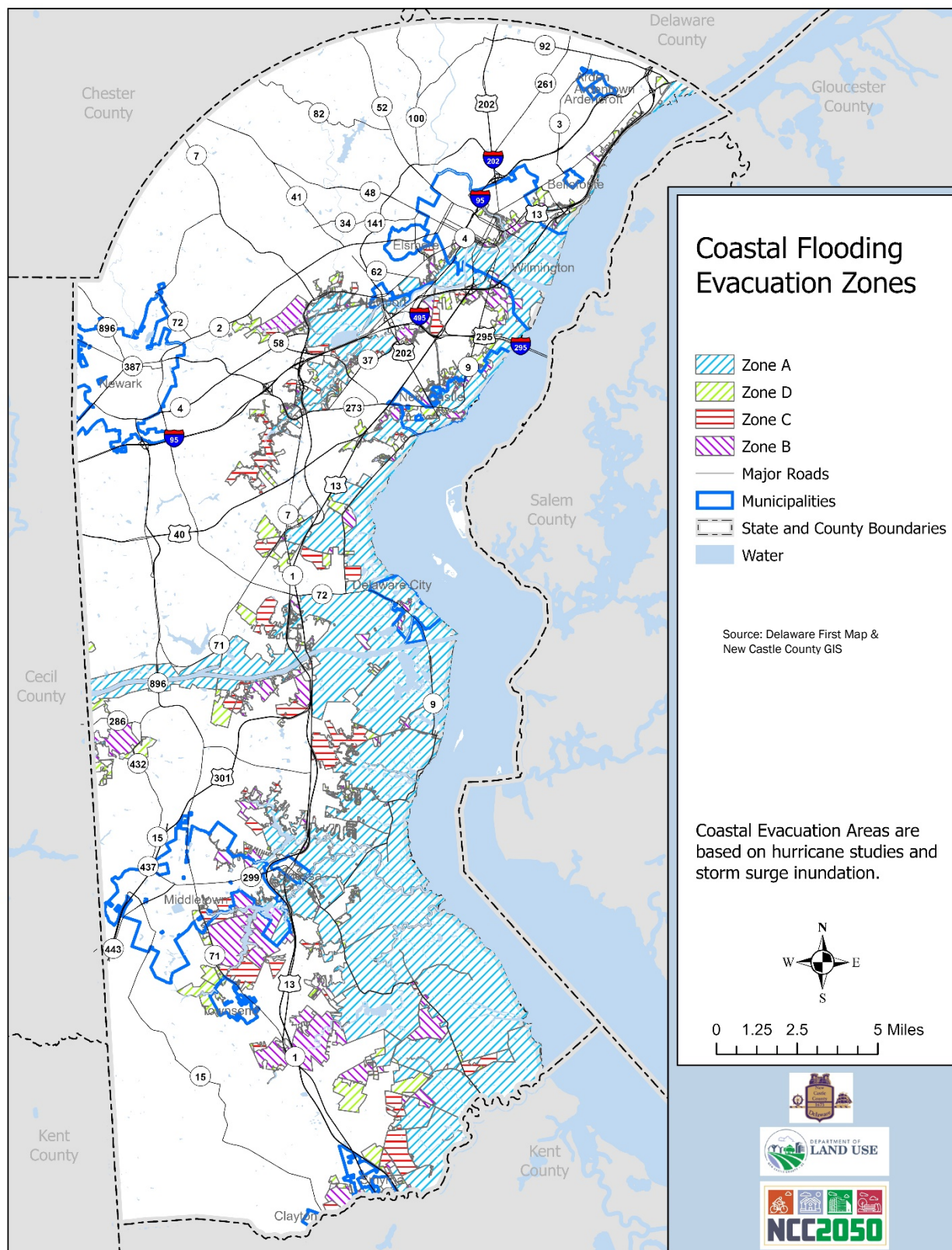
New Castle County experiences poor drainage, failing roadway and drainage infrastructure, and is home to considerable legacy development, including structures located in floodplains. A goal of this Comprehensive Plan is to ensure that our infrastructure and economic and social systems are resilient in all of our communities. This includes reducing the amount of infrastructure in areas prone to flooding or at risk of flooding and sea level rise.

In recent memory, remnants of Hurricane Ida (2021), Hurricane Sandy (2012), Hurricane Floyd (1999), and Tropical Storm Henri (2003) caused significant inland and tidal flooding issues. Storms Ida¹ and Henri produced record flooding impacts in the county with much of the water falling in the upper portions of the watershed in Pennsylvania and impacting downstream communities. Storm Ida occurred in September 2021 and the storm gauge in Chadds Ford recorded flood levels along the Brandywine Creek three feet higher than the previous record. After significant flooding from Hurricane Floyd in 1999 and Tropical Storm Henri in 2003, New Castle County purchased the land in the Glenville area, near Stanton, from the residents and demolished all structures in the flood prone areas.

When these extreme storms approach the region, occasionally evacuation orders are issued by County or state officials. **Map L-3** shows the identified Coastal Flooding Evacuation Zones, which are most at risk of flooding as a result of these types of storms.

¹ National Weather Service/National Oceanic and Atmospheric Agency. Accessed 9/20/21 at: <https://water.weather.gov/ahps2/river.php?wfo=phi&wfoid=18692&riverid=204370&pt%5B%5D=143986&allpoints=143986%2C144664%2C145966%2C147524%2C147525%2C145967&data%5B%5D=crests>

Map L-3: Coastal Flooding Evacuation Zones



Stormwater Management

One of the key functions of the New Castle County Department of Public Works is to control erosion and flooding within the county. The Department of Public Works maintains 60 stormwater management

facilities, reviews development proposals for compliance with the drainage code, and constructs new stormwater systems. Protection of the County's investment in existing commercial, industrial, and residential stormwater facilities is an ongoing effort for the department. In recent years, a major rehabilitation program was developed to address the County's long-term stormwater needs. (See Utilities, Water, and Sewer Element)

Storm Surge

As noted in the County All-Hazard Mitigation Plan, one of the main causes of coastal flooding is storm surge from major storms, like hurricanes or nor'easters. A storm surge is a large dome of water 50 to 100 miles wide that can rise anywhere from four or five feet up to 20 feet depending on the type and size of a storm. This surge of high water combined with waves driven by high winds can devastate coastal regions, causing severe beach erosion and property damage.

In Delaware, nor'easters are much more common than hurricanes. The National Weather Service characterizes nor'easters as large storms bringing heavy rain or snow, gale force winds, rough seas, and coastal flooding. . Because they tend to be slow-moving, Nor'easters generally impact an area over several days and multiple tide cycles, resulting in cumulative damages from repetitive flooding, wind, and erosion. The National Weather services also calls nor'easters 'Deceptive Killers', as most casualties of the storm are caused by indirect effects, including crashes on icy roads or exposure to cold.

New Castle County has constructed protections and buffers against storm surge, including wetlands for wave attenuation, sea walls, and dikes. These measures are important to preserve and allow for natural wetland migration, in combination with man-made solutions. See more details in the [Conservation element](#).

Hazardous Materials

Hazardous materials (HazMat) incidents largely result from fixed facilities or when the materials are transported via air, rail, roadways, or waterways. According to the County All-Hazards Mitigation Plan, hazardous substances are categorized as toxic, corrosive, flammable, irritant, or explosive. Hazardous material incidents generally affect a localized area, and the proper use of planning and zoning should minimize the area of impact if an incident does occur. These incidents refer to occasions when solid, liquid, and/or gaseous contaminants are released from a fixed or mobile container, which often are accidental, resulting from external natural events like a severe storm or earthquake, or intentional, as with a terrorist attack, and they vary in intensity and concern based on the amount and type of contaminant released. Secondary concerns result after the initial incident if contaminants are carried outside the affected area by persons, vehicles, water, wind, or even wildlife.

Despite increasing safeguards and regulations, potentially hazardous materials are increasingly being used in commercial, agricultural, and domestic activities. This situation is made worse by the density of people and hazardous materials in some areas.

Most hazardous materials incidents in New Castle County are reported through local 911 centers. When hazardous materials are involved, local fire departments and DNREC respond. DNREC responders, in coordination with the fire chief, work to remediate the situation. Based on the complexity of the situation, the State Emergency Response Team (SERT) may also be activated to assist.

The County plan includes mitigation actions to work to limit exposure to hazardous materials risks. Some actions should be applied at the County level to address procedures and policies related to these risks, and others are targeted to specific areas or municipalities, roadways, railways. Most of these actions are focused on alert or notification systems and response training to limit the impacts of hazmat incidents.

Emergency Response and Mitigation

The County All-Hazards Mitigation Plan includes prioritized lists of hazard mitigation projects. Some of those potential projects related to storm surge and flooding include:

- Coordination with local municipalities including the City of New Castle, Town of Newport, Town of Elsmere, City of Newark, and the City of Wilmington to conduct a detailed flood vulnerability study to focus on flooding from severe storms and sea level rise
- Construction of flood barriers and other improvements
- Updates to local Flood Damage Prevention Ordinances
- Education initiatives to help property owners protect their property from storm surge and flood damage
- Stormwater infrastructure improvements, such as channel and culvert improvements

The state [All-Hazards Mitigation Plan](#) includes a Vulnerability Assessment which breaks down the interaction between population and development density and hazard risk. The plan also outlines recommended mitigation actions at the state and local levels. It recognizes that the most effective hazard mitigation policies begin at the local level to address specific hazards and concerns of communities and are coordinated across all levels of government. County land use policies are part of a range of policies at the federal, state, and local levels that work to prevent residential exposure to these hazards in high-risk area. The State's plan creates a framework for analyzing overall vulnerability, analyzing and incorporating local risk assessments into the statewide plan, and drawing state-level conclusions.

Related Goals, Objectives, and Strategies

Future planning must consider the potential impacts and effects of climate change to ensure a resilient New Castle County. All elements of this plan, from transportation and land use to economic development and housing, must be approached with the intent to balance the effects of climate change while promoting a vibrant economy and supporting our communities. We need to implement the best practices on how to be resilient and protect the well-being of our people and our infrastructure under these changing conditions. New Castle County has existing emergency preparedness and hazard mitigation plans and measures to promote the health, safety, and welfare of our communities, and the implementation of these measures involves the coordination of emergency response teams from across the county.

Climate change mitigation is an important consideration for New Castle County in future planning and policy development. The following goals, objectives, and strategies seek to form local steps in alignment with the Delaware Climate Action Plan (2021) with emphasis on a built environment that reduces greenhouse gas emissions and protects our people and critical infrastructure from the impacts of climate change.

Our strategies will help reduce greenhouse gases and other pollution sources to reduce and mitigate our impact on the environment and to protect our people and critical infrastructure and resources from the impacts of climate change, extreme weather, hazardous material releases, technological incidents, or deliberate acts of terrorism.

13. Goal: Environmental protection, climate change mitigation, and adaptation are important considerations in all county policies. Our community's collective built environment—infrastructure, transportation, nature, and development patterns—are designed in a way that limits greenhouse gas emissions and protects our people and critical infrastructure from impacts of climate change.

13.1. Objective: Reduce Greenhouse Gas emissions.

13.1.1. Strategy: Increase energy efficient and green building practices in all building types

13.1.2. Strategy: Shift from current to future energy needs, leveraging opportunities to embrace clean energy and efficiency

- 13.1.3. Strategy: Work with transportation sector to foster land use/transportation integration that enables lower VMT, lower transportation emissions, etc.
- 13.1.4. Strategy: Reduce pollution and exposure to pollution/toxins by planning, analysis, and strengthening County regulations
- 13.1.5. Strategy: Encourage and incentivize the use of solar panels on all new construction
- 13.2. Objective: Strengthen/improve resiliency in the face of climate change threats through changes to the built environment (infrastructure, transportation, etc.) so to minimize risk and impacts to all people and communities.
 - 13.2.1. Strategy: Integrate resiliency and hazard mitigation planning with public facilities plans/implementation such as parks and open space
 - 13.2.2. Strategy: Adjust zoning and design standards to make New Castle County resilient against disruptions such as climate change and sea level rise
 - 13.2.3. Strategy: Perform analysis of the criteria and prerequisites as well as develop a plan to achieve a National Flood Insurance Program Community Rating System Class 4 Rating.
 - 13.2.4. Strategy: Require that new residential and nonresidential developments account for sea level rise and other potential threats.
 - 13.2.5. Strategy: Address climate change and its impacts through the network of protected lands/open space/parks
 - 13.2.6. Strategy: Use open space design, green infrastructure, and other best practices in the design and use of space
 - 13.2.7. Strategy: Increase carbon sequestration and storage
 - 13.2.8. Strategy: Restore and protect natural habitats, sensitive lands, and native species as part of carbon sequestration strategy
 - 13.2.9. Strategy: Encourage property owners to preserve natural, scientific, educational, aesthetic, recreational and cultural values as Nature Preserves in the State's Natural Areas Preservation Program (<https://dnrec.alpha.delaware.gov/parks/natural-areas/>)
- 14. Goal: Pursue a net zero built environment by following emerging technologies, and alternative regional and individual energy sources.
 - 14.1. Objective: Increase the proportion of energy efficient building stock and conservation infrastructure in the building stock.
 - 14.1.1. Strategy: County government leads by example and reviews County operations (e.g. procurement, public space management, buildings, other capital, etc.) to reduce greenhouse gas emissions, including:
 1. Converting County passenger and heavy-duty vehicle fleet to electric
 2. Conducting energy audits at all county-owned properties and implementing energy upgrades
 3. Establish work policies that support reduced transportation congestion/emissions, such as flex schedule and remote work.
 4. Deploying renewable energy at county-owned properties
 5. Upgrading county land maintenance equipment (mowers, tractors, etc.) to electric
 6. Converting large areas of mowed space at county properties (including offices and parks) to meadows, pollinator gardens, and forests

- 14.1.2. Strategy: Hire a sustainability manager to direct these activities and track progress
- 14.1.3. Strategy: Address flood risks associated with climate change by implementing environmental and land use policies
- 14.2. Objective: Reduce pollution from Transportation sources.
 - 14.2.1. Strategy: Lead by example with investments in low/no emissions technology in government (e.g. Electric vehicles, charging stations, etc.)
 - 14.2.2. Strategy: Collaborate with partners and other agencies to achieve reduction in Vehicle Miles Traveled (VMT) by vehicles with internal combustion engines.
 - 14.2.3 Strategy: Evaluate potential county code revisions to encourage school districts to implement low/no mow practices in unused areas of their property.

See Also:

Conservation Element, Goal 2

Mobility Element, Goal 8 & 9

Environmental and Social Justice, Goal 15



ELEMENT M

Environmental & Social Justice

Courtesy of GWCVB

M. Environmental & Social Justice Element

Element Defined

Governmental action and in some cases, inaction have played a role in creating and perpetuating discrimination and inequities in minority and lower-income communities. Historically, zoning, which is intended to separate incompatible land uses, has also been used to exclude certain population groups from single-family neighborhoods and to exclude multifamily rental housing from neighborhoods with better access to jobs, transit, and amenities. The 1910 Baltimore zoning ordinance, widely used as a template by early 20th century planners stands as a stark example of a racially discriminatory zoning ordinance.¹ While little evidence exists that New Castle County actively encouraged or perpetuated such policies or regulations, historically our inaction has nonetheless resulted in disparity.

The environmental justice movement was started primarily by people of color and grew from a recognition that the poor and people of color are those who most often live in or near America's most polluted environments.² The Federal Government began analyzing environmental justice in earnest in 1994, with the signing of Executive Order 12898, which instructs all federal agencies to "collect, maintain and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin or income." In 2010, the Environmental Protection Agency began development on EJSCREEN, which is an index reflecting 11 environmental indicators and demographic risk factors:

1. National Scale Air Toxics Assessment Air Toxics Cancer Risk
2. National Scale Air Toxics Assessment Respiratory Hazard Index
3. National Scale Air Toxics Assessment Diesel PM (DPM)
4. Particulate Matter (PM2.5)
5. Ozone
6. Lead Paint Indicator
7. Traffic Proximity and Volume
8. Proximity to Risk Management Plan Sites
9. Proximity to Treatment Storage and Disposal Facilities
10. Proximity to National Priorities List Sites
11. Wastewater Discharge Indicator

The EJSCREEN was peer reviewed, published in 2014 and is updated on an annual basis.³ Appendix G includes the 2020 EJSCREEN indicators and updated maps are found at <https://ejscreen.epa.gov/mapper/>. The EPA uses EJSCREEN as a preliminary step when considering environmental justice in certain situations and to screen for areas that may be candidates for additional consideration, analysis or outreach as EPA develops programs, policies and activities that may affect

¹ Planning for Equity Policy Guide, American Planning Association (2019), p.3

² Ibid., p.8

³ <https://www.epa.gov/ejscreen/how-was-ejscreen-developed>

communities.⁴ While EJSCREEN serves as an important analytical tool, real change also requires strong policy and leadership.

Recent events across the nation, including the death of George Floyd and subsequent protests, have highlighted inequities faced by persons of color or those of lesser means on several levels. As a County we need to strive for true environmental and social justice bringing “fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.”⁵

Acknowledging and examining these complex issues in the Comprehensive Plan is one step in working toward solutions. Achieving environmental and social justice will require broad, collaborative efforts from all levels of government, community groups, and residents. It is our obligation, as a county, to set policies and enact regulations that support and protect the health, safety, and welfare of all residents in the county, including protection from environmental and health hazards, access to services and infrastructure (schools, parks, etc.) and the ability to participate meaningfully in the public decision-making process.

This element of the Comprehensive Plan identifies communities facing inadequate access to services, transportation, infrastructure, housing, health, and other resources, allowing us to set policies that improve their physical health, well-being, and overall quality of life. Strategic investments in these communities serve as preventative measures decreasing rates of diabetes, asthma, heart disease and mental health concerns, while providing the necessary mobility and accessibility to allow all residents to thrive.

“Environmental justice and good land-use planning are inseparably connected...Plans and the zoning regulations that implement them ideally should segregate incompatible land uses, such as separating multifamily housing from industries that use and emit toxic substances. Good planning evaluates all of the likely significant impacts of various land uses on the human and natural environment, including cumulative impacts of concentrations of related land uses. Good plans provide for the social and physical needs of the people in the community, including public transportation, parks and open space, adequate facilities for public utilities, community centers, and the like. Good planning preserves and protects existing neighborhoods, with their heritages, social networks, and shared physical environments.”⁶

⁴ <https://www.epa.gov/ejscreen/how-does-epa-use-ejscreen>

⁵ Environmental Justice, EPA: <https://www.epa.gov/environmentaljustice>

⁶ Fair and Healthy Land Use: Environmental Justice and Planning, Craig Anthony Arnold, American Planning Association, Planning Advisory Service Report Number 549/550, 2007

What We Heard

The NCC2050 process provided an opportunity for the community to discuss environmental and social justice.

“We need to protect the health and quality of life for people who live in the county but also economic development. Social justice comes down to the choice that people have on where they are able to live...We need to have good paying jobs, so the County needs to work towards a long-term goal of economic development without the tradeoff of the health and safety of communities.” – Willie Scott, NCC Resident

“It's not just equal access but an effort should be made to make sure the most vulnerable disadvantaged communities who are normally left out of the decision making are included.” – Public Participant, NCC2050 Deep Dive Session, 5/5/2021

“Calling out problems is not a solution in itself, but identifying problems is a necessary first step. Coupling those challenges with policy remedies would be the real solution, but we need to set priorities first and justify that in a transparent, data- and history-driven way.”

– Public Participant, NCC2050 Deep Dive Session, 5/5/2021

New Castle County Today

County Population and Demographics

According to the 2020 Decennial Census Redistricting File, the total population in New Castle County is roughly 570,719, of which 55% are white, 24% are Black/African American, 6% are Asian, and the remaining 15% are another race or combination of races. **Figure M-1** shows demographics changes New Castle County has seen between 2000 and 2020 regarding race:

New Castle Hundred (CCD)	Population	White	Black	American Indian	Asian	Islanders and Other Pac	Other	Two Plus Races
Brandywine	2,577	-9,400	3,591	104	3,207	10	1,380	3,685
Glasgow	10,309	-2,616	5,791	106	3,567	-6	934	2,594
Lower Christiana	857	-8,108	1,801	185	184	17	3,321	3,457
Middletown-Odessa	38,993	17,668	12,525	128	2,712	17	1,402	4,541
Newark	591	-12,621	5,405	58	2,487	-120	1,151	4,170
New Castle	8,438	-18,206	12,614	426	2,201	6	5,837	5,568
Piedmont	1,580	-1,995	334	9	1,525	7	233	1,467
Pike Creek	477	-7,082	956	53	2,020	-9	1,413	3,126
Red Lion	4,456	943	1,861	-6	754	5	175	716
Upper Christiana	3,942	-4,577	2,853	30	3,040	6	756	1,834
Wilmington	-1,766	-5,464	-965	90	321	23	842	3,387
Total	70,454	-51,458	46,766	1,183	22,018	-44	17,444	34,545

Figure M-1 New Castle County Demographic Changes Between 2000 and 2020

Achieving equity requires consideration of variables in addition to race, including: age, income, and disability access, among other demographic information. The median age in New Castle County is 39, slightly younger than the median age in Delaware which is 41. Fifteen percent (15%) of the population is

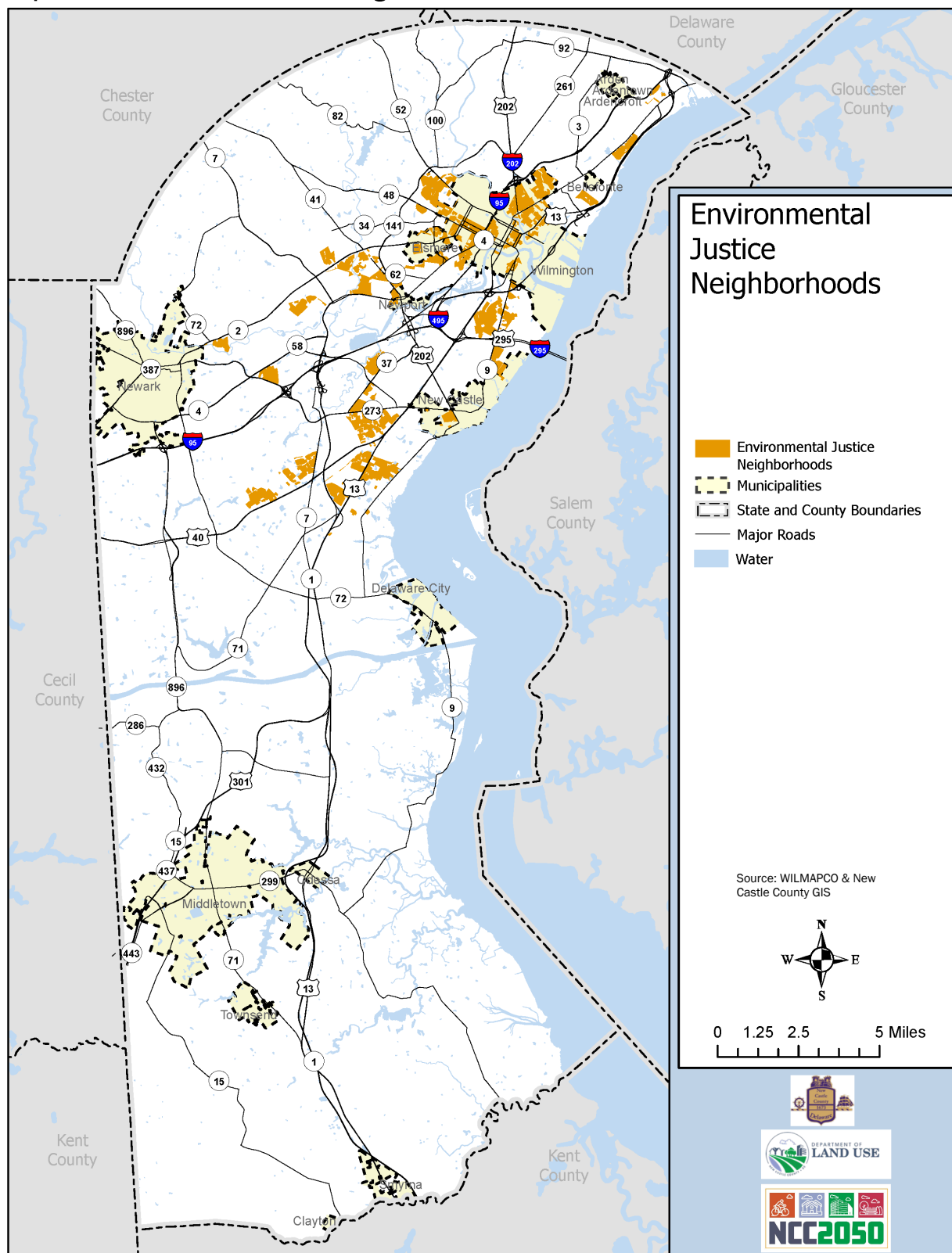
over the age of 65, compared to 19.5% in Delaware. It is expected that the population over the age of 65 will continue to grow as ‘baby boomers’ (born between 1946 and 1964) continue to age and live longer.

It is important that our future planning efforts consider county residents with various disabilities. More than 12% of our county population is living with a disability, according to the 2019 American Community Survey. These disabilities include hearing, vision and cognitive difficulties as well as physical/ambulatory and self-care and independent living difficulties.

Environmental Justice neighborhoods⁷ were identified by WILMAPCO (See **Map M-1**) based on race, poverty, affordable housing, and school feeder data are in northern New Castle County.

⁷ Environmental justice (EJ) communities refer to those with high percentages of ethnic and racial minority populations or low-income levels. Much of the data included in this element is provided by WILMAPCO

Map M-1 Environmental Justice Neighborhoods



Income and Poverty

According to the 2019 ACS, the median annual household income in New Castle County is \$73,892, more than \$10,000 higher than the median income for the United States (\$62,843) and slightly higher than the median income in Delaware (\$70,176). The poverty rate in New Castle County is 11.4%, almost identical to the rate in Delaware (11.3%) and slightly lower than the 12.3% across the United States.

When comparing income and demographics, Hispanic and Black/African American populations show the lowest median income for adults with bachelor's degrees (*Figure M-2*). When measuring unemployment, Non-Whites have historically had a higher unemployment rate than Whites, although the 2019 data show that the gap is significantly smaller than it was in past decades (*Figure M-3*). Median income for both groups is below \$50,000 per year, well below the county-wide median income level. White individuals have a median income very near the statewide average while the median income for Asian individuals is well above the average at \$88,000 per year. When poverty levels are mapped (see *Map M-2*), it is evident that in most cases they coincide with the EJ neighborhoods depicted in *Map M-1*. Blacks/African Americans represent the highest percent of the population below the poverty level in New Castle County (*Figure M-4*).

Median Annual Household Income and
% of those >25 Years w/ a Bachelor's Degree or Better
by Ethnic/Racial Group in the WILMAPCO Region, 2012-2016 ACS⁶



Figure M-2: Median Annual Household Income and Percentage of Those >25 years with a Bachelor's Degree or Higher; Source: WILMAPCO

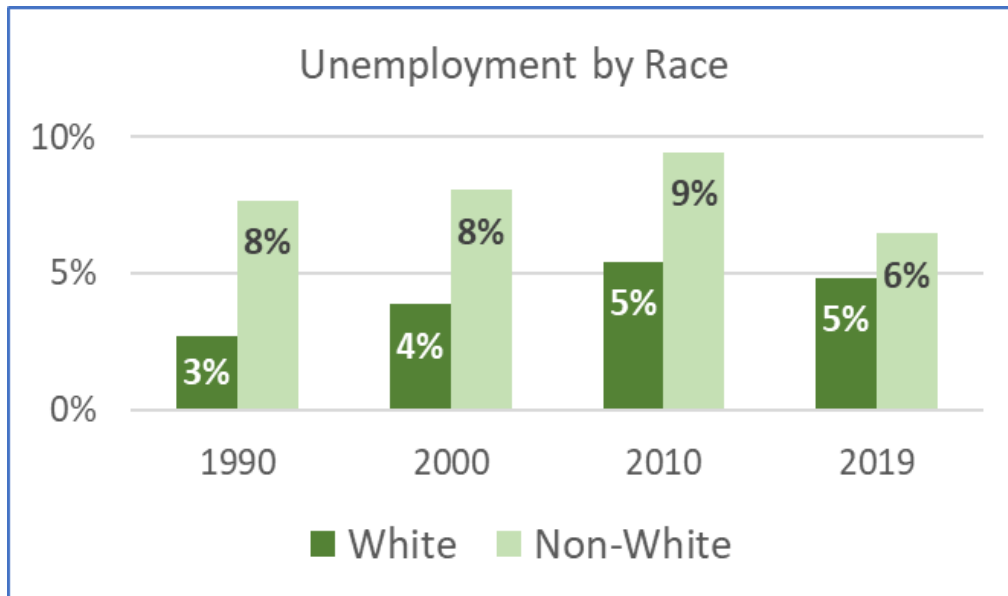


Figure M-3: Unemployment by Race
(Source: 2019 American Community Survey, US Census Bureau)

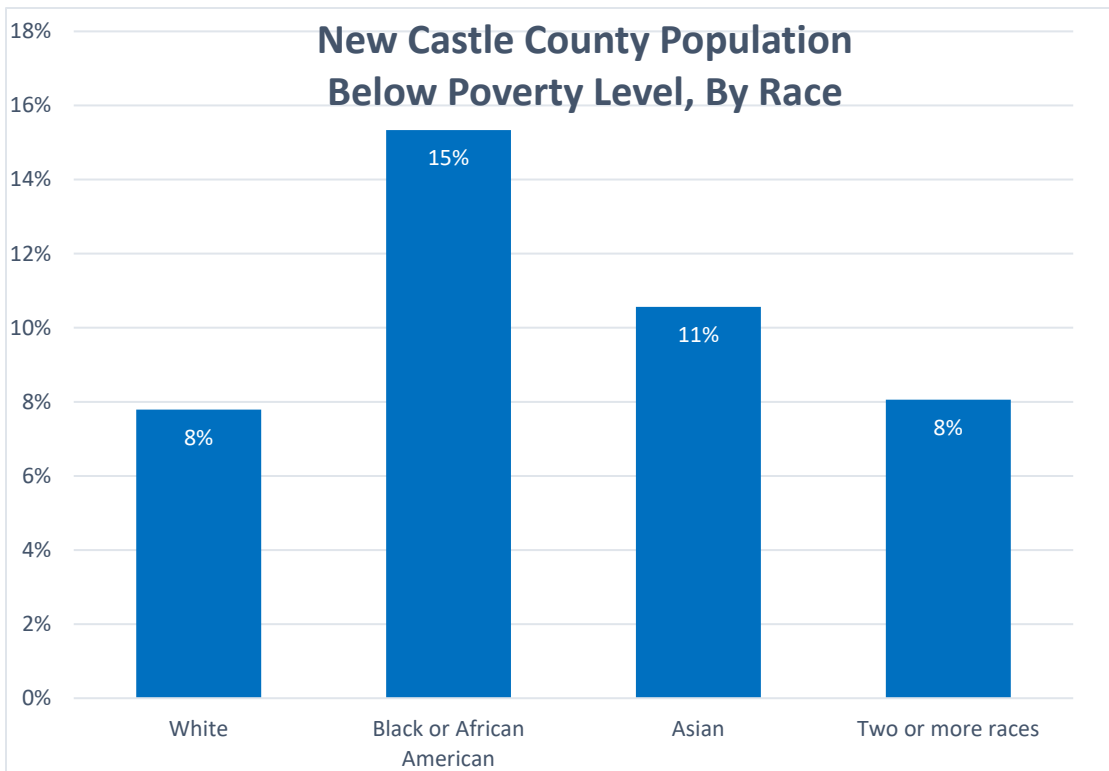
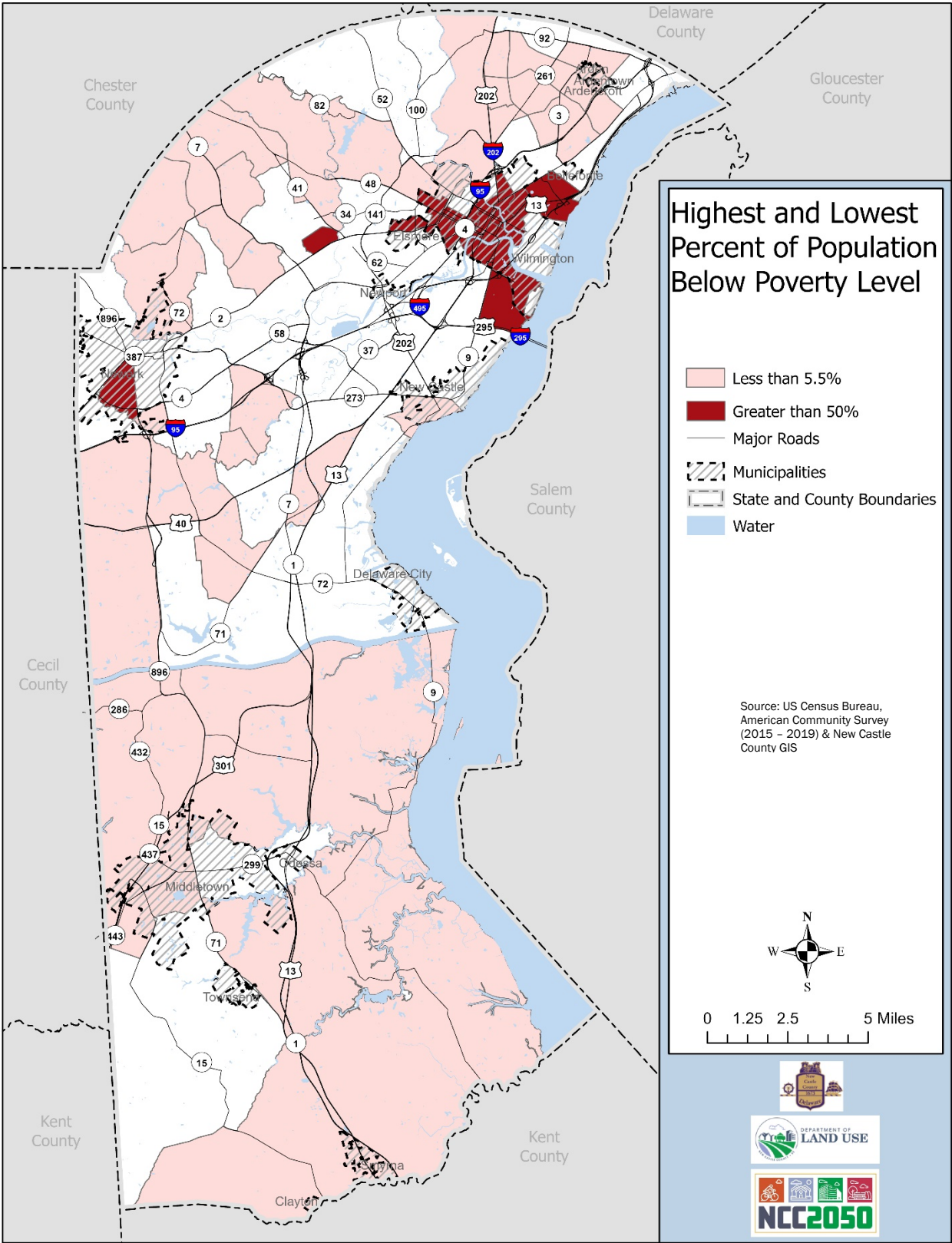


Figure M-3: New Castle County Population Below Poverty Level by Race
(Source: 2019 American Community Survey, US Census Bureau)

Map M-2: Highest and Lowest Percent of Population Below Poverty Level



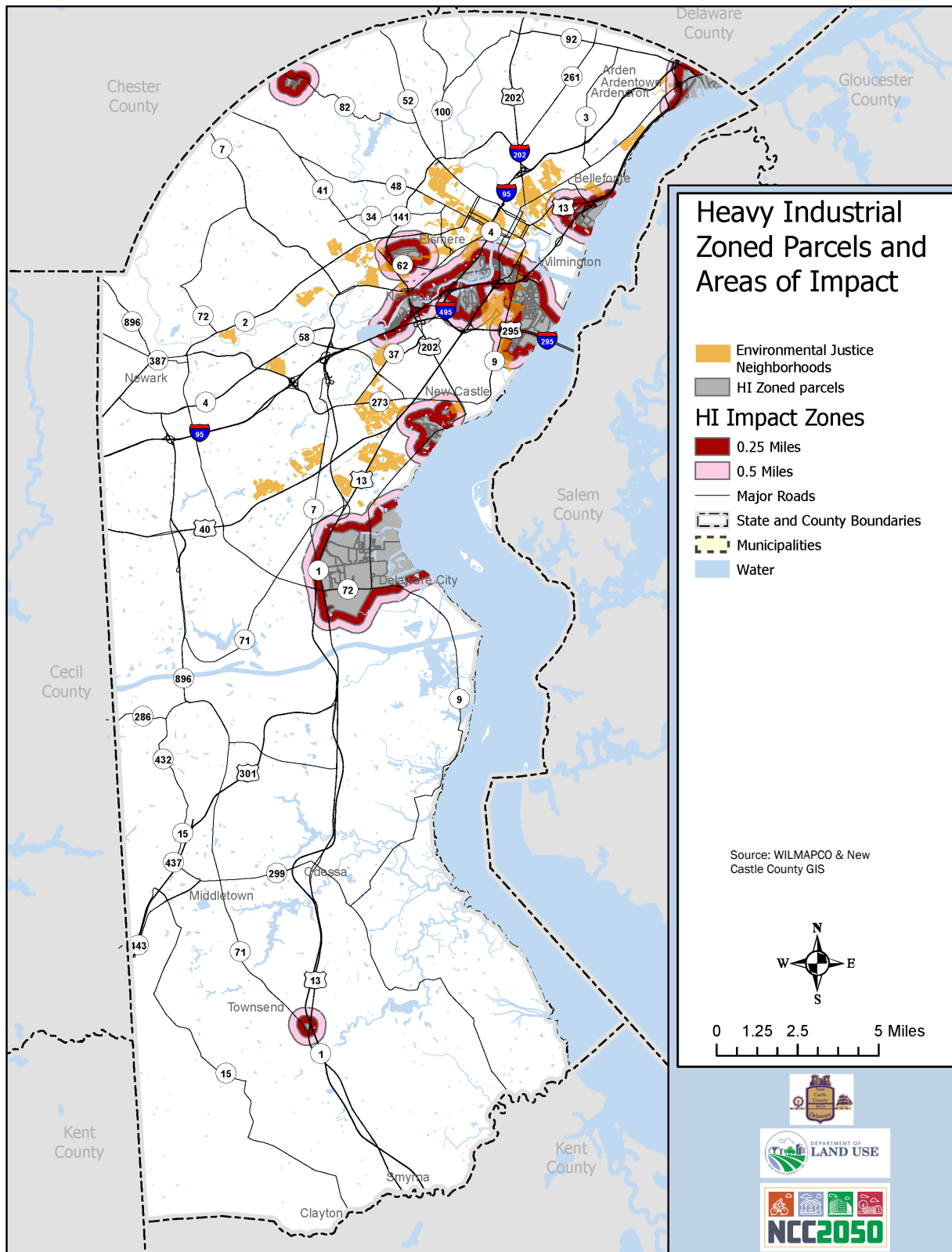
Development and Environmental Justice Communities

Incompatible land uses, specifically those classified as Heavy Industrial, tend to disproportionately be located near and impact Environmental Justice communities.

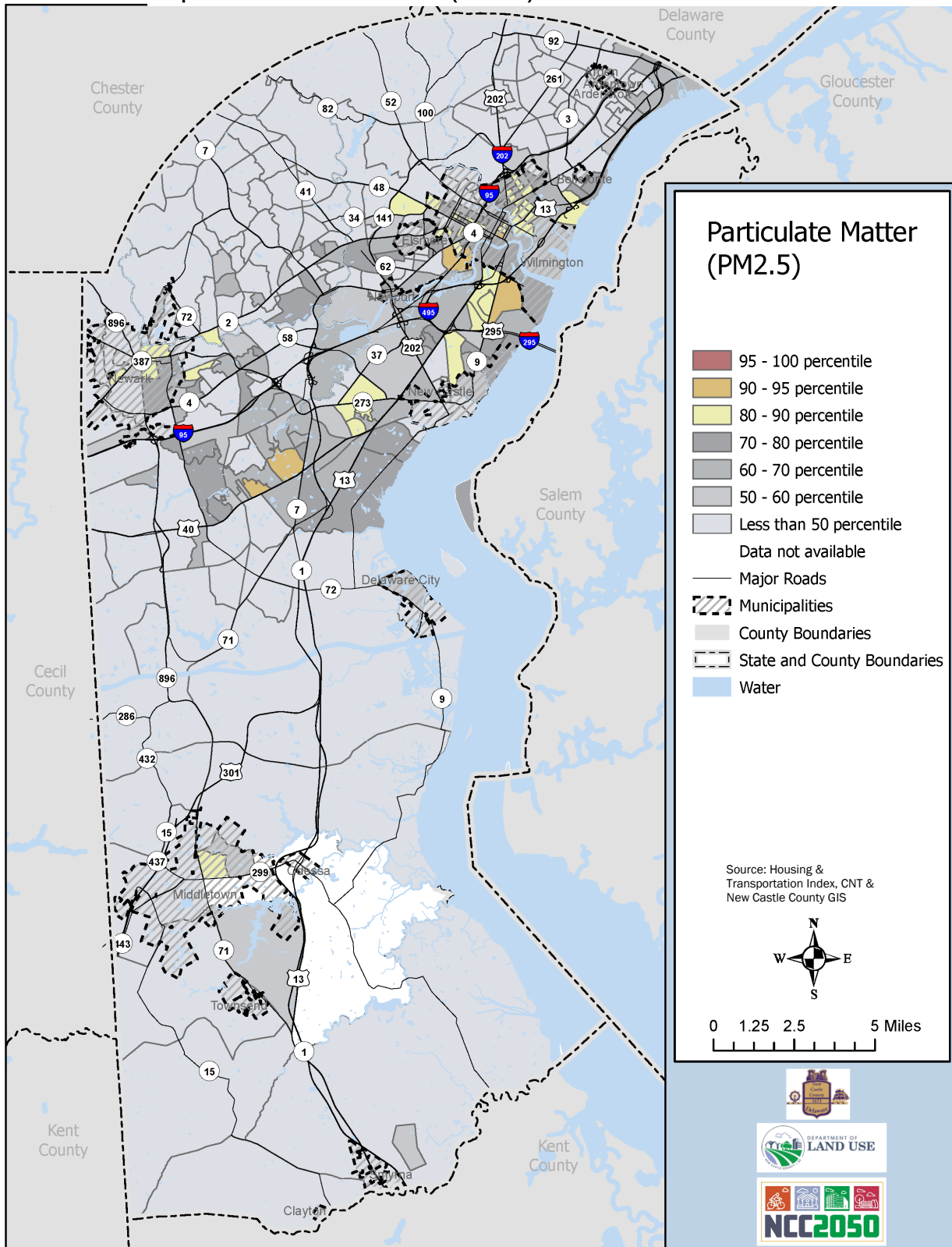
The relationship of EJ neighborhoods and Heavy Industry around the City of Wilmington is shown in *Map M-3*. Countywide, there are just under 15,000 residential structures within a half mile and just under 6,000 residential structures within a quarter mile of Heavy Industrial zoned parcels.

As mentioned earlier in this element, the EPA EJSCREEN tool is useful for understanding the impacts of incompatible land uses, specifically Heavy Industrial. The National Scale Air Toxics Assessment Air Toxics Cancer Risk Index (see *Map A-4*) provides important information for residents and government officials to consider. For each environmental factor, the EJ Index finds the block groups that contribute the most toward the nationwide disparity in that environmental factor. (Disparity, in this case, means the difference between the environmental indicator's average value among vulnerable groups (low-income and minority) and the average in the US population. Additional EJSCREEN indexes are found in Appendix G.

Map M-3: HI Zoned Lands



Map M-4: Particulate Matter (PM2.5)



A public survey was distributed between November 2020 and May 2021, and a portion of the survey addressed future development in the County. Given the estimate that New Castle County is expected to grow by about 13,000 people by the year 2050, according to the Delaware Population Consortium, respondents were asked to rate the appropriateness of the following statement: *Encourage development*

in existing developed areas, such as growth in municipalities, infill development, and revitalization of existing neighborhoods. Eighty-seven percent (87%) of respondents indicated that it was “Somewhat” or “Very Appropriate,” supporting County efforts to encourage redevelopment of existing but disused or underused “greyfields,” like industrial parks and strip malls rather than building new buildings and infrastructure.

New Castle County strives to increase opportunities near existing services and infrastructure, which are primarily found in Investment Level 1 areas as described in the Delaware Cabinet Committee on State Planning [Strategies for State Policies and Spending](#) document. These include municipalities and urban/urbanizing areas characterized by higher density, increased transportation options, and mixed-use properties. In New Castle County, Level 1 areas are concentrated in the northern portion of the County, near Wilmington, Newark, and Middletown.

Housing Trends

The Delaware State Housing Authority (DSHA) released a Housing Needs Assessment report in 2014, which examined housing trends and issues related to housing policy through 2020. It showed that both portions of New Castle County (north and south of the canal) are predominantly homeowner communities. Demographic data from IPUMS USA, **Figure M-5**, shows that in 2019 72% of homeowners in New Castle County were white, while only 62.3% of the population was white, according to the 2019 American Community Survey.

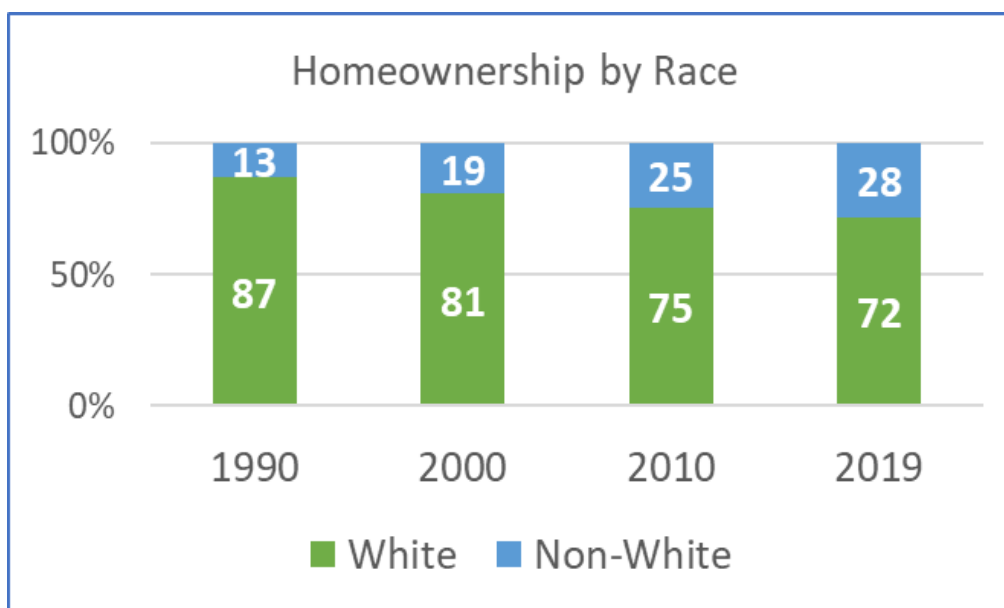


Figure M-5: Homeownership by Race in New Castle County
(Source: IPUMS USA, University of Minnesota, www.ipums.org)

In the southern portion of the County, there are fewer multifamily developments or mobile homes than the state average. In northern New Castle County, housing stock is much older than the state average, with more than 60% of the homes built before 1970. Alternately, housing in the southern portion of the county is significantly newer, with 80% of the housing developed after 1980 and 40% built in the last 10-15 years.

Large portions of both north and south New Castle County see high percentages of low-income renters and owners who are cost burdened. DSHA considers a household to be cost burdened if more than 30% of income is spent on housing costs, including rent and utilities for renters, and mortgage, taxes, and insurance for owners.

In northern New Castle County, renters are substantially more cost burdened than owners, while in southern New Castle County, homeowners are more cost burdened due to the lower numbers of available rental units. African American and Hispanic renters are disproportionately cost burdened in the northern part of the County, and 65% of cost burdened renters in the southern portion are minority households. Additional details about cost burdened owners and renters are found in the Housing element.

Newly constructed homes tend to be outside of cities and away from existing infrastructure. These new residential developments are often built on large ‘greenfield’ sites, typically former agricultural land, with single family detached homes. Developments disconnected from existing infrastructure require construction of new infrastructure, including transportation systems, utilities, and sewer service. This directs infrastructure funding away from maintenance of existing infrastructure that needs repair and updating.

Based on demographic trends in the County, there is a need for smaller units and more rental housing. As a result of the housing crisis and recession in 2008-2009, fewer households of all ages are homeowners, and demand for new housing has shifted to smaller, more affordable homes and rental housing, according to DSHA. The growing senior population and smaller family units in general are also reducing the demand for large single-family homes. More detail related to these trends are found in the [Population and Demographics](#) and [Housing](#) elements.

Community Health

Christiana Care Health System is one of the largest health providers in the area. In 2019, they completed a Community Health Needs Assessment (CHNA) to identify community health needs to develop a strategy to address those needs. The assessment included all of New Castle County but distinguished between the zip codes around Wilmington (19801, 19802, 19804, 19805, and 19720) and the rest of the County. The report referred to the area around Wilmington as Community 1 and the remaining zip codes as Community 2. This distinction ensured that the variation in socioeconomic conditions in the County would be recognized in the report, not buried within County-wide statistics and averages. At the time of the report, the poverty rate in Community 1 was 20%, while the poverty rate in Community 2 was 7.9%.

The report outlined major community needs, but selected the following as the top priorities:

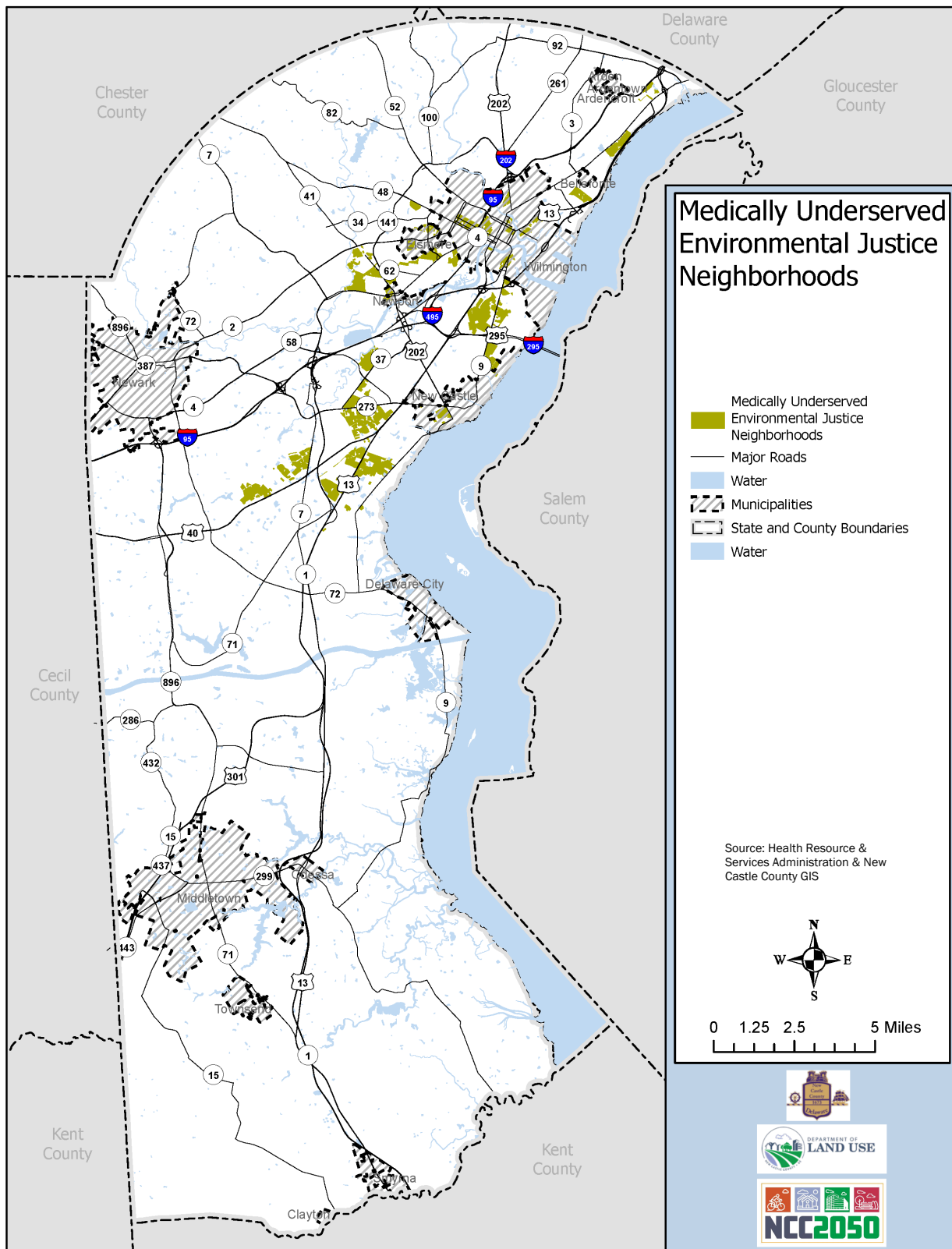
- Social Determinants of Health including poverty, food insecurity, housing, affordability of care, education, and employment/job security
- Mental Health and Substance Use Disorder
- Violence and Public Safety
- Maternal and Child Health especially Infant Mortality
- Access to Dental and Primary Care

The area in and around Wilmington included a much higher minority population and approximately double the percent of residents in poverty and considered low income. These residents are also much more likely to be uninsured, with 8.8% of residents without insurance, even with additional options provided by the Affordable Care Act and Delaware’s expansion of Medicaid.

Community Health Indicators were worse in areas with lower income and higher percentages of racial and ethnic minorities. These negative indicators included low birth rates; rates of diabetes, high blood pressure, and obesity, as well as a prevalence of adults with no dental visits in the past year, who have delayed or not sought care due to cost, and with no usual source of care such as a regular doctor or clinic. These indicators are higher in and around Wilmington than in the remainder of the County.

Several census tracts in the County have been designated by the Health Resources and Services Administration (HRSA) as Medically Underserved Areas, based on access to primary medical care physicians, infant mortality rate, population with incomes below the poverty level, and population over the age of 65. The Medically Underserved Areas within Environmental Justice Neighborhoods in New Castle County are illustrated in Map M-5.

Map M-5: Medically Underserved EJ Neighborhoods



Access to Community Services, Facilities, and Amenities

As suburban development and sprawl occurred in the middle of the 20th century along with the widespread availability of personal passenger cars, strict zoning was applied to these suburbs, leading to communities of single-family homes spread apart across the region. Alternate modes of transportation, like walking, biking and transit, are underdeveloped in the region, according to WILMAPCO's *Transportation Justice Report*.

Access to safe places to walk, bike or just play outdoors play a vital role in a community's wellbeing, both mentally and physically. Having access to space for active recreation like ballfields and tennis courts and passive recreation, such as trails and birdwatching, are key to a robust and thriving community. Many of the uses are low or no cost to community members, like walking, jogging, or utilizing playground equipment, and provide numerous health benefits by promoting healthy lifestyles and encouraging a love of nature. Ensuring that all communities have equal [access to open space and recreation](#) is a key aspect of this Plan and the County's planning efforts.

Sprawl and transportation funding focused on highways have contributed to this underdevelopment. WILMAPCO found that 95% of homes in the region were "reasonably connected" by car to popular destinations, but on average, less than 25% were reasonably connected by alternate modes of transportation. Only 7% of homes had good walking connections. WILMAPCO described this as the "near total absence of complete community/urbanist-style development in the region."

With this lack of connectivity, car dependence is high in the region. Without regular access to a vehicle, people experience isolation and often are unable to access jobs or community resources.

Food deserts include residential areas of block groups with household poverty rates of at least 20% and at least 33% of the population one mile or farther from a grocery store. Non-residential areas of these block groups were clipped using the 2012 Delaware Land Use/Land Cover and 2010 Cecil County land use data.

The transit analysis measures the percentage of housing units within each block group that are within a 30 minute door-to-door bus trip to a supermarket at peak time, including no more than 10 minutes walking along subdivision streets, trails, or sidewalks.

This affects low-income residents the hardest. Based on technical connectivity analysis performed by WILMAPCO, those living in the lowest income neighborhoods reported the following:

- Only 23% could easily reach a library by walking
- Only 50% could easily reach a low-wage job center by biking
- Only 52% could easily reach a medical center by bus

This car dependence also contributes to unaffordable transportation costs for low-income families. Nearly all reported owning a car, sometimes two cars, to enable them to get to school, work, social gatherings, and other resources, even if they were unable to afford the related costs. WILMAPCO reported that high poverty suburban households spend 25% of their monthly budget on transportation, compared to the average household, which usually spends below 18%. Additional detail is located in the [Housing element](#).

Race and ethnicity also play a role in access to jobs and community resources. In a survey from the University of Delaware's Institute for Public Administration (as cited by WILMAPCO), 40% of Black respondents and 37% of Hispanic respondents indicated that they experience travel interruptions due to lack of transportation. The respondents indicated that they were unable to reach their workplaces,

shopping, and social gatherings most often. In addition, more than half of those who reported earning less than \$25,000 per year experienced similar travel interruptions.

As noted above, New Castle County is making efforts to improve Level 1 investment areas, many of which fall into EJ neighborhoods. According to the *State Strategies*, Level 1 areas are first priority for enhancements like transit improvements, ADA accessibility projects, pedestrian improvements, and safety upgrades. These types of improvements help to increase interconnectivity of neighborhoods and residential areas with community resources, transportation, and jobs. Efforts must be made to expand housing options in communities with existing resources and employment, allowing residents to access services and jobs closer to their homes.

Technology Deserts

Technology and internet access has become more and more critical to everyday life, and the COVID-19 pandemic and resulting restrictions on in-person activities made it even more important. Employees and students with limited technology struggled to complete work and school tasks, creating and highlighting disparities in access to education, training, employment, and public participation. WILMAPCO conducted a study of ‘technology deserts’—areas with more than double the regional average of households without access to a computer or smartphone and/or household internet access. (See *Map M-6*) These areas have more than 19.2% of households without computers and/or 32.7% of households without internet access at home.

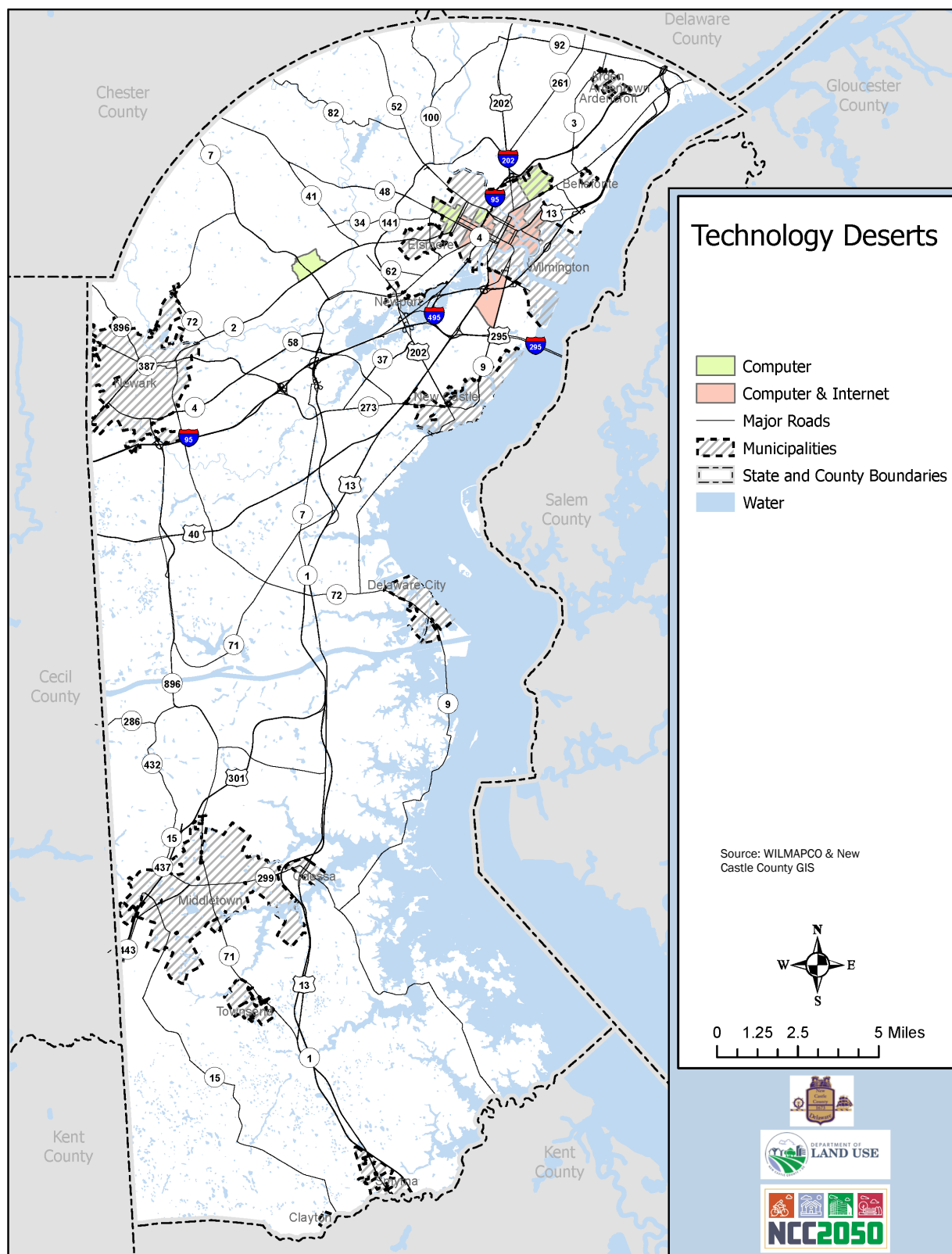
Delaware is first in the United States for fastest internet. It is the only state surpassing the Federal Communications Commission (FCC) 25 megabytes per second (mbps) threshold, and 95% of Delaware has GT 4mbps access. However, technology deserts exist, generally due to other conditions. WILMAPCO cited a 2019 study by the Pew Research Center, which showed that age, education, and income are key factors that impact whether a household has access to home broadband or a computer/smartphone.

In the WILMAPCO region, economic conditions play the larger role in the establishment of urban technology deserts. Poverty levels in WILMAPCO technology deserts are more than triple the regional average, and every identified technology desert included concentrations of poverty and/or government-subsidized housing.

Technology deserts have indicators very different from the region as a whole. Forty percent of households in technology deserts have no access to internet, while this number is 16% across the region. Twenty-six percent (26%) of technology desert homes have no computer and 16% have only a smartphone, compared to 10% and 6%, respectively, for the region as a whole. Black/African American households comprise 53% of the population of technology deserts, while they were 22% of the regional population at the time of the study.

The Delaware Broadband Initiative and other efforts are working to further increase access to high-speed internet to support economic growth and social advancement. Coordination of these technology and access initiatives will help to ensure that County residents receive the education and training necessary to secure jobs that pay a living wage to support their families and their communities into the future.

Map M-6: Technology Deserts



Route 9 Corridor Master Plan

The Route 9 Corridor Master Plan, a collaborative effort with WILMAPCO, DelDOT, New Castle County, and residents in the study area, was a comprehensive planning effort which brought front and center community health and social and environmental justice issues arising in communities adjacent to existing heavy industrial facilities. In 2019, after completion of the Rt. 9 plan, all heavy industrial uses became Special Uses⁸ thereby requiring any new construction and expansion to have a public hearing and approval from the Board of Adjustment. This also rendered all heavy industrial uses as non-conforming uses.⁹ While these are important first steps, continued work is needed. One recommendation of the Route 9 Corridor Master Plan was to conduct a survey of residents living in the Eden Park and Hamilton Park neighborhoods. These communities along the Route 9 Corridor are severely impacted by the adjacent active Heavy Industrial Uses. In January 2019, a survey was conducted by the University of Delaware to gauge residents' attitudes towards environmental and health concerns, as well as, potential mitigation efforts, including rezoning or relocation.¹⁰

Important subsequent actions should include the potential of split zoning existing HI zoned land as well as other buffering and separation methods. Additionally, innovative approaches are needed to address environmental and social justice such as requiring identification of relevant disparate impacts in land use planning and decision-making through an equity-mapping tool or comparable methodology,¹¹ establishing environmental justice frameworks for policy, resources and regulation,¹² and efforts and initiatives endorsed by the American Planning Association.

Themes found throughout NCC2050, and more specifically in this element help New Castle County provide a high quality of life for all residents, regardless of race, color, national origin, or income. All New Castle County residents are imbued with the expectation and inherent right to equitable protection from hazards, access to services and economic opportunities, and the ability to participate meaningfully in the public decision-making process. Our strategies work to increase access to education and employment, safe transportation networks, adequate and affordable housing, sustainable and effective investments in all communities.

⁸ Certain land uses and developments present unique conditions with respect to their relationship to the community. Such uses and developments are identified as special uses in each zoning district. The Board of Adjustment must find that the use not only meets zoning requirements of the UDC but also: (1) is consistent with the Comprehensive Development Plan, (2) is compatible with the character of the land in the immediate vicinity, (3) the design minimizes the adverse effects, including visual impact on adjacent lands, (4) the use minimizes adverse impacts on the environment or government services.

⁹ A nonconforming use is a use of land or use of a building/structure lawfully existing at the time this Unified Development Code or a subsequent amendment to the UDC became effective which does not conform to the use requirements of the district in which it is located.

¹⁰ A Residential Survey of Environmental Concern and Attitudes Towards Relocation, Rezoning, and Revitalization in Two New Castle County, DE Communities: Eden Park and Hamilton Park:

<https://www.nccde.org/DocumentCenter/View/29865/Residential-Survey-Final-Report-January-25-2019>

¹¹ Oregon House Bill 2488: <https://www.idsupra.com/legalnews/oregon-bill-proposes-new-statewide-land-1374493/Portland's-vision-for-growth-and-progress-Portland.gov>

¹² Minneapolis Environmental Justice and Green Zones: <https://minneapolis2040.com/policies/environmental-justice-and-green-zones/>

Related Goals, Objectives, and Strategies

15. Goal: New Castle County's infrastructure and economic and social systems are strong and our communities are prepared for future climate-related and man-made/natural events; all residents will live in neighborhoods that are protected from negative impacts of incompatible non-residential land uses/activity and other hazards such as flooding (discrete and cumulative); and economic growth, prosperity and change in New Castle County is equitable and accessible by all.
 - 15.1. Objective: Reduce infrastructure that is at risk due to sea level rise and flooding.
 - 15.1.1. Strategy: Coordinate with Office of Emergency Management to reduce manmade and natural risks in development and coordination on the All Hazards Mitigation Plan. Implement it along with the Delaware State Climate Action Plan.
 - 15.1.2. Strategy: Locate new neighborhoods and businesses in areas that will not be directly impacted by threats including sea level rise and flooding. Mitigation efforts will minimize the adverse impacts on existing neighborhoods and businesses.
 - 15.1.3. Strategy: Discourage development/redevelopment in hazard zones and incorporate strategies that strengthen our community's ability to respond and be resilient in the face of unplanned change or disaster
 - 15.1.4. Strategy: Utilize natural lands to enhance and build resiliency by:
 1. Evaluating extent of sea level rise,
 2. Enhancing and preserving wetlands to guard against flooding from sea level rise and heavy precipitation,
 3. Preserving large buffers from waterways, and
 4. Preserving forest and urban trees to enhance cooling
 - 15.1.5. Strategy: Encourage resilient communities that identify local vulnerabilities, i.e. flooding and hurricane-force winds, and implement practices to withstand the effects of climate change
 - 15.1.6. Strategy: Make disaster planning efforts an integral part of all comprehensive planning efforts including small area plans
 - 15.1.7. Strategy: Assess and update evacuation plans in coordination with DelDOT, and consider evacuation needs when planning new development and roadway improvements
 - 15.2. Objective: Reduce risk/disparate impact on sub-populations.
 - 15.2.1. Strategy: Establish cumulative impact caps in collaboration with other agencies and the community
 - 15.2.2. Strategy: Address air quality and environmental concerns in EJ neighborhoods by insisting the statutory authorized government agencies (such as DNREC, State Division of Public Health, WILMAPCO Air Quality Subcommittee (AQS), etc.), continuously conduct environmental testing such as, but not limited to air monitoring, fenceline monitoring, and dust control
 - 15.2.3. Strategy: Establish programs to monitor and track progress relative to existing development as well as overall statuses of various metrics/indicators
 - 15.2.4. Strategy: Regulate new development to meet modern standards informed by current research and data

- 15.2.5. Strategy: Examine further opportunities through zoning and future land use designations to distance Heavy Industry from residential neighborhoods.
- 15.2.6. Strategy: Work with DNREC to strengthen protections of Delaware's Coastal Zone.
- 15.2.7. Strategy: Land use policies and regulations should aim to rectify existing hardships in Environmental Justice communities and avoid the creation of new Environmental Justice areas.
- 16. Goal: Participation in planning and development represents the full diversity of the county.
 - 16.1. Objective: Increase diversity of engagement in community planning activities of all county residents regardless of age, race, income, native language, abilities, etc.
 - 16.1.1. Strategy: Measure and track diversity metrics in engagement activities
 - 16.1.2. Strategy: Work with community partners to build direct communication and tailored engagement approaches to local neighborhoods and residents
 - 16.1.3. Strategy: Use target marketing strategies to reach hard to reach populations
 - 16.1.4. Strategy: Shared public input platform to help bring together the community and all levels of government in civic discourse and public decision-making
 - 16.1.5. Strategy: Establish a committee comprised of relevant government agencies, organizations, and community members tasked with monitoring the implementation of Environmental and Social Justice goals, objectives, and strategies of this plan.
 - 16.2. Objective: Increase diversity of local professionals involved in planning, land use, infrastructure, and development.
 - 16.2.1. Strategy: Collaborate with partners and agencies to increase exposure and engagement by students and young professionals in these fields, creating a pipeline for future employment

See Also:

Recreation and Open Space, Goal 1

Conservation, Goal 2

Mobility, Goals 8, 9 & 11

Housing, Goal 4

Economic and Community Development, Goal 6

Community Planning and Design Element, Goal 17

The background image shows a modern library building with large windows and a flat roof. An American flag is visible on the left side. A group of people, including children and adults, are standing in a line outside the library entrance. The entire image is overlaid with a semi-transparent green filter.

ELEMENT N

Capital Improvements

N. Capital Improvements Element

Element Defined

Capital improvements are just one aspect of a Comprehensive Plan, but a very important one. The Comprehensive Plan encompasses a long-term vision for the County, addressing a variety of issues. The Capital Budget is a mid-range, six-year plan outlining how the County intends to maintain and upgrade various assets owned and managed by the County. The Capital Budget essentially takes the broader vision from the Comprehensive Plan and identifies tangible projects to work toward that vision. Both documents coordinate with all County departments and their needs to achieve larger goals. (Current and past County budget documents are available on the [County website](#).)

Looking toward the future of New Castle County, additional capital investments may need to be made to meet our [Community Vision and Goals](#).

The State of Delaware's [Delaware Broadband Initiative](#) is working to increase access to high-speed internet to support economic growth and social advancement. Increasing this access will require New Castle County will need to construct additional broadband infrastructure to ensure all residents have access to high-speed internet to get information, access services, and complete education programs.

New Castle County is planning for potential impacts and effects of climate change to ensure a resilient future for all County residents. Capital expenditures related to stormwater management and flood prevention will continue to be a major part of the County budget, including storm surge mitigation and climate resiliency efforts.

Safe and adequate water and sewer infrastructure is critical to guiding the County's planned growth and development, as well as supporting its residents, businesses, and natural environment. These types of capital improvements have been key parts of past capital budgets and will continue to be important investments in quality of life for our residents and supporting economic growth.

Parks, recreation, and open space, including multi-use paths, have become a high priority for New Castle County government and residents, and future capital investments in this infrastructure will be key to encourage active lifestyles and support the County's environmental goals.

Leveraging local dollars toward placemaking is a valuable way to invest in the health, safety, and welfare of our communities. Further local, public funds should also be brought together with private funds to maximize benefits to local communities.

What We Heard

"Parks with cracked courts and broken playground equipment aren't the quality space we want." – Public Participant, Deep Dive Session 3: Open Space, Conservation, Recreation, Environment February 3, 2021

"If it can't be maintained it tends to be of a lesser quality...If there aren't any funding streams or sharing between County and State, it tends to fall by the wayside." – Marco Boyce, New Castle County Department of Public Works Planner, Intergovernmental Work Group Meeting, March 10, 2021

New Castle County Today

County-owned Capital

New Castle County seeks to operate with a fiscally responsible budget, and budgets capital improvements based on available funds, as seen by the varying amounts allocated in recent years. The most recent capital budgets show increases from the low point in 2018 (*Figure N-1*).

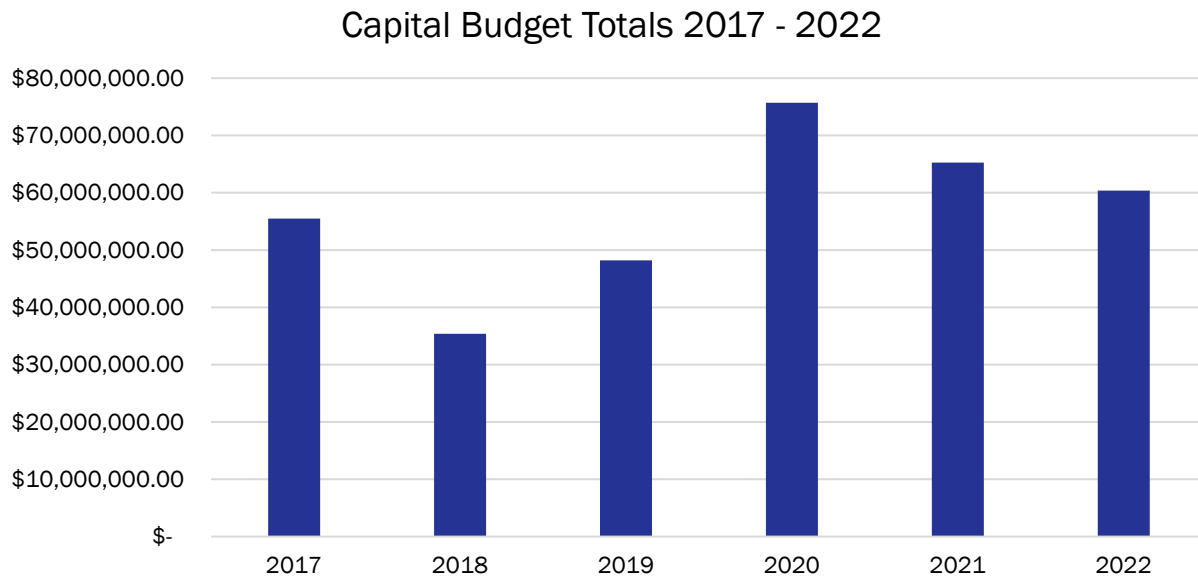


Figure N-1: Capital Budget Totals 2017-2022

New Castle County capital expenditures are organized into six major categories: Sewer/Stormwater; Facilities/Equipment; Parks; Public Safety; Administration; and Community Services.

A brief list of the assets owned by New Castle County are listed below.

Facilities/Equipment:

- Buildings: 58
- Vehicles: 1,000+
- Other Equipment (i.e., construction, landscaping equipment): 850

Parks & Recreation:

- Parks and Related Land: 249 (6,000 acres)
- Recreation Centers: 9

Sewer/Stormwater:

- Sanitary Sewer: 1,800 miles
- Wastewater Treatment Plants: 3
- Pump Stations: 175
- Stormwater Management Facilities: 2,400

Community Services:

- Libraries: 10 (directly administered by the County)



Figure N-2 Delcastle Recreational Park

County Capital Improvements Completed since 2012 Comprehensive Plan

New Castle County manages many assets and each year the Capital Budget projects expenditures for several capital projects for each of the categories noted in the budget. Capital improvements since the adoption of the 2012 New Castle County Comprehensive Plan generally are infrastructure (Sewer and Stormwater management, See Table N-1), recreation (Parks) and services (Police, EMS, etc...).

The County has significantly invested in improvements to sewer and stormwater management infrastructure (Noted in **Table N-1**) over the past 10 years. Additionally, the County has brought a number of important improvements to residents' quality of life through the construction of the Route 9 Library and Innovation Center (completed in September 2017) and a new paramedic/EMS station, Medic Station 5 in Middletown, (completed in May 2021).

Table N-1: Capital Improvement Projects (Infrastructure, Budget greater than \$1 million)

CAPITAL IMPROVEMENT PROJECTS (Infrastructure)	CONTRACT YEAR
Boyd's Corner Road Force Main Project	2013
Red Lion Pump Station Upgrade	2013
White Clay Sewer Basin Interceptor Manhole Improvements	2014
Route 9 Library & Innovation Center	2017
Muddy Six Interceptor Capacity Improvement	2018
Governor Printz Interceptor Upgrade	2018
East Wing Force Main Project	2018
Lea Eara Farms Force Main	2018
Richardson Park Pump Station	2018
Bringinghurst Interceptor Improvements	2019
Mt. Pleasant Interceptor	2020
Delaware City Industrial Expansion Force Main	2020

County Capital Improvements Underway

The Mt. Pleasant Interceptor project, listed in *Table N-1*, is ongoing as of summer 2021. The Brandywine Hundred Sewer Rehabilitation Program has been ongoing since 2002 to address sewer flow problems in the Brandywine Hundred area of the County.

The system in that area is the oldest sanitary system which New Castle County manages, and the aging system does not have the capacity to convey the amount of water entering the system, causing overflows into residential basements and discharges into local watercourses during heavy rains. The goal of this rehabilitation project is to reduce peak flow rates by 35% to minimize future costs to future property owners. Associated with this project are upgrades to the Wilmington Wastewater Treatment Plant, sewage pump stations, and interceptor systems to create additional capacity for the continually increasing flows.

Some other major projects that are currently underway include the new Appoquinimink Library, which will replace the Appoquinimink Library in Middletown and is expected to be completed in 2022.

The County is also in the process of developing a new [Southern Regional Park](#). Following a Parks Task Force public recommendation process, the site identified for the new park is a 100-acre, County-owned parcel located on Shallcross Lake Road near the intersection of Marl Pit Road. As of mid-2021, the design and construction documentation phases have begun.

Planned/Anticipated Capital Improvements

The County budgets future capital expenses annually for the next five years. The proposed capital expenditures for fiscal years 2022-2027 are shown in *Figure N-3*, and the complete FY 2022 Approved Capital Program and Budget is included as Appendix H. Much of this budget is allocated to ongoing sewer and stormwater infrastructure improvements (88% of the budget). In addition, the second largest portion

of the budget is designated for facilities and the third largest portion of the budget is for parks and land preservation.

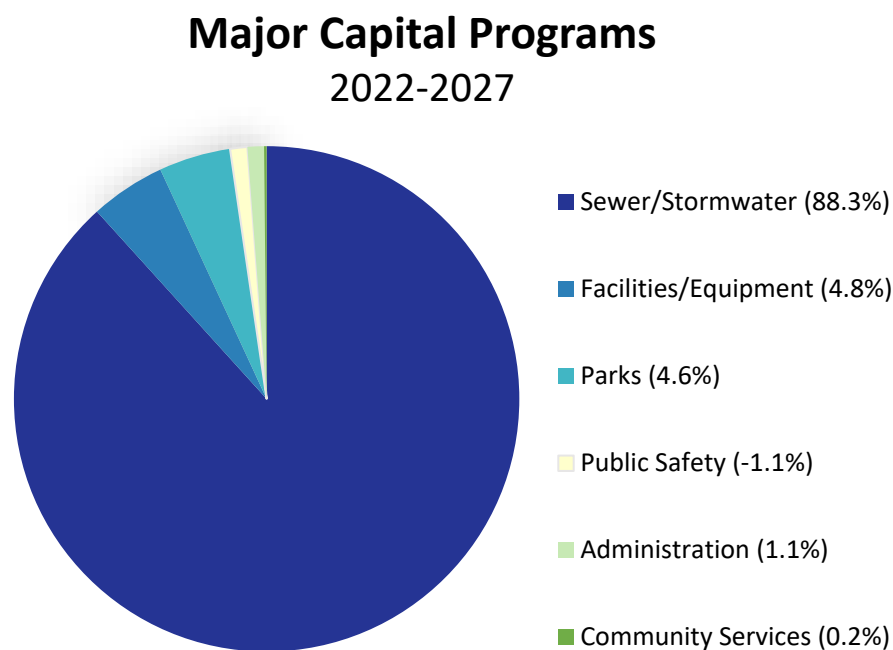


Figure N-3 Major Capital Programs 2022-2027

Some major capital improvements proposed in the most recent capital budget are listed below.

Sewer/Stormwater:

- Interceptor Renovations
- Sewer Expansions
- System Rehabilitations and Repairs
- Stormwater Basin Renovations

Facilities/Equipment:

- Building Rehabilitations/Renovations
- Route 9 Transportation Alternatives Program Improvements
(Costshare with DeIDOT)

Parks:

- Agricultural and Open Space Preservation
- Park, Game Court, Play Area Improvements
- Greenway Systems
- Historical Structure Rehabilitation

Public Safety:

- Safety and Fleet Equipment
- Construction/Renovations to Paramedic Emergency Medical Stations
- Technology Upgrades
- Building Renovations



Figure N-4 Kirkwood Library Stormwater Management

Community Services:

- Renovations to County Libraries and Surratte Park Pool

Administration:

- Information Systems Expansion

The complete Capital Budget and Program Funding Summary is listed on the following page (*Table N-2*).

New Castle County is planning for the future and the additional capital investments that will help us meet our Community Visions and goals, all while maintaining a fiscally responsible budget. These investments will help us prepare for climate change impacts, managing stormwater and flood prevention, improving water and sewer infrastructure, and enhancing our parks, recreation, and community facilities to provide high quality of life for our communities. It key that we create communities which reflect what is important to all of us, past, present and future, and which are well designed, maintained, accessible and vibrant.

FISCAL YEAR 2022 CAPITAL BUDGET AND PROGRAM FUNDING SUMMARY

Fiscal Year 2022 Capital Budget and Program Funding Summary

(in thousands)

Fiscal Year

Department	Prior Authorization s	Available Balance as of 2/28/2021	Obligated Amount as of 2/28/2021	Obligated %	2022	2023	2024	2025	2026	2027	Balance to Complete	Total Cost
Public Works	\$ 745,810	\$ 148,521	\$ 597,289	80%	\$ 60,304	\$ 10,954	\$ 76,662	\$ 71,178	\$ 68,789	\$ 62,203	\$ -	\$ 1,095,901
Community Services	67,221	2,263	64,958	97%	100	-	-	-	-	-	-	67,321
Public Safety	28,461	6,553	21,908	77%	(679)	322	1,022	1,022	1,022	1,022	-	32,192
Administration	13,054	875	12,179	93%	650	3,000	2,500	-	-	-	-	19,204
County Executive	750	668	82	11%	-	-	-	-	-	-	-	750
Total New Castle County	\$ 855,295	\$ 158,879	\$ 696,416	81%	\$ 60,376	\$ 14,276	\$ 80,184	\$ 72,200	\$ 69,811	\$ 63,225	\$ -	\$ 1,215,367
Source of Funds	Prior Authorization s	Available Balance as of 2/28/2021	Obligated Amount as of 2/28/2021		2022	2023	2024	2025	2026	2027	Balance to Complete	Total Cost
Bonds	\$ 672,323				\$ (21,982)	\$ 11,342	\$ 73,906	\$ 65,282	\$ 62,407	\$ 59,659	\$ -	\$ 922,936
Federal	1,407				-	-	-	-	-	-	-	1,407
State	62,994				71,500	-	-	-	-	-	-	134,494
General Fund	37,048				6,101	2,934	6,278	6,918	7,404	3,567	-	70,250
Sewer Fund	14,270				4,757	-	-	-	-	-	-	19,027
Other	67,253				-	-	-	-	-	-	-	67,253
Total New Castle County	\$ 855,295	\$ 158,879	\$ 696,416		\$ 60,376	\$ 14,276	\$ 80,184	\$ 72,200	\$ 69,811	\$ 63,225	\$ -	\$ 1,215,367

*Numbers may not add due to rounding.

Table N-2 Fiscal Year 2022 Capital Budget and Program Funding Summary



ELEMENT O

Intergovernmental Coordination

Courtesy of GWCVB

0. Intergovernmental Coordination Element

Element Defined

Fifteen incorporated municipalities and unincorporated areas made up of communities and Census-designated places comprise New Castle County. A focus of NCC2050 is cohesive planning for the unincorporated areas of the county, and where appropriate, coordinating efforts with the municipalities and state agencies. Working with the Delaware Department of Education (DDOE) and the Delaware Emergency Management Association (DEMA) will help ensure a cohesive future as the Comprehensive Plan is implemented. The Delaware Department of Transportation (DelDOT) has jurisdiction over most roadways within the county, planning strategically for growth and transportation must involve coordination with DelDOT. Active recreation and active transportation will require close coordination with DelDOT for roadways and Delaware's Department of Natural Resources and Environmental Control (DNREC) to enhance recreation opportunities for all.

At a regional level, New Castle County is surrounded by three other states and bordered by seven counties. The Intergovernmental Coordination Element, as required by the State of Delaware, is a process that allows New Castle County to create a Comprehensive Plan that is coordinated with the overall goals of the incorporated, unincorporated, and state governments which creates a better plan and likelihood for success.

The element also facilitates cooperative solutions for goals that may be applied differently across the county but are still critical to the development and implementation of the plan. Comprehensive by nature, NCC2050 addresses many aspects of New Castle County, and the responsibility of the Intergovernmental Coordination Element is to weave the various agencies and experts into the process. The collaborative approach includes discussions around climate change, social equity, protection of natural resources, emergency preparedness, and many others. This coordinated effort drives not only the development of the plan but also ensures future implementation support.



Figure 0-1: Interagency Working Group Member Logos

What We Heard

“To close the intergovernmental gaps, we need to develop a Equity Baseline Report and then use it to strategically develop a regional equity framework with specific strategies.” - Councilperson David Carter (District 6)

“Metropolitan planning! We need to stop planning in silos.”

– Councilperson Dee Durham (District 2)

NCC Today

Throughout the Planning Process, New Castle County has worked closely with many agencies. Hosting Interagency Working Group meetings allowed agencies to come together over the plan’s creation to review plan topics, recommendations, and compatibility with other incorporated municipal and statewide initiatives (See **Figure O-1**). Participants in the Interagency Working Group included representatives from planning, finance, public works, land use, transportation, agriculture, environment and natural resources, housing and community services, and leadership from governments and agencies at all levels.

State legislation has provided several tools that transcend jurisdictional boundaries, most critical of which is the Preliminary Land Use Service (PLUS) Process. The PLUS Process involves reviews by applicable State agencies at the initiation of the major land development process. New Castle County has a separate Memorandum of Understanding (MOU) with the Office of State Planning Coordination (OSPC) that requires significant zoning changes and all major plans be submitted to the Office of State Planning Coordination and scheduled for review at monthly PLUS meetings. These meetings provide a mechanism for applicants with land development proposals to meet with State agency representatives to discuss issues and opportunities relating to potential regional or area impacts of development and the integration of state and local development plans; and to bring State agency staff together with developers and local officials early in the land development process.

Environmentally sensitive projects or those requesting a variance from the environmental standards outlined in Article 10 of the [Unified Development Code](#) must be reviewed by a committee that incorporates representatives from both public and private jurisdictions to address the range of potential issues. This committee, RPATAC (Resource Protection Area Technical Advisory Committee) consists of representatives from DNREC, the Consulting Engineers Council, DGS, New Castle County Chamber of Commerce, New Castle County Departments of Public Works and Land Use, the Water Resources Agency at the University of Delaware (WRA), the chemical industry, water companies, an environmental advocacy group, the New Castle County Conservation District, a private sector environmental representative and a private sector representative.

Annexation

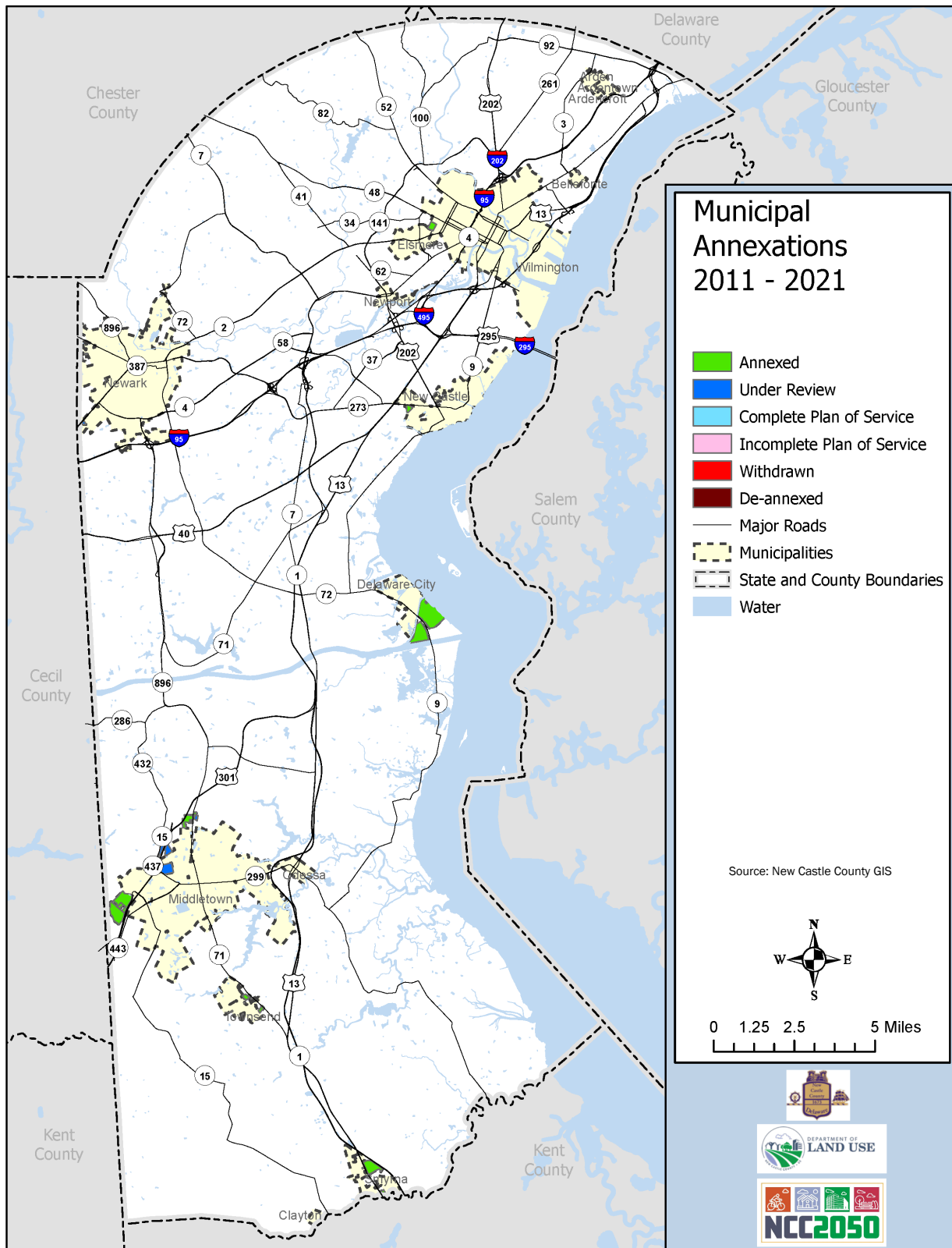
In 2018, NCC released an Annexation Background Report discussing the process and state of the annexation of unincorporated land and municipalities within NCC. Currently, annexations by municipalities must seek review of their Plan of Services by the Office of State Planning Coordination. If the proposed annexation is inconsistent with their certified comprehensive plan, then a plan amendment is required. Plan amendments must be reviewed by state agencies through the Preliminary Land Use Service, which includes a public meeting and an opportunity to address concerns. Ultimately the decision to annex is between the State, the municipality, and the property owner. Municipalities under 50,000 people (currently all municipalities in New Castle County, except Wilmington) seeking to annex land in unincorporated New Castle County do not need consent from the County.

Since 2011, there have been approximately 156 acres of annexed land in New Castle County. **Table O-1** shows the acreage breakdown between municipalities. Completed annexations between the 2012 Comprehensive Plan and 2021 are included in green on **Map O-1**.

Municipality	Acreage
Bellefonte	0.15
Delaware City	67
Middletown	46
New Castle	3
Newark	3
Smyrna	27
Townsend	4
Wilmington	6
Total	156

Table O-1: Annexation by Municipality, in acres (Source: New Castle County GIS)

Map O-1: Municipal Annexations 2011-2021



Currently, there are no joint or regional planning areas within the County. However, joint planning areas (JPA) are proposed in the draft [Southern New Castle County Master Plan](#). JPAs encourage collaborative and proactive planning, agreements, and ongoing monitoring to achieve a range of benefits including predictability, environmental benefits, service efficiencies, and cost-savings. JPAs might involve establishment of growth, transition, and preservation areas and definitions would be incorporated into jurisdictions' planning and zoning. Forming regional planning partnerships between incorporated and unincorporated areas would be a step in ensuring intergovernmental decisions are happening to achieve shared local goals. Planning at the boundaries of municipalities is important for coordination of infrastructure and development as well as for open space and farmland preservation. This could also include joint coordination with the State and MPO from an infrastructure-planning perspective.

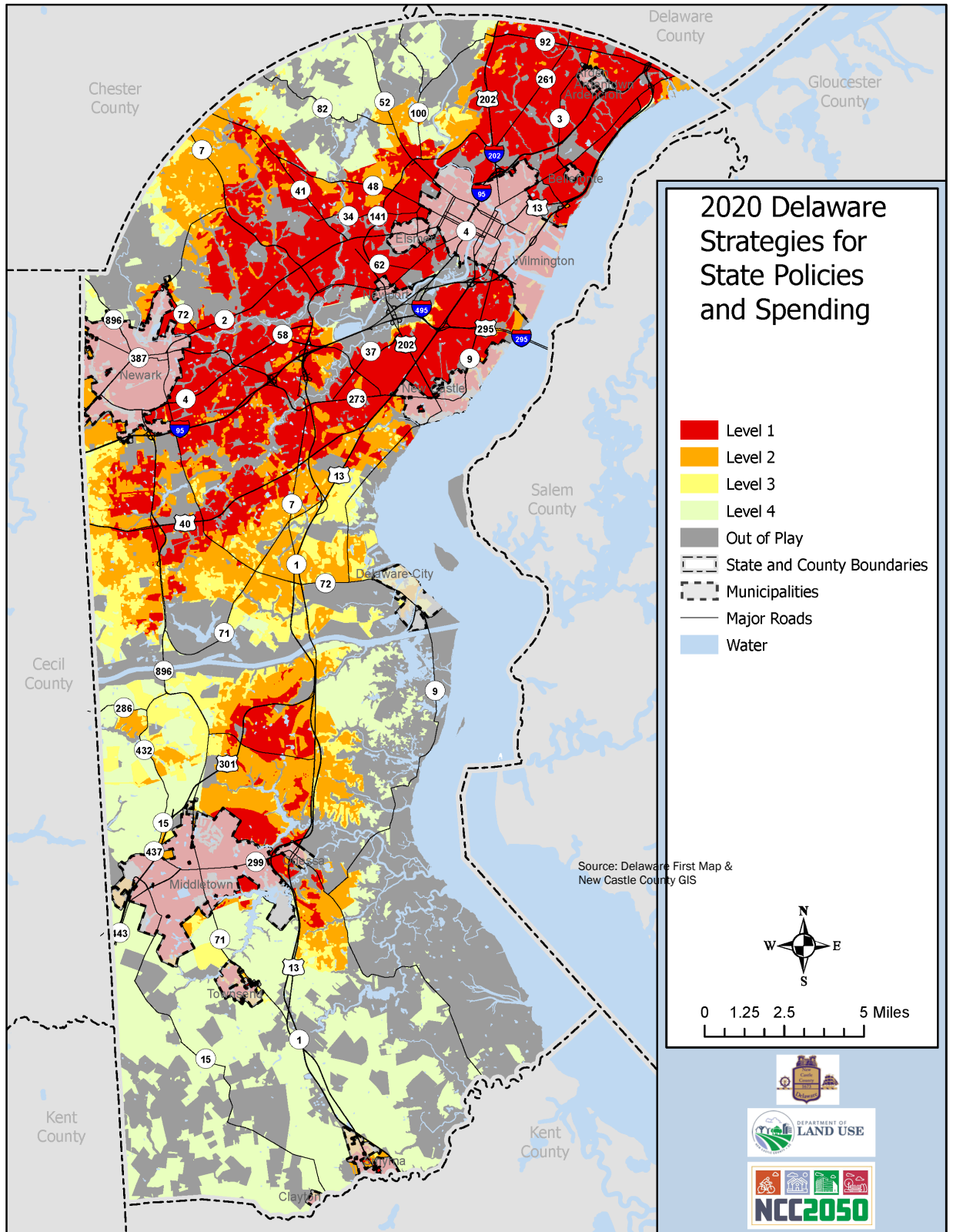
Statewide Planning

The Delaware Cabinet Committee on State Planning issues prepares the [Strategies for State Policies and Spending](#) document which serves as the primary policy guide summarizing the State's land use goals, policies, and strategies. The Strategies use Investment Levels to distinguish different types of policy, service and funding priorities. See *Map O-2* for a map of 2020 Delaware Strategies for State Policies and Spending.

New Castle County strives to increase employment opportunities near transit and existing services, which are primarily found in Investment Level 1 areas, by guiding development to Level 1 & 2 investment areas (see Priority Policy #1, p. 27). These include municipalities and urban/urbanizing areas characterized by higher density, increased transportation options, and mixed-use properties. In New Castle County, Level 1 areas are concentrated in the northern portion of the County, near Wilmington, Newark, and Middletown.

Public-private partnerships and coordination at all levels of government are key to redevelopment and economic revitalization in these downtowns and distressed urban areas. Local policy should be coordinated with state and County efforts to encourage redevelopment of existing but disused or underused "greyfields" like industrial parks and underutilized or vacant strip malls, thereby improving local community cohesion and quality of life by reducing vacant or blighted property while providing additional housing, services, and/or employment in those communities.

Map O-2: 2020 Delaware Strategies for State Policies and Spending



School Districts

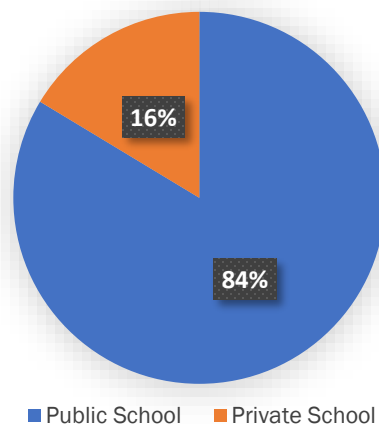
The school districts in Delaware are part of State government and have no direct ties to the government of New Castle County; they are regulated by the Delaware Department of Education. Within New Castle County there are six school districts and one vocational school district (See Table O-2).

Table O-2: School Type and District (Source Delaware Department of Education)

School District	ECC/K	Elementary	Middle	High	Specialty Center
Red Clay	2	15	8	5	5
Brandywine	-	10	3	3	1
Christina	2	15	4	3	9
Colonial	1	8	3	1	-
Appoquinimink	5	8	4	3	-
Smyrna (in New Castle County and Kent County)	4	6	1	1	-
New Castle County Vo-Tech	-	-	-	5	-

Within New Castle County, there are a total of 137 public schools, including 16 high schools, 5 vocational-technical schools, 23 middle schools, 62 elementary schools, 14 early education and kindergarten facilities, and 6 special centers. **Map O-3** illustrates the geographic boundaries of school districts in New Castle County. Total public-school enrollment for kindergarten through 12th grade is 78,878, and total private school enrollment in kindergarten through 12th grade is 14,432, for a total of 93,310, according to the 2019 ACS (See **Figure O-2**). There are also 23 charter schools. The average “per pupil” expenditure from all funding sources (federal, state, and local) in 2020 was \$16,369 in Delaware, up from \$15,730 in 2019, according to the Delaware Department of Education [Delaware Report Card](#). While schools are operated independently from the County, it is imperative that the schools, State and County work together to plan for future growth.

Figure O-2: New Castle County School Enrollment



District	Description	FY2017	FY2018	FY2019	FY2020	FY2021
Appoquinimink	New 330 Student Kindergarten Center	-	-	-	-	11,753,900
Appoquinimink	New 840 Student ES at Summit Campus	-	-	-	-	2,720,000
Appoquinimink	Demo/Construct Meredith MS	-	-	\$2,500,000	-	\$24,297,000
Appoquinimink	A&R to Silver Lake ES	-	-	1,244,300	\$4,524,000	16,621,600
Appoquinimink	Construct 1,000 student MS & 1,600 student HS	-	\$14,475,066	\$48,258,268	\$48,679,000	-
Appoquinimink	Summit Land Purchase	-	-	-	-	\$4,123,600
Appoquinimink	Louis L. Redding Reconstruction/Addition	-	-	-	-	-
Appoquinimink	Construction for 840 Students	-	\$12,648,397	\$11,671,000	-	-
Brandywine	Reno Brandywine HS	\$1,760,300	\$1,760,200	\$2,640,400	2,640,300	-
Brandywine	Reno Claymont ES	\$317,800	2,860,100	\$7,944,900	\$3,178,000	1,588,900
Brandywine	Bush Playground Equipment	-	-	-	\$40,000	-
Brandywine	Market Pressure - Brandywine	-	-	-	-	\$1,854,900
Brandywine	Carcroft ES Addition and Renovation	\$475,600	\$1,902,300	-	-	-
Brandywine	Demolish Burnette Bldg	\$780,000	\$780,000	-	-	-
Brandywine	Renovate Facilities Maintenance Bldg.	\$1,138,300	-	-	-	-
Christina	City of Wilmington Education Initiatives	-	\$2,000,000	\$17,500,000	\$12,100,000	\$7,500,000
Christina	Christina Early Education Center Mechanical & Electrical	-	-	-	-	\$683,100
Christina	Marshall ES HVAC	-	-	-	-	\$3,875,000
Christina	Leasure ES HVAC Renovation	-	-	-	-	2,264,600
Christina	Renovate Brennan School	\$600,000	\$712,700	-	-	-
NCCVT	Renovate Howard HS	\$17,584,900	\$8,990,900	-	-	-
Red Clay	Enhanced MCI	-	-	-	\$300,000	-
Smyrna	North Smyrna ES Roof & Mechanical Renovation	-	-	-	-	\$2,234,100
Smyrna	Land Purchase Rabbit Chase Lane (\$693,000 FY 2022)	-	-	-	-	-
Smyrna	New 600 Student ES	-	-	-	-	-
Smyrna	Addition to Clayton Intermediate	-	-	-	-	-
Smyrna	North Smyrna ES Addition/Renovation	-	-	-	-	-

Table O-3: New Castle Public School Improvement Appropriations (FY2021) (Source: Delaware Department of Education)

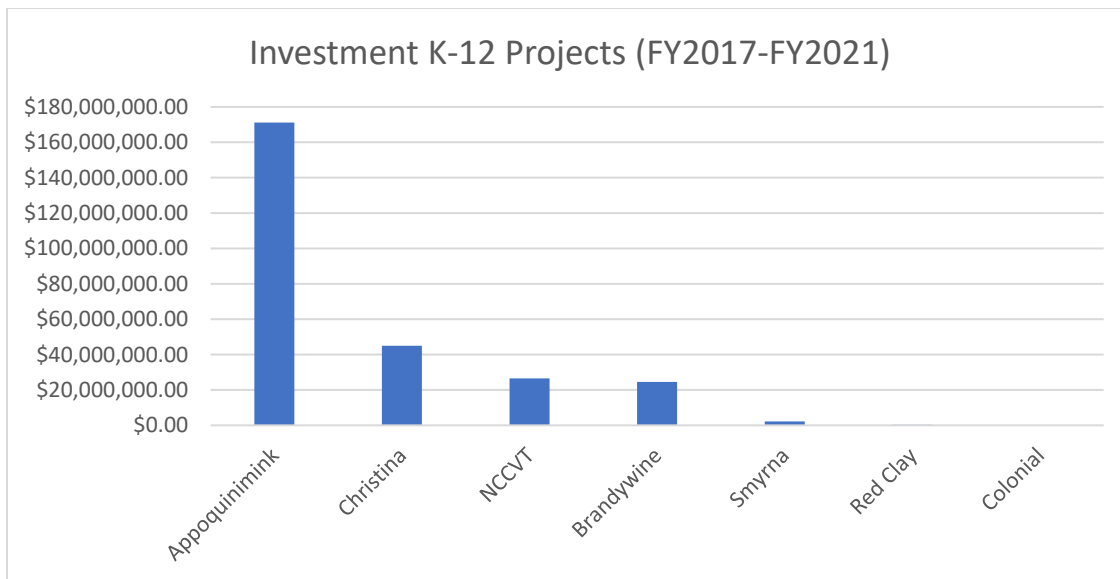
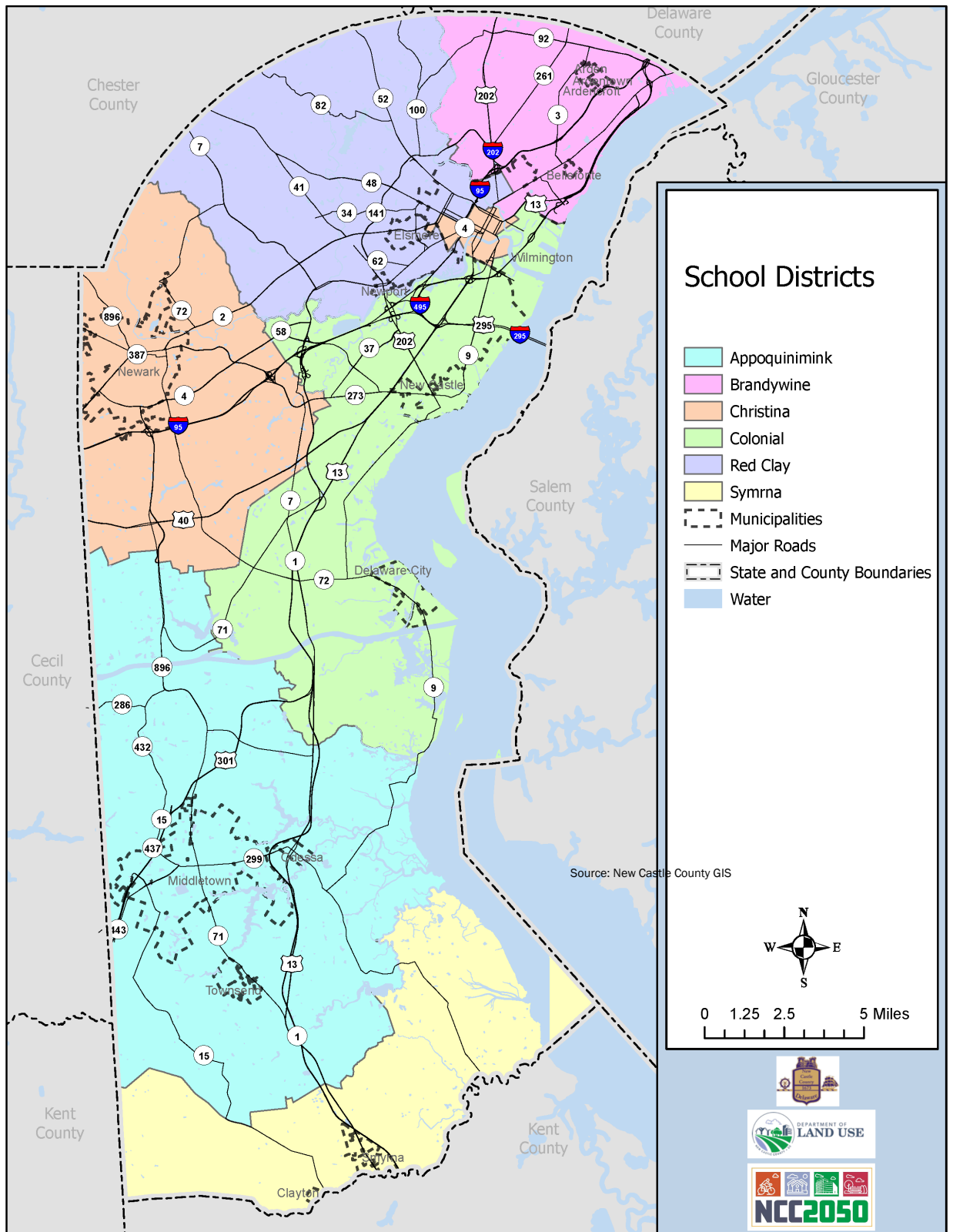


Figure O-3: New Castle Public School Improvement Appropriations (FY2021) (Source: Delaware Department of Education)

Table O-3 & Figure O-3 illustrate appropriations for public school improvements between FY2017 and FY2021 in New Castle County.¹ It is comprised of school construction, expansion, and maintenance projects. The Appoquinimink School District had the most projects and the most funding appropriated over the five most recent fiscal years.

¹ Note: This is appropriated funds provided in the Bond Bill and not actual expenditures as capital funding is set up with a 3-year budget life. Spend may occur sometime after the actual appropriation is available.

Map O-3: School District Boundaries



Projections included in the [Delaware Unified School District Enrollment Projections \(2014-2040\)](#), from the Delaware Department of Education and the University of Delaware, show expected changes in total school enrollment by county. These projections were based on the Delaware Population Consortium population projections released in November 2015. The data provides information about the Delaware public school system which includes the 16 traditional school districts, the three vocational-technical school systems, and charter schools as configured in the 2015-16 school year. Overall public-school enrollment in New Castle County is expected to rise through 2040. The Appoquinimink and Brandywine School Districts are projected to see slight decreases in enrollment over that period (1.35% and 0.33% reductions, respectively), while all other districts are expected to see increases of more than 6%, as shown in **Table O-4**. (This data does not include charter and vocational schools.)

While Delaware Unified School District Enrollment Projections (2014-2040), provides important background as to recent school infrastructure and investment planning considerations, there are important changes that have occurred over the last 7 years impacting overall enrollment (See Figure O-4 and Appendix I). It is important that projections be performed on a regular basis to accommodate economic and demographic changes.

Table O-4: New Castle County School Enrollment by District (Not Including Vo Techs) (Source: Delaware Unified School District Enrollment Projections, 2014-2040)

District	2015	2020	2025	2030	2035	2040	2015-2040 % Change	2015-2040 Change
Appoquinimink	10,381	10,259	10,358	10,456	10,437	10,241	-1.35%	-140
Brandywine	10,577	10,505	10,607	10,676	10,671	10,542	-0.33%	-35
Christina	15,553	15,749	15,828	15,849	16,194	16,509	6.15%	956
Colonial	9,760	9,893	10,002	10,068	10,259	10,423	6.79%	663
Red Clay	16,094	16,276	16,309	16,350	16,800	17,145	6.53%	1,051
TOTAL	62,365	62,682	63,104	63,399	64,361	64,860	3.7%	2,495

Table O-5 shows the detailed breakdown of school enrollment in New Castle County, including vocational and charter schools. The projected total enrollment for 2020 totals to 79,032.

Table O-5: Total Public-School Enrollment (New Castle County); Source: Delaware Unified School District Enrollment Projections, 2014-2040

Total Public School Enrollment (New Castle County)

	2015	2020	2025	2030	2035	2040	'15-'40 %change	'15-'40 # change
NCC								
Appo	10,381	10,259	10,358	10,456	10,437	10,241	-1.35%	-140
Brandywine	10,577	10,505	10,607	10,676	10,671	10,542	-0.33%	-35
Christina	15,553	15,749	15,828	15,849	16,194	16,509	6.15%	956
Colonial	9,760	9,893	10,002	10,068	10,259	10,423	6.79%	663
Red Clay	16,094	16,276	16,309	16,350	16,800	17,145	6.53%	1,051
NCC VoTech	4,697	4,755	4,838	4,900	4,974	5,022	6.92%	325
DE College Prep (66)	186	189	194	196	197	199	7.04%	13
Prestige (67)	223	227	232	234	235	238	6.59%	15
DAPS (68)	302	303	308	312	316	316	4.37%	13
Aspira (69)	637	664	665	667	709	754	18.32%	117
Wilm Charter (70)	972	948	924	903	907	895	-7.92%	-77
East Side Charter (72)	444	455	468	474	478	487	9.71%	43
Thom. Edison (76)	760	774	801	814	811	814	7.14%	54
DMA (79)	563	551	558	569	565	545	-3.20%	-18
Family Found. (80)	794	809	827	835	842	853	7.53%	60
Kuumba (82)	643	657	677	687	690	698	8.56%	55
Odyssey (86)	1,162	1,145	1,151	1,158	1,155	1,132	-2.51%	-29
MOT (88)	1,011	998	998	1,000	1,001	986	-2.53%	-26
Newark Charter (89)	2,142	2,097	2,078	2,065	2,065	2,026	-5.40%	-116
Gateway (92)	214	212	215	218	217	213	-0.37%	-1
Academia Alonso (9605)	321	337	340	342	362	386	20.17%	65
1st State Mont. (9606)	326	321	323	325	325	318	-2.45%	-8
Design Lab (9609)	214	217	220	220	222	225	-2.45%	-8
STEM (9610)	233	234	238	240	242	243	-2.45%	-8
Great Oaks (9611)	215	220	226	229	232	236	-2.45%	-8
Freire (9612)	233	237	241	242	245	250	-2.45%	-8

The report noted some statewide trends that may be reflected on a smaller scale in New Castle County:

- Low-income enrollment coming from families receiving assistance from SNAP (food stamps) or Temporary Assistance for Needy Families (TANF) is increasing slowly and steadily over the projection period.
- English Language Learners (ELL) are variable but are generally increasing as the Hispanic population steadily increases.
- The four categories of special education which are funded at a higher level than those who do not qualify for special education are increasing in numbers but generally at the rate of growth of total enrollments.
- The numbers of students who do not qualify for special education are increasing at the same rate as the total enrollment.
- The racial/ethnic distribution is slowly changing as the White non-Hispanic population declines and the Hispanic population increases.

When evaluating traditional public school (not including charter and vocational technical schools) capacity grades K-12, all school districts have adequate capacity to meet the projected needs for the 2022-2023 school year with Brandywine and Smyrna School Districts being closest to 100% capacity. There are

limitations to evaluating overall school district enrollment, additional tables can be found in Appendix I School District Capacity and projections for School Year 2022-2023.

Areas designated as Level 1 & 2 State Strategies Areas have more than an adequate amount of appropriately zoned, developable land to accommodate future school expansion needs for at the next thirty years.² Moving forward it is important for the County to continue to work with the Department of Education and school districts to make sure that there is adequate educational infrastructure to accommodate future needs.

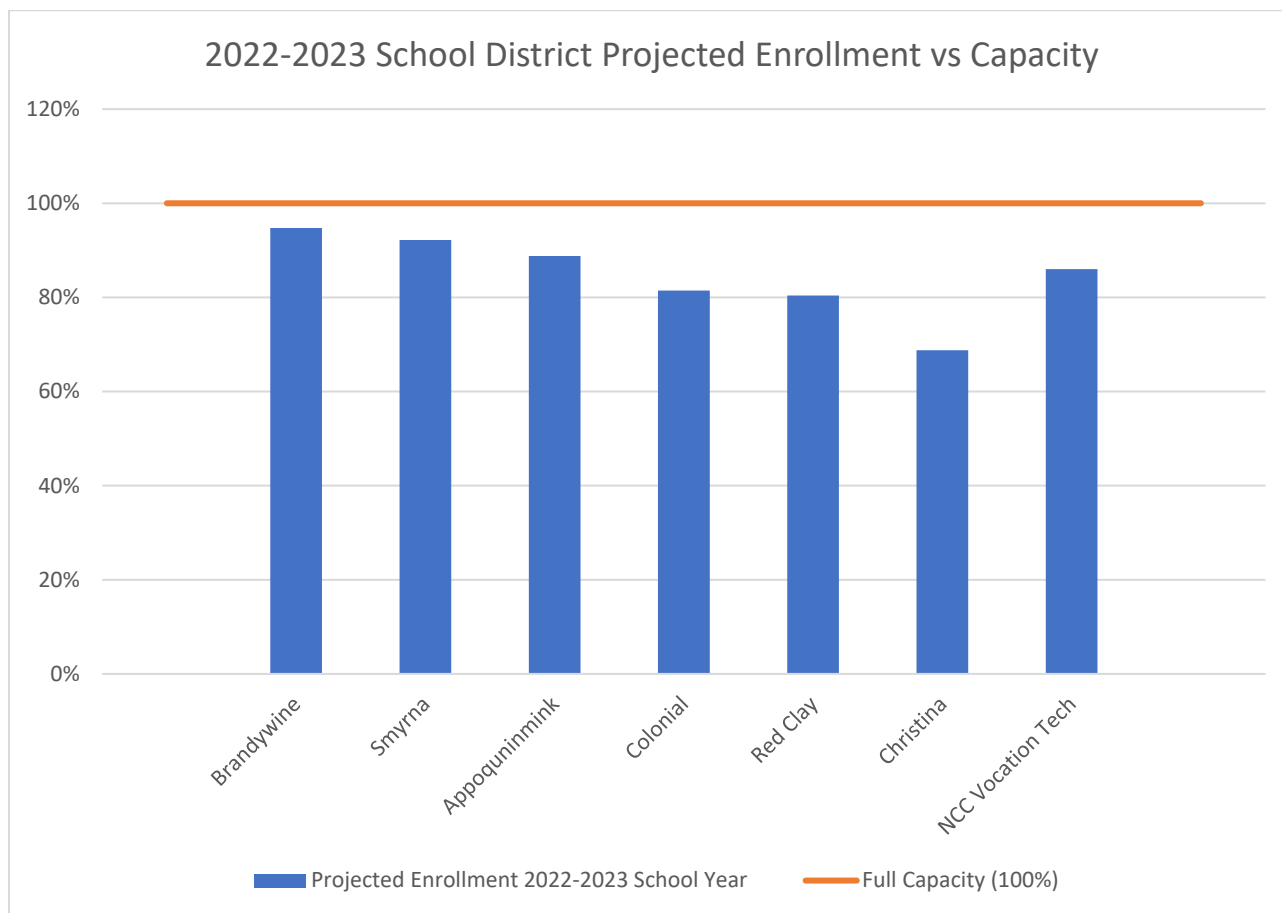


Figure 0-4: School Year 2022-2023 Projected Enrollment vs Capacity (Source: Delaware Department of Education)

² This is based on Map A-4 as well as land designated as Residential in the Future Land Use Map.

Schools are a significant public investment in construction and over time. They are important components of communities and popular school districts can attract growth. To varying degrees schools also often provide a community center role. All this is to say that maintaining and improving existing schools, and properly siting and constructing new ones is important for communities.

As part of the comprehensive plan development process this issue arose specifically in the MOT area, which has a growing school district. Much of the discussion focused on school enrollment and capacity projections, and how development regulations are linked to school capacity. Data availability and coordination between the County, school districts, Delaware Department of Education, and Delaware Office of State Planning Coordination was also discussed. As of this time, legislation is pending in the General Assembly that may require an educational element in the next comprehensive plan. Regardless of the outcome of this legislation, we believe that all schools (new and old) are important to their communities, and all would benefit with better data that is shared with all stakeholders, and more coordination and information sharing.

Municipalities within the County

New Castle County has had ongoing communications with municipalities during the comprehensive planning process through the Interagency Work Group, individual meetings, and phone calls. We discussed important intergovernmental coordination including but not limited to:

- Potential municipal growth internally and through annexation,
- Ways to coordinate gateways
 - Wilmington – East Riverfront/South Market Street area, Miller Road, and Northeast/Lea Blvd/Gov Printz corridors
 - Newark – Kirkwood Avenue and Glasgow Avenue
 - Middletown – Summit Bridge Road & Middletown & Warwick Road
- Climate Change and resource protection

Through continued outreach and coordination, we assure that county planning efforts are consistent with the vision(s) expressed at a county and municipal level.

Surrounding Jurisdictions

When planning for our future it is important to not only consider planning efforts within our boundaries but evaluate, examine, and capitalize on best practices by our neighbors. To our north important planning/preservation efforts are being made regarding watersheds and the Brandywine Greenway Chester County. Additionally, with the volume of commuters traveling from Chester County to the Wilmington area via Concord Pike, we need to factor this into our planning efforts for the Concord Pike corridor. Kent County's proposed Food Innovation Districts (Kent County 2018 Comprehensive Plan), if successful could be an interesting approach for increasing the viability of farms.

The North Claymont area is seeing a shift from heavy industrial uses to corridor type development with a mix of office, commercial and potentially residential uses, however, there has been recent heavy industrial growth in Marcus Hook (Delaware County), which need to be taken into account to assure that we provide the best protections to our residents.

As we move forward the County will continue to work with and learn from surrounding jurisdictions when developing land use policy.

Libraries

New Castle County is home to several libraries which are available for residents' use for research and learning. The mission of New Castle County Libraries is to inspire innovation and lifelong learning, advance literacy, and strengthen connections within the community. Each branch offers different community classes and activities. The libraries work to adapt and innovate in order to stay relevant to changing needs and interests, provide equitable and inclusive access to free information, and foster community engagement and outreach.

The County's library system is comprised of 16 public libraries, as noted in the FY2022 Approved Capital Program and Budget. Ten facilities are directly administered by the County (Appoquinimink, Claymont, Brandywine Hundred, Hockessin, Kirkwood, Newark, Bear, Route 9, Elsmere, and Woodlawn), and six are contractually managed (Corbit-Calloway, Delaware City, New Castle, Wilmington and its two branches, La Biblioteca del Pueblo and the North Wilmington Branch).

In 2022, New Castle County plans to open a new 26,300 square foot library facility in Middletown, which will replace the existing Appoquinimink Community Library, which is the main library serving southern New Castle County. In addition, the planned 25,000 square foot Duck Creek Library in Smyrna will replace the existing Smyrna Public Library and will serve the southernmost area of the County.

Library funding comes from multiple sources; however, the largest portion of operating funds comes from county tax revenue.

In December of 2010, the Department of Community Services completed a Library Master Plan for 2010-2030 to update the previous Master Plan for Libraries 1990-2010. This plan is designed to ensure that all residents of New Castle County will have outstanding access to public library services for many years to come. New facilities or facility updates have been developed in accordance with the Master Plan to reflect changes in population growth in the county.

The County Department of Community Services coordinates with the community through the Library Advisory Board, a 13-member board including community members and library friends' groups. The board advises the county library manager, recommends programs concerning local library needs, and assists in implementation of an effective county library system. The board also reviews and makes recommendations related to matters including new and modified administrative policies, the library budget, long-range plans, new library site selection and conceptual plans, and material changes to the master plan.

Public Safety

The New Castle County Department of Public Safety provides police services, emergency medical services (EMS) and emergency communications center services (police, fire, and EMS.) In addition, the Department provides emergency management and preparedness and victim assistance programs.

Police Services provide patrol and investigative services for the unincorporated areas of New Castle County. They respond to the immediate needs of communities with a problem-solving approach. This places the County's police in more direct contact with the community members served, as demonstrated by community policing sub-stations, mounted, foot, motorcycle, and bicycle patrols.

To provide more proactive and community-oriented police service, studies conducted externally and in-house indicate the County would benefit from a significant increase in staffing. In early 2021, County Council approved expanding the police force by 15 officers. The new officers were part of the police academy class which started in May 2021. The expansion helped to meet the staffing demands of the

body camera program, specialized units including the behavioral health unit, and to address population growth.³

New Castle County Emergency Medical Services provides pre-hospital advanced life support services. This paramedic service significantly increases survivability from a medical emergency or traumatic emergency. In addition to emergency response, the department provides public information, education, and public relations aimed to increase quality of life within the County. Activities include the promotion of prevention and proper response to medical emergencies, CPR training, Heroin Alert Program, Delaware Resuscitation Academy, special event medical coverage, and the distribution of “Vial of Life” kits to senior citizens.

As our population grows, so does the need for emergency services, increasing the calls into the 9-1-1 center for assistance. The lifeline to these services is the Emergency Communications Center, also known as the 9-1-1 Center. 9-1-1 takes calls from all New Castle County residents, businesses, and people traveling through New Castle County, both in the unincorporated areas and in the towns and cities, except for Newark and Wilmington.

New Castle County is the first 911 center in the state to offer [Smart911](#) capabilities. Smart911 is a free service that allows residents to create a Safety Profile for their households to include any information that emergency responders would need in the event of an emergency. When anyone in the household dials 911 from the phone(s) associated with the profile, the profile information is displayed to the 9-1-1 operator to facilitate the proper response to the proper location.

Volunteer fire companies provide fire protection services under an agreement with the New Castle County government, resulting in large savings for the taxpayers of New Castle County. New Castle County has established impact fees for infrastructure improvements and provides annual funding to ensure fire protection facilities keep pace with demand.

The Office of Emergency Management (OEM) is charged with preparing New Castle County and the public to manage activities before, during, and after the impact of natural and technological disaster agents to protect lives and property within the County. The Office operates under the concept of Comprehensive Emergency Management, which applies to all types of hazards and requires a partnership among all levels of government, the private sector, industry, voluntary organizations, and the public. Additional details about the County emergency preparedness efforts are found in the [Climate Change/Hazard Mitigation element](#).

All goals, objectives, and strategies included in this Comprehensive Plan must not be implemented in a vacuum. These efforts will require support and participation from agencies, organizations, and partners across New Castle County and the state. Even the development of this plan was coordinated with a variety of partners. Involving and coordinating with our diverse partner organizations will facilitate better, innovative, and cooperative solutions to improve all aspects of our communities included in this plan, including sustainable and effective investments in transportation networks, economic and community development, and environmental protection.

Waste Disposal and Recycling

Trash and recycling service, unincorporated New Castle County is addressed by private waste haulers. Delaware State Code requires that waste haulers provide not only disposal services but also recycling services. New Castle County needs to work with these companies to make sure that there is adequate disposal and recycling capabilities and capacity to serve future residents. Additional information can be found at: <https://dnrec.alpha.delaware.gov/waste-hazardous/recycling/>.

³ New Castle County’s police department gains 15 positions, Sophia Schmidt, Delaware Public Media, Feb. 10, 2021, <https://www.delawarepublic.org/politics-government/2021-02-10/new-castle-countys-police-department-gains-15-positions>

Related Goals, Objectives, and Strategies

17. Goal: Development, infrastructure, and change is well-planned and coordinated, achieving sustainable and effective public investment in our communities.

17.1. Objective: Planning/investment decisions integrate across governments and jurisdictions.

- 17.1.1. Strategy: Enable joint planning areas and agreements, working with State and municipal governments
- 17.1.2. Strategy: Establish a county-based economic development group with state and local jurisdictions
- 17.1.3. Strategy: Coordinate with intergovernmental partners (states, region, and municipalities), especially about environmental issues
- 17.1.4. Strategy: Work in partnership with intergovernmental agencies to achieve shared, regional goals for land use and design
- 17.1.5. Strategy: Expand government-nonprofit-private partnerships to help advance NCC@2050
- 17.1.6. Strategy: Coordinate land use regionally with adjacent municipal comprehensive plans, directing growth to existing downtowns and areas with existing infrastructure
- 17.1.7. Strategy: work collaboratively with state and local government to prepare for, test, and adopt new technology and associated change in our communities (e.g. CAV transportation technology, Internet of Things, etc.)
- 17.1.8. Strategy: Collaborate with towns to develop place-based approaches to economic development, building on community assets (e.g., local food, agritourism, strong schools, green economy, etc.) and infill.
- 17.1.9 Strategy: Work with the State Department of Education, local school districts, and places of higher education to provide up to date enrollment information and projections and to assure NCC residents are prepared for the jobs of the future.

17.2. Objective: Increase collaboration associated with data/analysis and public engagement.

- 17.2.1. Strategy: work across agencies/jurisdictions to establish a shared public input platform to help bring together the community and all levels of government in in public decision-making (e.g. BeHeard Philly)

17.3 Objective: Achieve greater predictability regarding future development

- 17.3.1. Update the approach for rezonings and Future Land Use Map (FLUM) changes so zoning conforms to the FLUM
- 17.3.2 Refine zoning district descriptions to provide clarity regarding sewer services

17.4 Objective: Provide improved emergency services; types of equipment and response time to meet future demands.

- 17.4.1. Strategy: Provide capacity and facilities for emergency and police services by monitoring the need for police stations on a regular basis, specifically in southern New Castle County.

Once it has been determined that a police station is needed, the location should be determined based on response time and visibility.

- 17.4.2. Strategy: Ensure emergency and police services capacity and funding is available as population grows by re-evaluating impact fee to ensure the monies levied from new development adequately address the impact of increased demand for fire, EMS and police expansion and service.

See Also:

Utilities, Water, and Sewer Element, Goal 3

Mobility Element, Goal 8, 9 & 11

Community Planning and Design Element, Goals 10

Climate Change and Hazard Mitigation Element, Goal 13, 14 & 15

Environmental and Social Justice, Goal 16

APPENDIX A: _____

2012 Future Land Use Map, Current Zoning Map and Protected Lands

Chester County

Delaware County

Gloucester County

Salem County

Cecil County

Kent County

Kent County

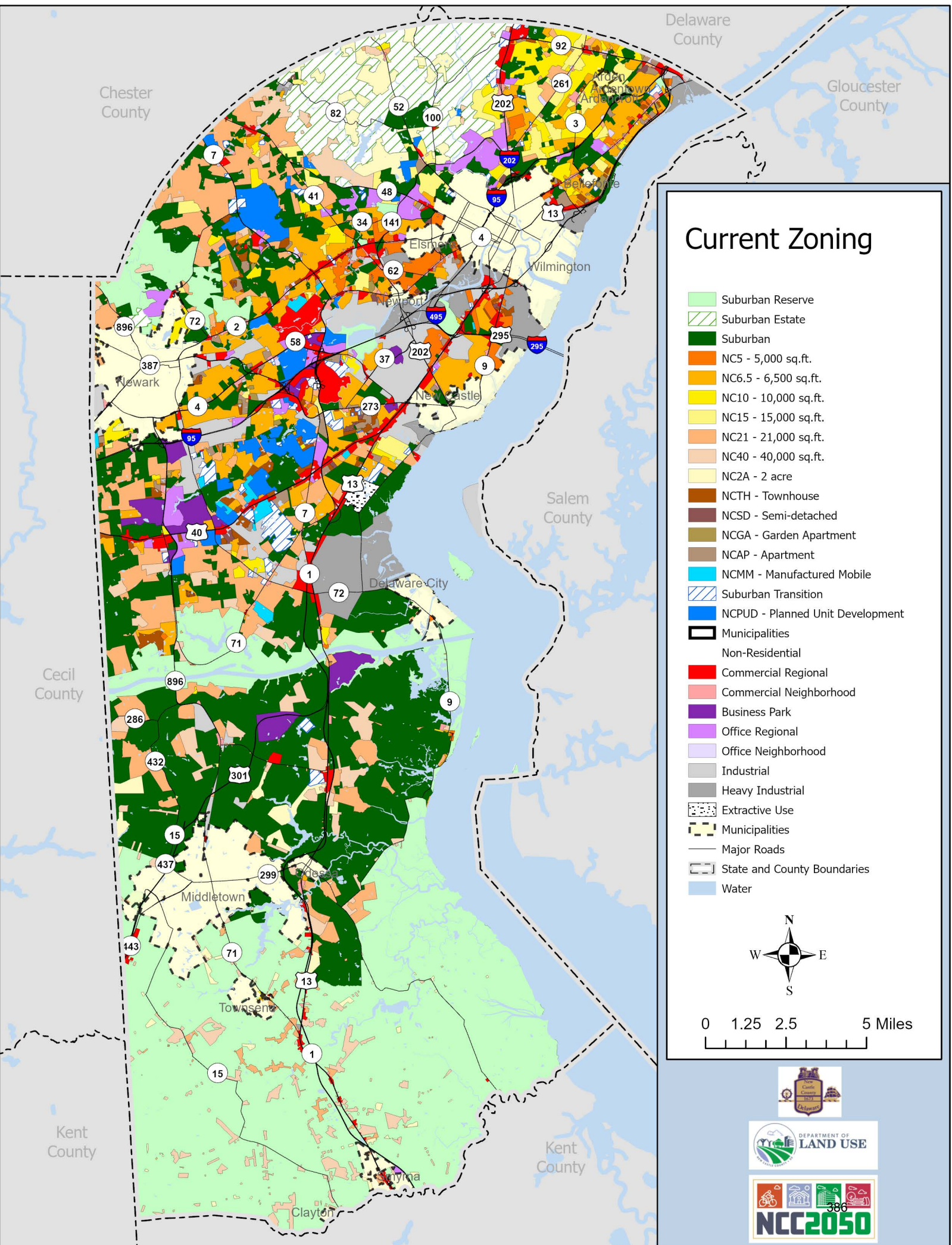
2012 Future Land Use

- MUNICIPAL LAND
- HIGH DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- LOW DENSITY RESIDENTIAL
- VERY LOW DENSITY RESIDENTIAL
- HEAVY INDUSTRIAL ZONED LAND
- COMMERCIAL/OFFICE/INDUSTRIAL DEVELOPMENT AREA
- NEW COMMUNITY DEVELOPMENT
- RESOURCE & RURAL PRESERVATION
- State and County Boundaries
- Major Roads
- Water



0 1.25 2.5 5 Miles





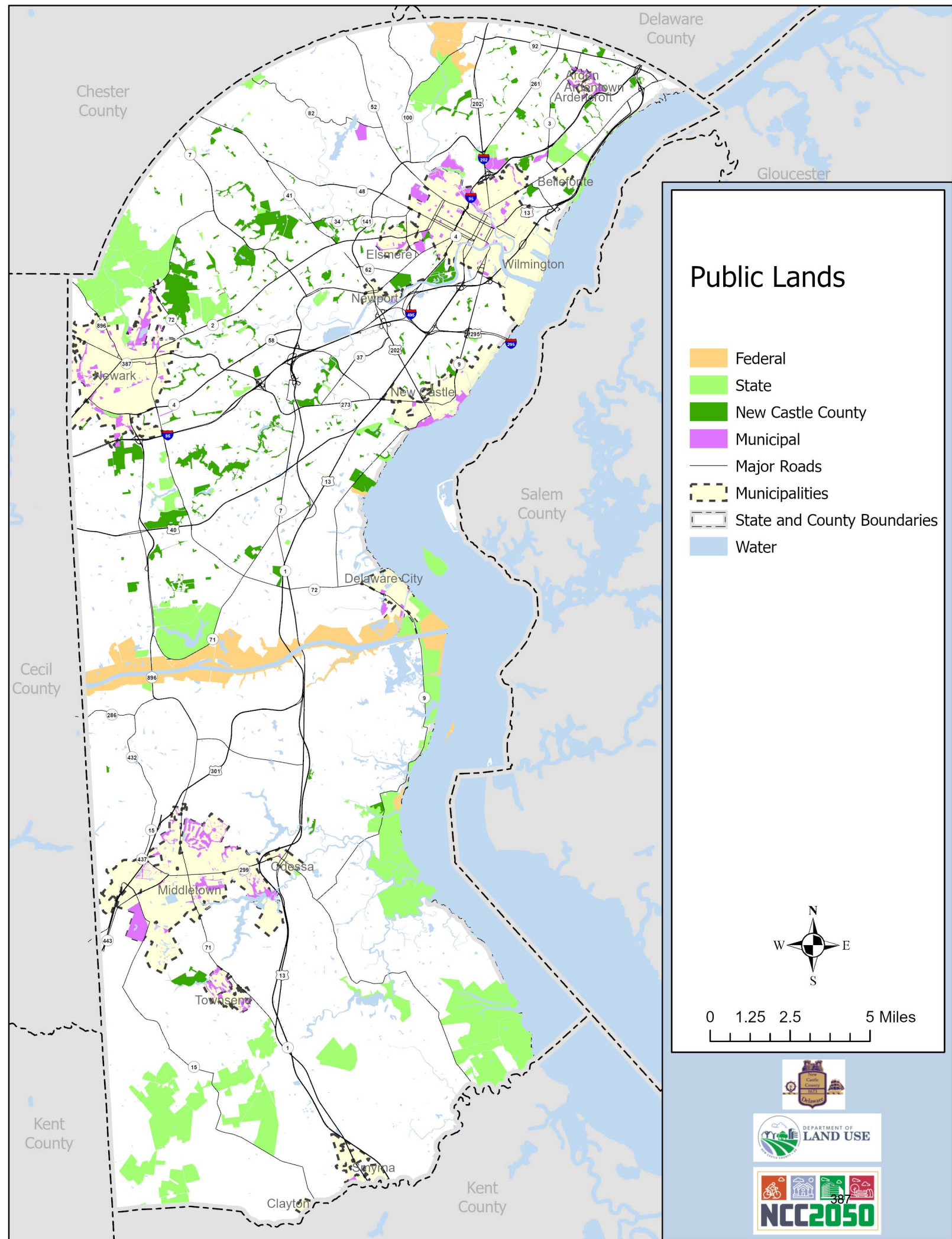
Current Zoning

- Suburban Reserve
- Suburban Estate
- Suburban
- NC5 - 5,000 sq.ft.
- NC6.5 - 6,500 sq.ft.
- NC10 - 10,000 sq.ft.
- NC15 - 15,000 sq.ft.
- NC21 - 21,000 sq.ft.
- NC40 - 40,000 sq.ft.
- NC2A - 2 acre
- NCTH - Townhouse
- NCSD - Semi-detached
- NCGA - Garden Apartment
- NCAP - Apartment
- NCMM - Manufactured Mobile
- Suburban Transition
- NCPUD - Planned Unit Development
- Municipalities
- Non-Residential
- Commercial Regional
- Commercial Neighborhood
- Business Park
- Office Regional
- Office Neighborhood
- Industrial
- Heavy Industrial
- Extractive Use
- Municipalities
- Major Roads
- State and County Boundaries
- Water



0 1.25 2.5 5 Miles





APPENDIX B: _____

NCC2050 Goals Matrix



	Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
1. Goal: New Castle County has a connected, well-maintained and well-loved network of open space (natural lands and recreational resources) that benefits all residents.	✓			✓	✓			✓				✓	✓
1.1. Objective: Preserve at least a minimum of 7,100 acres land as protected open space in the county, with in 30 years.	✓			✓	✓			✓				✓	✓
1.1.1. Strategy: Establish the New Castle County Open Space Advisory Board in partnership with the state Open Space Preservation Council and implement the 2020 Land Preservation Task Force Report recommendations including funding sources and public private partnerships.	✓			✓	✓								
1.1.2. Strategy: Develop a Land Preservation and Stewardship Master Plan with weighted project selection criteria	✓			✓	✓								
1.1.3. Strategy: Develop policies and initiatives that coordinate/integrate open space across adjacent developments.	✓			✓	✓			✓					
1.1.4. Strategy: Strategically create open space in developed areas to equitably increase green infrastructure, resiliency, and access to open space/recreation, such as the south Wilmington wetland park. Place emphasis on greening in underserved areas and coordinate with regional planning initiatives, such as the Brandywine-Struble Greenway Plan, Delaware River Program, Christina and Brandywine River Remediation, Restoration and Resilience Plan, and Chesapeake Bay Program	✓			✓	✓							✓	✓



Goal/Objective/Strategy													
	Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
1.1.5. Strategy: Link agricultural land preservation, open space, and land use strategies, including strategic programs that leverage diverse partnerships to preserve open space, resource and agricultural lands. For example: Where appropriate, permit passive open space, which is required by residential land development plans, to be preserved by a permanent agricultural land preservation easement and leased for agricultural use.	✓			✓	✓			✓					
1.1.6. Strategy: Consider adding a preservation zoning category (greater than 5-acre minimum lot size)	✓			✓	✓			✓					
1.2. Objective: Increase the percentage of residents that have safe, comfortable access (within 1 mile using a low-stress, accessible route) to a variety of recreational opportunities and natural spaces without the requirement of a personal automobile.	✓			✓	✓			✓			✓		✓
1.2.1. Strategy: Implement the NCC Bike Plan, track progress, and keep the plan up to date. Coordinate with local, regional and state initiatives, such as Blueprint for a Bicycle-friendly Delaware, the Brandywine-Struble Greenway Plan, East Coast Greenway Plan, Connecting Communities Plan, and Mill Creek Neighbors for Safer Pathways.	✓							✓					
1.2.2. Strategy: Ensure safe, comfortable non-motorized facilities, particularly key connections in the network, are included in development and redevelopment plans.	✓							✓					



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
1.2.3. Strategy: Develop a countywide long-range Parks Master Plan that includes assessment of multi-modal and equitable access to parks and clean water recreational opportunities, as well as monitoring and tracking progress.	✓			✓	✓							
1.2.4. Strategy: Identify communities, especially in dense residential areas, that have inadequate access to open space and recreational opportunities and prioritize preservation and design of open space areas adjacent to these communities. The County should use the vacant property list to evaluate park expansions in Environmental Justice Communities.	✓			✓	✓			✓			✓	✓
1.2.5. Strategy: Ensure that existing parks and open space are sufficient to serve the population through updating equipment, maintaining existing infrastructure, and ensuring a safe and clean park experience for all.	✓			✓	✓							✓
2. Goal: The natural environment of the county continues to be a distinguishing characteristic of our community, and the quality of our natural resources— air, water, land, ecosystems (plants and animals)—are continually improving and meeting the needs of present and future generations. Development/redevelopment patterns that consume less unbuilt “greenfields” and resource lands support conservation of our important natural resources.	✓			✓							✓	✓



Goal/Objective/Strategy													
	Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
2.1. Objective: The County shall set an example and evaluate ways to address the impact of development on micro- (e.g. local air quality) and macro-climate conditions (e.g. greenhouse gases) and achievement of State/Federal air quality standards.	✓										✓	✓	
2.1.1. Strategy: Engage the full breadth of sectors and communities across the county in a sustainability action agenda/working group (Refer to Environmental Justice, Climate Change, and Emergency Preparedness/Hazard Mitigation/Resiliency goals and objectives)	✓												✓
2.2. Objective: Improve surface water quality and reduce stormwater runoff from developed lands, with recognition that community revitalization and stream/ecosystem restoration are linked.	✓			✓							✓		
2.2.1. Strategy: Eliminate parking minimums for certain smaller buildings and in town centers; establish parking caps.	✓			✓									
2.2.2. Strategy: Discourage development in areas that lack water and/or sewer service	✓			✓									
2.2.3. Strategy: Conduct watershed-based planning with associated policies and programs, including incentives that focus on improved stormwater management facilities on existing sites, application of ecosystem services, and retrofitting with green stormwater infrastructure.	✓			✓							✓		
2.2.4. Strategy: Establish a stormwater utility to fund and optimize stormwater BMP implementation and ongoing maintenance.	✓			✓							✓		



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy

2.3. Objective: Improve ecosystem health by reducing sprawl and fragmentation, reconnecting open space, enhancing ecosystems, and applying green stormwater infrastructure strategies (while our economy and population continues to grow).	✓			✓				✓			✓	
2.3.1. Strategy: Encourage more compact growth patterns, focusing development in areas that are already served by infrastructure (water, sewer service, road network, etc.)	✓			✓				✓			✓	
2.3.2. Strategy: Continue to review and update development and property management code requirements to ensure flexibility in landscaping materials (e.g. native vegetation, pollinator gardens, and ecologically friendly landscaping)	✓			✓							✓	
2.3.3. Strategy: Encourage/incentivize use of native species and habitat-oriented landscapes through innovative conservation strategies, including homeowner education and incentive programs (e.g. cost-share program to convert lawn or non-natives to native pollinator gardens and meadows). Consider evaluation of County owned properties for existing native and invasive species.	✓			✓								
2.3.4. Strategy: Collaborate with DNREC and other organizations to further protect Critical Natural Areas and State Resource Areas. Offer full support to DNREC in reevaluation of natural areas.	✓			✓								
2.3.5. Strategy: Promote farming practices that protect the natural environment	✓			✓								



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
2.3.6. Strategy: Continue to partner with the State, Federal government, and other nonprofit agencies on agricultural preservation with a targeted approach to select land to be preserved	✓			✓								
2.3.7. Strategy: Support youth agriculture education programs	✓			✓								
2.3.8. Strategy: Consider an amendment to the Unified Development Code to address forest fragmentation placing an emphasis on contiguous forest habitats.	✓			✓								
2.3.9. Strategy: Promote and encourage the participation in the Natural Areas Preservation Program with the DNREC Division of Parks and Recreation, Office of Nature Preserves.	✓											
2.3.10 Strategy: Work with New Castle County Department of Public Works and DNREC Division of Parks and Recreation's Office of Nature Preserves to assess habitat conditions in public parks for wildlife, invasive species, and signs of degraded habitat such as litter, water pollution, and loss of ecosystem function, then develop strategies to restore or enhance public natural resources.	✓											
2.4. Objective: Increase tree-canopy to 40%, prioritizing areas with the lowest canopy cover and greatest potential benefits (e.g. urban heat island, flooding, etc.)	✓			✓				✓			✓	✓



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
2.4.1. Strategy: Establish an incentive-based program with private and non-profit partners to support property owners planting and maintaining healthy tree cover (e.g. subsidize cost of trees for property owners, Pennsylvania Horticultural Society's Tree Tender program)	✓			✓								
2.4.2. Strategy: Implement effective reforestation regulations that ensure trees are planted with new development and redevelopment and are sustained over the long term. Evaluate effectiveness and opportunities to increase effectiveness, such as through incentives. Consider including a tree-bank/fee-in-lieu of program.	✓			✓				✓				
2.4.3. Strategy: Evaluate and incentivize forest protection standards to maximize tree canopies for heat abatement and ensure that high-quality forest habitat is preserved, particularly mature forests and "heritage" trees.	✓			✓								
2.4.4. Strategy: Work to advance the Delaware Forest Service's 1 Million Trees initiative, Urban and Community Forestry Program, and Tree for Every Delawarean Initiative (TEDI) by coordinating with national, state, and local partners.	✓			✓								
3. Goal: Clean water is available to all residents now and in the future.	✓		✓	✓							✓	
3.1. Objective: Continue to ensure water services and drinkable water supply is sufficient to meet demand.	✓		✓	✓								



Goal/Objective/Strategy	Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
3.1.1. Strategy: Continue to work with the Water Supply Coordinating Council, DNREC and the Water Resources Center at the University of Delaware to monitor the water supply, evaluate changing demands and influences, and ensure availability now and for future generations.	✓		✓	✓							✓		
3.1.2. Strategy: Consider additional safeguards for Water Resource Protection Areas (WRPAs) and the public water supply.	✓		✓	✓									
3.1.3. Strategy: New Castle County government leads by example and through community partnerships, implementing water-saving techniques and best practices, such as low-water landscaping, water-saving technology in buildings, rain barrel program, etc.	✓		✓	✓									
3.1.4. Strategy: Work with water purveyors, utilities, and public service commission to look for opportunities to connect to public water supply as part of a strategy to prevent water supply disruptions in those communities of 25+ units that were developed on private well system prior to the code requirement being added.	✓		✓	✓							✓		
3.1.5. Strategy: Work with water purveyors to interconnect between and within systems, add new finished water storage and aquifer storage and recovery, and transport water from aquifers with excess availability south of Townsend to growth areas between Middletown/Odessa and the Chesapeake & Delaware Canal.	✓		✓	✓							✓		



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
3.1.6. Strategy: Work with DNREC to monitor demands and water levels from allocated public water supply wells and irrigation wells so as not to diminish the capacity of irrigation wells for producers that wish to sustain farming in southern New Castle County.	✓		✓	✓								
3.2. Objective: Continue to maintain efficient and effective sanitary sewer service in existing areas served by sewer and extend service to new areas, as planned, to meet growth demands in a sustainable manner.	✓		✓	✓								
3.2.1. Strategy: Encourage new development within Sewer Service Areas and regulate septic use for low-density development consistent with County Septic Policy.	✓		✓	✓								
3.2.2. Strategy: Delineate a Growth Area Boundary and amend the Sewer Service Area Map to include areas planned and not planned for sewer service (including definitions that provide clarity and predictability).	✓		✓	✓								
3.2.3. Strategy: Designate areas for growth and areas for preservation, working collaboratively with the Office of State Planning Coordination	✓		✓	✓								
3.2.4. Strategy: NCC and incorporated towns should continue coordination and collaboration on development, infrastructure, and policies to support efficient/effective provision of sewer and water, including using joint planning areas.	✓		✓				✓					



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
3.2.5 Strategy: Update Chapter 38 of the County Code (which covers sewers and sewage disposal) and Public Works policies to achieve consistency with the UDC and the NCC2050 Comprehensive Plan.	✓		✓									
4. Goal: Healthy, safe housing options throughout the County are diverse, meeting needs of people of all incomes, ages, abilities, and races, while maintaining design and form of the built environment that integrates with existing communities.	✓					✓		✓				✓
4.1. Objective: Increase variety and range of price-points of safe, quality housing options, in a diversity of locations.	✓					✓		✓				
4.1.1. Strategy: Enable/encourage greater range of housing types in exclusive residential zones, including Accessory Dwelling Units (ADUs), duplexes, and multiplexes.	✓					✓		✓				
4.1.2 Strategy: Modify existing ADU provisions by removing regulatory barriers. Eliminate the limit on the percentage of permitted ADUs in the county, as well as assess current lot size requirements for detached ADUs.	✓											
4.1.3. Strategy: Enable and pursue innovative housing types to help meet demand now and in the future.	✓					✓		✓				
4.1.4. Strategy: Require moderately-priced dwelling units (MPDUs) in by-right residential developments of 15 units or more. Model after Montgomery County, MD, and their MPDU program.	✓					✓		✓				✓



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy

4.1.5. Strategy: Using the market value analysis (MVA) and other data, identify priority areas and areas of opportunity and implement affordable and moderately priced housing efforts there to achieve better distribution of housing types and price points along with accessibility to daily needs (jobs, transit, school, etc.). Consider establishing sliding scale for MPDU requirements. For example, in parts of the county better served by affordable housing fewer MPDUs are required, and in areas with fewer affordable units more MPDUs are required.	✓					✓						✓
4.2. Objective: Increase proximity of quality housing to other daily needs throughout the county, especially jobs and quality education, to support overall cost of living affordability. Better balance of jobs and housing can support residents and their access to both quality/affordable living and living-wage jobs as well as employers and their workforce.	✓					✓		✓				
4.2.1. Strategy: Incentivize mixed-use development areas that balance jobs, housing, shopping and services at varying income levels.	✓					✓		✓				
4.2.2. Strategy: Support the creation and enhancement of transit-oriented development and mixed income development, such as by allowing multi-family housing within a distance of all transit centers/stations and specific transit lines.	✓					✓		✓				



Goal/Objective/Strategy													
	Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
4.2.3. Strategy: Advance Universal Design to support aging in place by allowing for by-right Accessory Dwelling Units (ADU) and evaluate current development bonuses for age-restricted housing.	✓					✓							
4.2.4. Strategy: Designate target growth areas and encourage development in those places where transit, water, and sewer infrastructure already exists. Also ensure there is consistency as the transportation investment area map (part of the regional transportation plan) to include areas in the county where transit and transit supportive infrastructure exists (e.g. Newport, Churchman's Crossing, Claymont).	✓					✓		✓					
4.2.5. Strategy: Update Chapter 38 and Public Works policies to achieve consistency with the UDC and Comprehensive Development Plan updates.	✓					✓							
4.2.6. Strategy: Update the Unified Development Code to clearly differentiate between zoning districts intended to receive sewer service and districts that will not.	✓					✓							
4.2.7. Strategy: Work with the Neighborhoods and Fair Housing Association to promote and support the Fair Housing Law to guide fair housing practices.	✓					✓							✓
4.3. Objective: Expand access to homeownership, especially among low-income residents and people of color	✓					✓							✓
4.3.1 Strategy: Reduce regulatory barriers and processes that unnecessarily increase the cost of housing or delay/prevent its development.	✓					✓							✓



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy

4.4. Objective: Upgrade the condition of substandard housing stock—including integration of green energy—throughout the county, without causing displacement.	✓					✓						
4.4.1. Strategy: Work with local communities to create partnerships to help communities establish and advance a neighborhood vision, including supporting and funding the upgrade and installation of environmentally friendly design elements and energy conservation in existing homes.	✓					✓		✓				
4.4.2. Strategy: Work with housing agencies to identify and monitor for displacement/gentrification and proactively implement strategies to prevent it.	✓					✓						
4.4.3. Strategy: Work with residential real estate industry to establish energy disclosure reporting (e.g. Truth in Sale of Housing and Time of Rent energy disclosure) to provide homeowners, prospective buyers, and renters with the general energy performance of a home/unit and provide recommendations on what could be done to improve the energy efficiency.	✓					✓						
4.4.4. Strategy: Provide support and funding for home repairs for low- and middle-income households while providing protections from foreclosures or sheriff's sale for homeowners whose residence has code violations.	✓					✓						✓
4.4.5 Strategy: Ensure that Housing Trust Funds are distributed equitably.	✓											



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
5. Goal: New Castle County is a strong, resilient hub of the regional economy that provides a range of jobs and services to County residents.	✓	✓						✓		✓		
5.1. Objective: Promote business clusters by focusing resources and policies toward retaining and growing businesses in discrete sectors that advance the County's economic strengths.	✓	✓							✓			
5.1.1. Strategy: Support emerging business (green jobs, warehousing/logistics, startups, other areas where demand from the market is growing) to complement traditional industry and business in the County (business services, agriculture, banking, chemical, healthcare, etc.)	✓								✓			
5.1.2. Strategy: Work with other agencies and partners to focus transportation and other investments in the built environment that support and attract local business, such as corridor reinvestment, streetscape enhancement, tech infrastructure, etc.	✓	✓							✓			
5.2. Objective: Achieve a diverse and supportive business ecosystem.	✓	✓							✓			
5.2.1. Strategy: Support small business and entrepreneurship	✓								✓			
5.2.2. Strategy: Encourage community-based economic development and revitalization	✓						✓		✓			
5.2.3. Strategy: Grow a diverse portfolio of employers/businesses, especially those owned by female and minority entrepreneurs.	✓								✓			



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
5.2.4. Strategy: Create spaces where employees can connect to work (remote) for employers that are located beyond the county to reduce long commutes and foster access to employment.	✓									✓		
5.2.5. Strategy: Enhance and promote the County's high quality of life (schools, natural amenities, transportation, character, built environment) to retain and attract a skilled workforce and new businesses	✓	✓								✓		
5.2.6. Strategy: Increase access to modern infrastructure and emerging/ new technology (e.g. renewable energy transportation, Connected/ Autonomous vehicles, microtransit, high speed internet, green energy, etc.)	✓	✓								✓		
5.3. Objective: Increase the percentage of jobs located in Delaware Level 1 State Strategies Investment Areas, ensuring job centers are located near inclusive transit options and existing infrastructure/services.	✓							✓		✓		
5.3.1. Strategy: Encourage redevelopment of industrial land, strip malls, office parks, and other "greyfields" to strengthen community cohesion, environmental quality, fiscal productivity, and quality of life	✓							✓		✓		
5.3.2. Strategy: Enact land use policies and regulations that incentivize infill and redevelopment in and around job centers	✓									✓		
5.3.3. Strategy: Evaluate the existing Economic Empowerment District (EED) regulations in County code and update/enhance and promote. Consider identifying target areas for application.	✓									✓		



Goal/Objective/Strategy													
	Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
5.3.4. Strategy: Increase industries that generate green, quality jobs (toward addressing climate change, creating good jobs, employing locals)	✓								✓				
6. Goal: All residents have the ability to participate in the economy and have access to living-wage jobs. Delaware's workforce is strong and positioned for emerging industry and jobs as well as applying innovation and adaptation in traditional industries.	✓					✓			✓				✓
6.1. Objective: Increase equitable access to workforce, educational and economic opportunities (see also Housing and Environmental/Social Justice elements).	✓					✓			✓				✓
6.1.1. Strategy: Require that new neighborhoods have access to internet at speeds adequate to facilitate education and occupational needs at home; address underserved areas.	✓					✓			✓				✓
6.1.2. Strategy: Work with a full range of stakeholders (traditional business leaders, community members, surrounding governments, and others) to strengthen the regional economy around our existing assets and incentivize investment in areas that have experienced disinvestment	✓								✓				✓
6.2. Objective: As economic growth occurs, increase distribution of benefits across the community.	✓					✓			✓				✓
6.2.1. Strategy: Support the creation of Community Benefits Agreements to support residents' voices in development/redevelopment	✓					✓			✓				✓



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
6.2.2. Strategy: As the retail economy shifts away from brick and mortar and toward delivery-based, ensure sufficient access to goods and services	✓									✓		✓
6.2.3. Strategy: Evaluate the impact of nonresidential development on clean air, water, and soil to enact regulations where appropriate especially focused on the disproportionately larger impact in Environmental Justice communities	✓				✓				✓			✓
7. Goal: Farming continues to be a viable way of life and contributes to economic resiliency and healthy communities (for its provision of food access and security, its preservation of farmland, and contribution toward community character).	✓			✓					✓			
7.1. Objective: Increase the amount of preserved, contiguous farmland and amount of prime soil protected from development.	✓			✓					✓			
7.1.1. Strategy: Establish the New Castle County Agricultural Preservation Committee and develop methodology and criteria to prioritize County funding for agricultural land preservation based on best practices, and implement the 2020 Land Preservation Task Force Report recommendations	✓			✓					✓			
7.1.2. Strategy: Support agricultural economic development opportunities such as farm to table and urban agriculture connecting local customers to farmers directly.	✓								✓			
7.1.3 Strategy: Establish/revise land use regulations to permit farmers to not only develop their property but retain a portion required for passive open space as farmland under an agricultural preservation easement.	✓								✓			



				<div>Future Land Use</div> <div>Mobility and Transportation</div> <div>Utilities, Water, Sewer</div> <div>Conservation</div> <div>Open Space, Recreation</div> <div>Housing</div> <div>Intergovernmental Coordination</div> <div>Community Planning and Design</div> <div>Historic Preservation</div> <div>Economic, Community Development</div> <div>Capital Improvements</div> <div>Climate, Resiliency, Hazard Mitigation, Emergency Preparedness</div> <div>Environmental and Social Justice</div>									
Goal/Objective/Strategy													
8. Goal: All New Castle County residents will have safe, efficient, inclusive access to employment, retail services, parks, and other daily needs including by walking, bicycling, public transit, and emerging modes. The transportation and land use systems are integrated and support each other to create livable places and a vibrant county.	✓	✓			✓		✓	✓		✓		✓	✓
8.1. Objective: Establish a Vision Zero policy and coordinate with DeIDOT and WILMAPCO toward reaching zero traffic fatalities by 2050.	✓	✓						✓					
8.1.1. Strategy: Support DeIDOT & WILMAPCO’s efforts to address crash hot spots (including pedestrians, bicyclists, and motorcyclists) through safety improvements, such as traffic calming features and roundabouts	✓	✓					✓	✓					
8.1.2. Strategy: Encourage DeIDOT to utilize Intelligent Transportation System (ITS) infrastructure/services and associated technology to improve traffic operations, transit services, and safety	✓	✓					✓						
8.2. Objective: Enhance and increase accessibility by all modes to/between local and regional destinations, including diverse housing, jobs, and goods/ services.	✓	✓			✓					✓			✓
8.2.1. Strategy: Implement the County's Bike Master Plan to Increase the miles of safe, convenient, connected pedestrian/bicycle transportation network; monitor and update the plan at 5 years.	✓	✓			✓			✓				✓	
8.2.2. Strategy: Create pedestrian- and bicycle-friendly streetscapes	✓	✓						✓				✓	



		<div> <div>Future Land Use</div> <div>Mobility and Transportation</div> <div>Utilities, Water, Sewer</div> <div>Conservation</div> <div>Open Space, Recreation</div> <div>Housing</div> <div>Intergovernmental Coordination</div> <div>Community Planning and Design</div> <div>Historic Preservation</div> <div>Economic, Community Development</div> <div>Capital Improvements</div> <div>Climate, Resiliency, Hazard Mitigation, Emergency Preparedness</div> <div>Environmental and Social Justice</div> </div>											
Goal/Objective/Strategy													
8.2.3. Strategy: Adopt best-suited metrics of accessibility with regulations and policies (VMT per capita, trip-based delay, etc.)		✓	✓					✓					
8.2.4. Strategy: Prioritize target areas and facilitate public and private investment to improve multi-modal accessibility (community area master plans, CCEDs, TIDs, around transit stations)		✓	✓					✓	✓				
8.2.5. Strategy: Require interconnection of streets within developments and existing streets and transportation networks		✓	✓						✓				
8.2.6. Strategy: Incentivize mixed-use and transit oriented/supportive development areas that balance mix of jobs, housing, and other uses that support access to daily needs. (See Economic Development and Housing elements)		✓	✓						✓		✓		
8.2.7. Strategy: Reevaluate standards and threshold requirements linking transit provision and development		✓	✓						✓				
8.2.8. Strategy: When reviewing age-restricted developments, work with DeIDOT and DTC to evaluate paratransit needs and opportunities for fixed route connectivity rather than expanding paratransit.		✓	✓					✓	✓				
9. Goal: Transportation of people and goods is efficient and fair. The transportation system and land use/development are coordinated; development occurs in areas with ample existing or planned transportation infrastructure (and other infrastructure) and decisions are fiscally sound, inclusive, and fair for present and future generations.		✓	✓					✓	✓			✓	✓



	Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
Goal/Objective/Strategy													
9.1. Objective: Preserve existing roads and transportation infrastructure, while limiting widening and creation of new multi-lane roadways. Make the best use of our past investments and their capacity through innovation and collaboration.	✓	✓				✓	✓				✓		
9.1.1. Strategy: Prioritize multimodal transportation connection opportunities when reviewing rezoning applications for residential transition zones (ST) and regional non-residential districts (CR, OR, BP, I, and HI)	✓	✓				✓	✓				✓		
9.1.2. Strategy: Work with DeIDOT to mitigate the impacts of e-commerce expansion and related demands on the road network, final-mile network, and around new distribution facilities, and where possible prevent/eliminate heavy truck travel through existing residential communities.	✓	✓					✓						✓
9.1.3. Strategy: Foster an understanding that infrastructure costs not only to build or install, but there is also an obligation and expense to maintain.	✓	✓				✓							
9.1.4. Strategy: Work with DeIDOT and WILMAPCO to account for final mile networks in plan reviews by integrating the checklist developed in the Statewide First/Final Mile Network Study to help land use agencies in accounting for final mile freight provisions.	✓	✓											
9.1.5. Strategy: Prioritize freight connectivity for areas/industries in Freight Intensive Sectors (FIS) (40% of all employment in Delaware) that are highly dependent on goods movement for marketplace competitiveness.	✓	✓											



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
9.1.6.Strategy: Support the implementation of the WILMAPCO 2021 Delaware Statewide Truck Parking Study.	✓	✓										
9.1.7.Strategy: Work with WILMAPCO and DeIDOT to plan for connected and automated vehicle (CAV) technology, including infrastructure development to facilitate Level 4 autonomy (i.e., trucks operating without a human driver under limited conditions)	✓	✓										
9.2. Objective: Plan for emerging transportation modes and technologies (e.g. renewable energy-based, autonomous, e-bikes/scooters, etc.) to leverage benefits and minimize potential negative externalities; embrace technology designed to address existing infrastructure issues, benefit the environment, and improve how people experience travel.	✓	✓					✓	✓			✓	
9.2.1. Strategy: Support transition to electric and other renewable and efficient vehicles	✓	✓					✓				✓	
9.2.2. Strategy: Require/incentivize accommodations for electric vehicles	✓	✓									✓	
9.2.3. Strategy: Partner with DeIDOT, DTC, and others in the public and private sector to foster opportunities for applying emerging technologies in transportation/accessibility. (For example: a collaboration between a car-sharing non-profit, local government, and energy company are launching a fleet of 150 shared electric vehicles (EVs) and install 70 EV charging stations in Minnesota.)	✓	✓					✓				✓	
9.2.4. Strategy: Conduct study to understand how to best design and regulate for new retail and distribution	✓	✓										



Goal/Objective/Strategy													
	Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
9.2.5. Strategy: Conduct study to understand how to best design and regulate for Connected and Automated Vehicles (CAVs) and other emerging transportation technology	✓	✓				✓					✓		
9.3. Objective: "Right-size" traffic/congestion and reduce its associated pollution burdens (both local and macroclimate).	✓					✓					✓		
9.3.1. Strategy: work with transportation-focused agencies to evaluate and adopt traffic metrics that sustain mobility and support reductions in congestion related emissions, such as Vehicle Miles Traveled (VMT).	✓					✓					✓		
10. Goal: Land uses, transportation, and other infrastructure complement each other, and neighborhoods and areas across the county are distinctive, attractive, functional, comfortable, and human scale. The physical environment is high quality, inclusively designed, retains value, and is fiscally sustainable.	✓					✓	✓	✓	✓				
10.1. Objective: Redevelop and infill key areas of the county (identified in Community Plans and other studies/analyses) and struggling industrial land, strip malls, office parks, and other "greyfields" to achieve connected places, continuity of design, and sense of place.	✓						✓		✓				
10.1.1. Strategy: Incentivize/encourage growth and redevelopment in those targeted areas through public investment and flexible policies that work toward achieving other goals (e.g. preservation, environmental enhancements, watershed improvements, placemaking, walkability/ bikeability, etc.).	✓						✓		✓				



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
10.1.2. Strategy: Establish flexible/hybrid zoning in designated areas to support flexibility and creativity for redevelopment/infill and economic development; Consider amending the Unified Development Code to expand opportunities and areas that can employ Smart Code principles.	✓							✓				
10.1.3. Strategy: Increase use of universal design in public space.	✓							✓				
10.1.4. Strategy: Ensure that as change occurs, communities and neighborhoods evolve intentionally toward the community's vision; change aligns with local needs as well as part of the broader countywide vision	✓							✓				
10.1.5. Strategy: Focus on implementation in areas where sub-area plans exist (master plan, corridor plan, etc.)	✓						✓	✓		✓		
10.1.6. Strategy: Prioritize physical form and design, not just land use and density in policies and decision, with plans, regulations and incentives. Consider amending the Unified Development Code to include provisions for Form Based Zoning and Subdivision regulations where appropriate.	✓							✓	✓			
10.1.7. Strategy: Identify and preserve cultural and historical resources, to contribute to the character, quality, and function of communities.	✓							✓	✓			
10.2. Objective: Increase compact development in places where it is appropriate and will support the range of community goals (like transit, affordable housing/lifestyles, non-motorized accessibility, enhancement of place, etc.).	✓							✓				



		<div>Future Land Use</div> <div>Mobility and Transportation</div> <div>Utilities, Water, Sewer</div> <div>Conservation</div> <div>Open Space, Recreation</div> <div>Housing</div> <div>Intergovernmental Coordination</div> <div>Community Planning and Design</div> <div>Historic Preservation</div> <div>Economic, Community Development</div> <div>Capital Improvements</div> <div>Climate, Resiliency, Hazard Mitigation, Emergency Preparedness</div> <div>Environmental and Social Justice</div>												
Goal/Objective/Strategy														
10.2.1. Strategy: Achieve optimal balance of land use mix (and fees structure)		✓							✓		✓			
10.2.2. Strategy: Support the creation and enhancement of transit-oriented development. (See Transportation element)		✓							✓		✓			
10.2.3. Strategy: Direct residential development in and around existing job centers in a manner that is complementary with county and municipal development patterns. (See Housing and Economic Development elements)		✓						✓	✓		✓			
11. Goal: The built environment and streetscapes promote physical activity and healthy lifestyles including options for walking and biking. All residents have safe, inclusive access to lead physically active and healthy lifestyles (see also Transportation).		✓	✓			✓		✓	✓					✓
11.1. Objective: Increase the percentage of people who walk, bike, and take transit to work (from 6% in 2018).		✓	✓					✓						
11.1.1. Strategy: Increase trees and landscaping to promote safer, more comfortable spaces (See Conservation element)		✓	✓			✓								
11.1.2. Strategy: Increase use of varied, pedestrian-scaled building form and frontage, with streetscapes that are physically and visually connected, providing a safe, low-stress experience		✓	✓					✓						
11.1.3. Strategy: Connect the low-stress bike and walking network		✓	✓					✓						



Goal/Objective/Strategy	Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
11.2. Objective: Increase access to healthy food retailers, medical care, and other daily needs.	✓	✓						✓					✓
11.2.1. Strategy: Establish incentives and flexibility in regulations to encourage these types of development	✓	✓						✓					
11.2.2. Strategy: Work with transportation partners to support improved accessibility	✓	✓				✓							
11.2.3. Strategy: Seek and support other emerging solutions for affordable provision of daily needs	✓	✓											✓
11.2.4. Strategy: Direct funds for affordable housing to connected, accessible, and walkable locations close to transit, schools, daycare, jobs, shops, and services	✓	✓											✓
12. Goal: The value and significance of the historic, prehistoric, and cultural resources in the county are known and promoted; significant resources are preserved for the benefit of residents and visitors.	✓							✓	✓	✓			
12.1. Objective: Increase awareness of the county's historic/prehistoric/cultural resources, including tourism promotion.	✓								✓				
12.1.1. Strategy: Create opportunities for the community to learn about historic preservation and participate in research and preservation efforts, such as an outreach program.	✓								✓				
12.1.2. Strategy: Promote educational programs for the public, business, and development communities regarding the history, prehistory, and architectural history of the County, and the process and benefits of historic preservation.	✓								✓				



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
12.1.3. Strategy: Digitize and publish New Castle County historic property inventory records for public use.	✓							✓				
12.1.4. Strategy: Work with educational institutions and community organizations to feature the stories and resources	✓							✓				
12.2. Objective: Increase preservation and adaptive reuse of the county's historic/prehistoric/cultural resources.	✓						✓	✓	✓			
12.2.1. Strategy: Develop a County-wide historic preservation plan, including inventorying and prioritizing existing historical sites and sites of historical significance that will be eligible for protection. The plan will have goals and strategies for protecting specific historic buildings, contexts, areas, landscapes, and resources, with emphasis on broadening the concept of historic resource preservation in the County Code to include landscapes and context.	✓							✓				
12.2.2. Strategy: Preserve in our neighborhoods and across our county that which is meaningful and supports our quality of life by protecting and enhancing environmental, historical, and cultural assets.	✓						✓	✓				
12.2.3. Strategy: Define and incorporate greater protections for historic landscapes and contexts.	✓							✓				
12.2.4. Strategy: Inventory and survey abandoned/neglected properties with potential historic significance.	✓							✓				



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
12.2.5. Strategy: Develop a comprehensive approach to historic preservation in New Castle County that proactively incentivizes and rewards residents for engaging in historic preservation activities, including Historic overlay zoning.	✓							✓				
12.2.6. Strategy: Establish a program to work with property owners to preserve historic properties, with a focus on endangered resources and threats of demolition by neglect, in complement to more stringent enforcement of “demolition by neglect” laws.	✓							✓				
12.2.7. Strategy: Create a grant or loan program to assist the owners of historically significant properties in maintaining the structural integrity and historic character of their structures.	✓							✓				
12.2.8. Strategy: Strengthen the development incentives for preserving and rehabilitating historic structures as part of the land development process.	✓							✓				
12.2.9. Strategy: Encourage adaptive reuse historic structures to preserve the character of existing neighborhoods, while providing options for small business owners.	✓						✓	✓	✓			
12.2.10. Strategy: Be the example of careful preservation for residents, property owners, and developers by working to develop uses for historic properties owned by the County and by partnering with vocational high schools and college preservation trade programs.	✓							✓				



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
12.2.11. Strategy: Continue supporting implementation of Byways efforts in the county.	✓							✓	✓			
13. Goal: Environmental protection, climate change mitigation, and adaptation are important considerations in all county policies. Our community's collective built environment—infrastructure, transportation, nature, and development patterns—are designed in a way that limits greenhouse gas emissions and protects our people and critical infrastructure from impacts of climate change.	✓			✓			✓				✓	
13.1. Objective: Reduce Greenhouse Gas emissions.	✓						✓				✓	
13.1.1. Strategy: Increase energy efficient and green building practices in all building types	✓						✓				✓	
13.1.2. Strategy: Shift from current to future energy needs, leveraging opportunities to embrace clean energy and efficiency	✓						✓				✓	
13.1.3. Strategy: Work with transportation sector to foster land use/ transportation integration that enables lower VMT, lower transportation emissions, etc.	✓						✓				✓	
13.1.4. Strategy: Reduce pollution and exposure to pollution/toxins by planning, analysis, and strengthening County regulations	✓											
13.1.5. Strategy: Encourage and incentivize the use of solar panels on all new construction	✓											



Goal/Objective/Strategy													
	Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
13.2. Objective: Strengthen/improve resiliency in the face of climate change threats through changes to the built environment (infrastructure, transportation, etc.) so to minimize risk and impacts to all people and communities.	✓		✓								✓		
13.2.1. Strategy: Integrate resiliency and hazard mitigation planning with public facilities plans/implementation such as parks and open space	✓		✓								✓		
13.2.2. Strategy: Adjust zoning and design standards to make New Castle County resilient against disruptions such as climate change and sea level rise	✓		✓								✓		
13.2.3. Strategy: Perform analysis of the criteria and prerequisites as well as develop a plan to achieve a National Flood Insurance Program Community Rating System Class 4 Rating.	✓		✓								✓		
13.2.4. Strategy: Require that new residential and nonresidential developments account for sea level rise and other potential threats.	✓		✓								✓		
13.2.5. Strategy: Address climate change and its impacts through the network of protected lands/open space/parks	✓		✓								✓		
13.2.6. Strategy: Use open space design, green infrastructure, and other best practices in the design and use of space	✓		✓								✓		
13.2.7. Strategy: Increase carbon sequestration and storage	✓		✓								✓		
13.2.8. Strategy: Restore and protect natural habitats, sensitive lands, and native species as part of carbon sequestration strategy	✓		✓								✓		



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
13.2.9. Strategy: Encourage property owners to preserve natural, scientific, educational, aesthetic, recreational and cultural values as Nature Preserves in the State's Natural Areas Preservation Program (https://dnrec.alpha.delaware.gov/parks/natural-areas/)	✓											
14. Goal: Pursue a net zero built environment by following emerging technologies, and alternative regional and individual energy sources.	✓	✓					✓				✓	
14.1. Objective: Increase the proportion of energy efficient building stock and conservation infrastructure in the building stock.	✓										✓	
14.1.1. Strategy: County government leads by example and reviews County operations (e.g. procurement, public space management, buildings, other capital, etc.) to reduce greenhouse gas emissions, including: Converting County passenger and heavy-duty vehicle fleet to electric Conducting energy audits at all county-owned properties and implementing energy upgrades Establish work policies that support reduced transportation congestion/emissions, such as flex schedule and remote work. Deploying renewable energy at county-owned properties Upgrading county land maintenance equipment (mowers, tractors, etc.) to electric Converting large areas of mowed space at county properties (including offices and parks) to meadows, pollinator gardens, and forests	✓										✓	
14.1.2. Strategy: Hire a sustainability manager to direct these activities and track progress	✓										✓	



Goal/Objective/Strategy													
	Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
14.1.3. Strategy: Address flood risks associated with climate change by implementing environmental and land use policies	✓										✓		
14.2. Objective: Reduce pollution from Transportation sources.	✓	✓				✓					✓		
14.2.1. Strategy: Lead by example with investments in low/no emissions technology in government (e.g. Electric vehicles, charging stations, etc.)	✓	✓				✓					✓		
14.2.2. Strategy: Collaborate with partners and other agencies to achieve reduction in Vehicle Miles Traveled (VMT) by vehicles with internal combustion engines.	✓	✓				✓					✓		
14.2.3 Strategy: Evaluate potential county code revisions to encourage school districts to implement low/no mow practices in unused areas of their property.	✓												
15. Goal: New Castle County's infrastructure and economic and social systems are strong, and our communities are prepared for future climate-related and man-made/natural events; all residents will live in neighborhoods that are protected from negative impacts of incompatible non-residential land uses/activity and other hazards such as flooding (discrete and cumulative); and economic growth, prosperity and change in New Castle County is equitable and accessible by all.	✓					✓					✓	✓	
15.1. Objective: Reduce infrastructure that is at risk due to sea level rise and flooding as well as other risks.	✓					✓					✓		



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
15.1.1. Strategy: Coordinate with Office of Emergency Management to reduce manmade and natural risks in development and coordination on the All Hazards Mitigation Plan. Implement it along with the Delaware State Climate Action Plan.	✓						✓				✓	
15.1.2. Strategy: Locate new neighborhoods and businesses in areas that will not be directly impacted by threats including sea level rise and flooding. Mitigation efforts will minimize the adverse impacts on existing neighborhoods and businesses.	✓										✓	
15.1.3. Strategy: Discourage development/redevelopment in hazard zones and incorporate strategies that strengthen our community's ability to respond and be resilient in the face of unplanned change or disaster	✓										✓	
15.1.4. Strategy: Utilize natural lands to enhance and build resiliency by: Evaluating extent of sea level rise, Enhancing and preserving wetlands to guard against flooding from sea-level rise and heavy precipitation, Preserving large buffers from waterways, and Preserving forest and urban trees to enhance cooling	✓										✓	
15.1.5. Strategy: Encourage resilient communities that identify local vulnerabilities, i.e. flooding and hurricane-force winds, and implement practices to withstand the effects of climate change	✓										✓	
15.1.6. Strategy: Make disaster planning efforts an integral part of all comprehensive planning efforts including small area plans	✓										✓	

[illegible]



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
15.2.6. Strategy: Work with DNREC to strengthen protections of Delaware's Coastal Zone.	✓										✓	✓
15.2.7. Strategy: Land use policies and regulations should aim to rectify existing hardships in Environmental Justice communities and avoid the creation of new Environmental Justice areas.	✓											
16. Goal: Participation in planning and development represents the full diversity of the county.	✓						✓					✓
16.1. Objective: Increase diversity of engagement in community planning activities of all county residents regardless of age, race, income, native language, abilities, etc.	✓						✓					✓
16.1.1. Strategy: Measure and track diversity metrics in engagement activities	✓											✓
16.1.2. Strategy: Work with community partners to build direct communication and tailored engagement approaches to local neighborhoods and residents	✓											✓
16.1.3. Strategy: Use target marketing strategies to reach hard to reach populations	✓											✓
16.1.4 Strategy: Shared public input platform to help bring together the community and all levels of government in civic discourse and public decision-making	✓						✓					✓
16.1.5 Strategy: Establish a committee comprised of relevant government agencies, organizations, and community members tasked with monitoring the implementation of Environmental and Social Justice goals, objectives, and strategies of this plan	✓											✓



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
16.2. Objective: Increase diversity of local professionals involved in planning, land use, infrastructure, and development.	✓						✓					✓
16.2.1. Strategy: Collaborate with partners and agencies to increase exposure and engagement by students and young professionals in these fields, creating a pipeline for future employment	✓						✓					✓
17. Goal: Development, infrastructure, and change is well-planned and coordinated, achieving sustainable and effective public investment in our communities.	✓						✓	✓				✓
17.1. Objective: Planning/investment decisions integrate across governments and jurisdictions.	✓						✓	✓				
17.1.1. Strategy: Enable joint planning areas and agreements, working with State and municipal governments	✓						✓	✓				
17.1.2. Strategy: Establish a county-based economic development group with state and local jurisdictions	✓						✓	✓				
17.1.3. Strategy: Coordinate with intergovernmental partners (states, region, and municipalities), especially about environmental issues	✓						✓	✓				
17.1.4. Strategy: Work in partnership with intergovernmental agencies to achieve shared, regional goals for land use and design	✓						✓	✓				
17.1.5. Strategy: Expand government-nonprofit-private partnerships to help advance NCC2050	✓						✓					



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
17.1.6. Strategy: Coordinate land use regionally with adjacent municipal comprehensive plans, directing growth to existing downtowns and areas with existing infrastructure	✓						✓	✓				
17.1.7. Strategy: work collaboratively with state and local government to prepare for, test, and adopt new technology and associated change in our communities (e.g. CAV transportation technology, Internet of Things, etc.)	✓						✓	✓				
17.1.8 Strategy: Collaborate with towns to develop place-based approaches to economic development, building on community assets (e.g., local food, agritourism, strong schools, green economy, etc.) and infill.	✓						✓	✓				
17.1.9 Strategy: Work with the State Department of Education, local school districts, and places of higher education to provide up to date enrollment information and projections and to assure NCC residents are prepared for the jobs of the future.	✓							✓				
17.2. Objective: Increase collaboration associated with data/analysis and public engagement.	✓											✓
17.2.1. Strategy: Work across agencies/jurisdictions to establish a shared public input platform to help bring together the community and all levels of government in in public decision-making (e.g. BeHeard Philly)	✓											✓
17.3 Objective: Achieve greater predictability regarding future development	✓							✓				



Future Land Use	Mobility and Transportation	Utilities, Water, Sewer	Conservation	Open Space, Recreation	Housing	Intergovernmental Coordination	Community Planning and Design	Historic Preservation	Economic, Community Development	Capital Improvements	Climate, Resiliency, Hazard Mitigation, Emergency Preparedness	Environmental and Social Justice
-----------------	-----------------------------	-------------------------	--------------	------------------------	---------	--------------------------------	-------------------------------	-----------------------	---------------------------------	----------------------	--	----------------------------------

Goal/Objective/Strategy												
17.3.1. Strategy: Update the approach for rezonings and Future Land Use Map (FLUM) changes so zoning conforms to the FLUM	✓							✓				
17.3.2 Strategy: Refine zoning district descriptions to provide clarity regarding sewer services	✓							✓				
17.4 Objective: Provide improved emergency services; types of equipment and response time to meet future demands	✓						✓	✓				
17.4.1 Strategy: Provide capacity and facilities for emergency and police services by monitoring the need for police stations on a regular basis, specifically in southern New Castle County. Once it has been determined that a police station is needed, the location should be determined based on response time and visibility.	✓						✓	✓				
17.4.2 Strategy: Ensure emergency and police services capacity and funding is available as population grows by re-evaluating impact fee to ensure the monies levied from new development adequately address the impact of increased demand for fire, EMS and police expansion and service.	✓						✓	✓				

APPENDIX C: _____

NCC2050 Planning & Public Involvement Process

NCC2050 Planning and Public Involvement Process

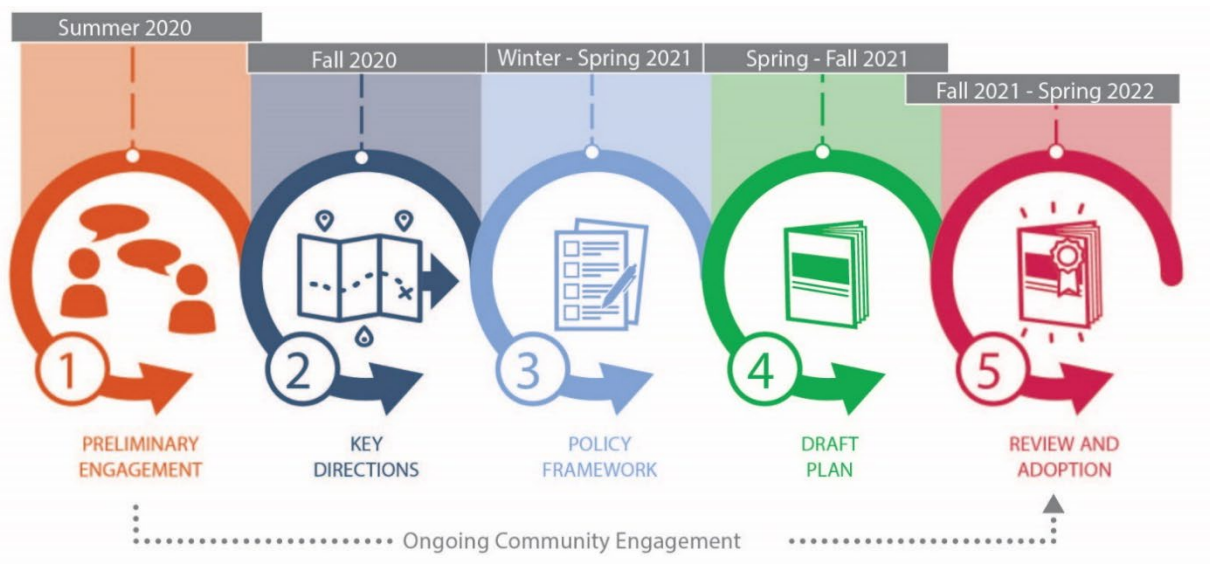


Figure 1: NCC2050 Development Process

A successful plan is achieved through the involvement from a wide range of community stakeholders. Despite pandemic-related restrictions requiring public involvement activities to occur virtually, community engagement in this planning process has been arguably the most robust in the history of New Castle County. The New Castle County Comprehensive Plan was a community-driven process that strategically guided how we grow and develop. There were multiple ways to participate and help shape the County's future. In total, there were thousands of interactions with the community and hundreds of community members participating in NCC2050 public events.

The NCC2050 planning team ensured these virtual engagements were accessible and inclusive by recording the engagement opportunities and placing summaries and video recordings online for those who were unable to attend live. New Castle County's robust public involvement efforts included three surveys, four *NCC2050 Let's Talk* web workshops, three public forums, five Deep Dive workshops, the Stakeholder Challenge, the Stakeholder Advisory Committee, Interagency Work Group, and the Youth Planning Board. In addition to scheduled virtual public meetings, the NCC2050 website allowed visitors to interact with the New Castle County Department of Land Use, learn about the comprehensive plan update process, view meeting recordings, and participate in online surveys. The email address NCC2050newcastlede.gov was available to submit questions and comments to the New Castle County Department Land Use. Other opportunities to engage included the NCC2050 *Notify Me* email platform, Nextdoor, and both the Department of Land Use and the broader New Castle County Government Facebook, Twitter, Instagram, and YouTube social media channels. The Department of Land Use also featured NCC2050 articles for inclusion in County Executive Matthew Meyer's biweekly Meyer Minute community newsletter.

Robust Public Engagement

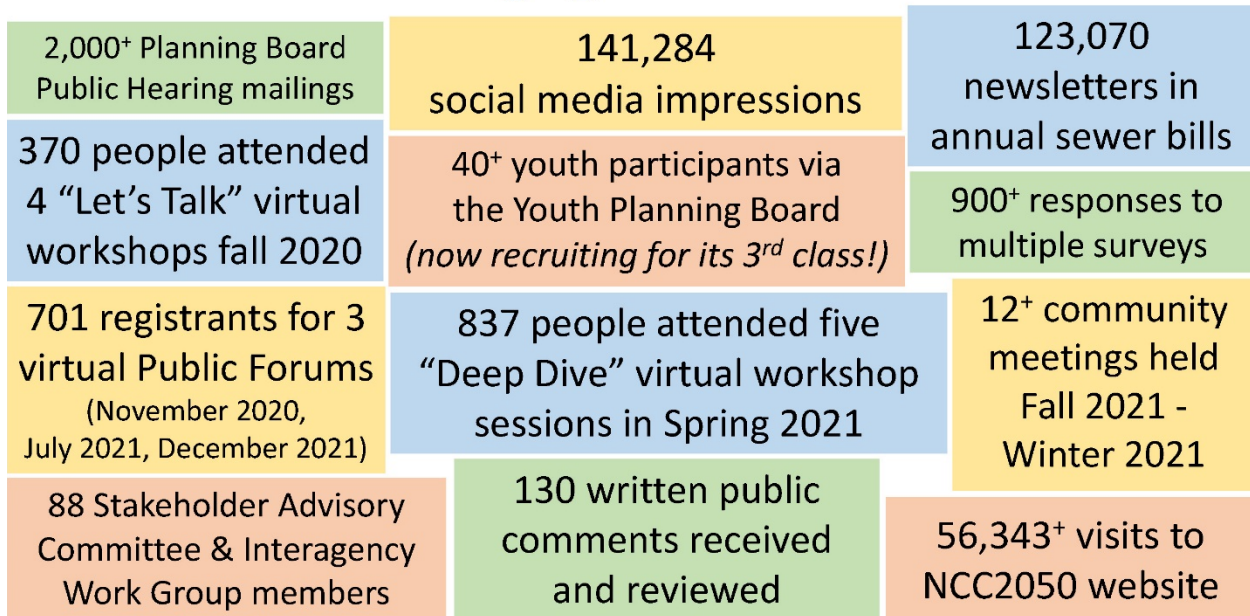


Figure 2: Community Engagement Results as of June 2022

Stakeholder Groups

Interagency Work Group (IWG)

This work group consisted of staff from a variety of state and local partner agencies. It served as the steering committee and met throughout the process on a regular basis, particularly leading up to major milestones. They provided specialized advice and feedback on key content and next steps. The group reviewed and refined the Vision and Goals, provided input on Big Questions and Emerging Issues, identified concerns and priorities for the Plan.

Organizations Represented:

- City of Newark Department of Planning and Development
- City of Wilmington Department of Planning and Development
- Delaware Department of Agriculture
- Delaware State Housing Authority (DSHA)
- Delaware Department of Transportation (DelDOT)
- Delaware Department of Natural Resources and Environmental Control (DNREC)
- Town of Elsmere
- New Castle County Department of Finance
- New Castle County Office of Management and Budget
- Town of Smyrna Department of Planning and Zoning
- Town of Middletown
- Town of Newport
- Town of Townsend
- University of Delaware Institute for Public Administration

- New Castle County Department of Public Works
- New Castle County Department of Community Services
- Wilmington Area Planning Council (WILMAPCO)
- New Castle County Department of Land Use

Stakeholder Advisory Committee (SAC)

The Stakeholder Advisory Committee was a diverse group composed of community members and community organization representatives. They brought a variety of perspectives important to the development of a successful comprehensive plan. The committee advised on the planning process and products for each phase and served as ambassadors for the plan with the broader public by helping disseminate communications and promoting engagement. Members of the Stakeholder Advisory Committee also provided facilitation assistance during the Fall 2020 Forum.

Stakeholder Challenge

The Department of Land Use also issued the Stakeholder Challenge where we asked civic associations, advocacy groups, and individuals to respond to five broad questions related to key issues, priorities, and aspirations for their community in the coming decades. Over 300 challenges were issued during the period July 2020 – October 2020 and the department received 50 responses.

Participants in Stakeholder Advisory Committee	
Name	Org
Peggy Schultz	League of Women Voters, New Castle County
James Edwards	member of Youth Planning Board 2020-2021
Ethni Abiy	member of Youth Planning Board 2020-2021
Mike Bio	citizen
Ellen Kohler	Delaware Nature Society Board of Directors
Harold (Hal) Schneikert	8th District Neighborhood Planning Council, Wawaset Maintenance Corp.
Sherri L. Evans-Stanton	Delaware Chapter of the Sierra Club
Willie Scott	Delaware Chapter of the Sierra Club
Valerie George	citizen
Serene Abiy Tamirie	member of Youth Planning Board 2020-2021
Debra Young	Empowerability LLC
Mark Weinberg	citizen
Jennifer Kmiec	Committee of 100
Stephen French	Carrcroft Civic Association
Linnette Glassco, President	Salem Woods Maintenance Corporation Phases II, III, IV
Bernadette Cummings, President	Centennial Village Maintenance Corporation
Allison Laurant	citizen
Charlene Poe	citizen
Robert S. Weiner	citizen
Jordyn Pusey	citizen
Gwen Angalet	citizen
Josephine DiGiovanni	citizen
Lisa Donlon, PE	VanDemark & Lynch
Christopher Duvall	citizen
Patricia Purnell	Emerald Ridge HomeOwners Association
RJ Miles	Council of Civic Organizations of Brandywine Hundred
Jonathan M. Kirch	citizen
La Vaida Owens-White, MSN, RN	Delaware State NAACP Conference of Branches, Health Committee Chair
Mike McGrath, AICP	Preservation Delaware
Gladys Spikes	Housing Opportunities of Northern Delaware
Amani Thurman	member of Youth Planning Board 2020-2021
Sandra Smithers	Dunleith Civic Association
Ellie Ezekial	Delaware Nature Society
Maria Matos	Latin American Community Center
Mary Roth	Delaware Greenways
Lisa Locke	Interfaith Power and Light
Marianne Cinaglia	Naamans Creek Watershed Association
Leah Coles	Goodwill of Delaware and Delaware County
Nicholas Koski-Vacirca	Asset Management Alliance
Cecilia Scherer	Odessa National Civic Association
Roxane Ferguson	Middletown Area Chamber of Commerce
Marie Reed	Southbridge Civic Association (Wilmington)
Zakiya Minkah	Eastlawn Civic Association (Wilmington)
Donna Gooden	Woodlawn Trustees
Phil Socorso	Triangle Neighborhood Association (Wilmington)
James Paradise	Town of Bellefonte Planning Commission
Brian DiSabatino	EDiS Company
Denison Hatch	Highlands Community Association (Wilmington)
Vince Watchorn	Friends of Cooch's Bridge
Bob Beichner	NCC Chamber of Commerce
Jerry Heisler	Reybold
Max Williamson	member of Youth Planning Board 2020-2021
Iveena Mukherjee	member of Youth Planning Board 2020-2021 and 2021-2022
Will Hurd	City of Newark Planning Commission
Tonisha Hurd	citizen

Participants in Stakeholder Challenge	
Name	Org
Peggy Schultz	League of Women Voters, New Castle County
Ethni Abiy	member of Youth Planning Board 2020-2021
Mike Bio	citizen
Ellen Kohler	Delaware Nature Society Board of Directors
Harold (Hal) Schneikert	8th District Neighborhood Planning Council, Wawaset Maintenance Corp.
Willie Scott	Delaware Chapter of the Sierra Club
-	Village of Jester Crossing
-	Merestone Maintenance Corporation
-	Smalleys Cove Maintenance Corporation
-	Nordic Dell Maintenance Corp
-	Forest Glen at Pinewoods II
-	Glennwood Station
-	Shipley Chase Maintenance Corporation.
-	Hunter's Ridge
-	Millcreek Neighbors for Safer Pathways
-	Wyndom Maintenance Corporation
-	REACH Riverside
-	Videre Woods
-	Bayview Manor
-	Centerville Point
-	The Nature Conservancy
-	Rosegate Development

Youth Planning Board

The Youth Planning Board is a 10-month program focused on engaging youth in county planning. The program is composed of approximately 20 county residents who are between 14 and 22 years old. They meet monthly to follow planning processes such as the Comprehensive Development Plan, and to lend perspective, help develop recommendations, and champion issues and engagement particularly as relate to other young people. Two classes of the YPB participated during the NCC2050 process (academic years 2020 – 2021 and 2021 – 2022). Members used their unique perspectives and interests in the future of the County to provide input during key steps. The Youth Planning Board helped to refine the Vision and Goals Survey, explain and promote NCC2050, collect input on concerns and priorities, and helped with youth engagement. Members of the Youth Planning Board learned about various aspects of planning from subject matter experts, which helped them refine their ideas and opinions on the future of New Castle County and create a list of recommendations (See Appendix D) that they presented to County Council.

2020-2021 Members:

Amani Chamberlin	David Escobar-Huertas	Iveena Mukherjee	Nathan Cho
Anya Battista	Eleri Phillips	James Edwards	Samaij Sanders
Bella Pabian	Emily Chmiel	Kamora Wilson	Serene Abiy
Bria Reed	Ethni Abiy	Max Williamson	Sophia Talley
Caelin Foley	Francesca Tusso	Michael Payne	
Charlotte Di Guglielmo	Harry Long	Molly Fink	

2021-2022 Members:

Addison Mariea Carroll	Collin Willard	Kanmani Duraikkannan	Payton Bell
Allison Harten	Erik Joseph Hansen	Kiera Woods	Sydney M Luckey
Anaum Allimulla	Iveena Mukherjee	Kori Sampson	Tahamina Prity
Austin Gray	Jaila Maddrey	Nysier Judkins	Therese Kim
Brianna Fletcher	James Kennedy	Oluwaseun Ogundimu	VedaSriDatta Kakaraparti
Brianna Sherman-Blanding	Jamison DeLaine	Parker Lehmann	

Planning 101

We created Planning 101, a series of free online courses developed in partnership with the University of Delaware that discusses why planning matters, explores the importance of comprehensive planning, and helps to explain the planning process. After completing the online courses, participants receive their Citizen Planner Certificate from New Castle County.

Planning Process

This comprehensive plan is the product of a detailed and collaborative process over many months. Throughout the five phases of plan development, we coordinated with stakeholders, other agencies, and community members to identify a community vision, key principles, and recommendations. NCC2050 compiles all of the public input and engagement with data analysis to create a plan to help us to build a more successful, resilient, and sustainable New Castle County.

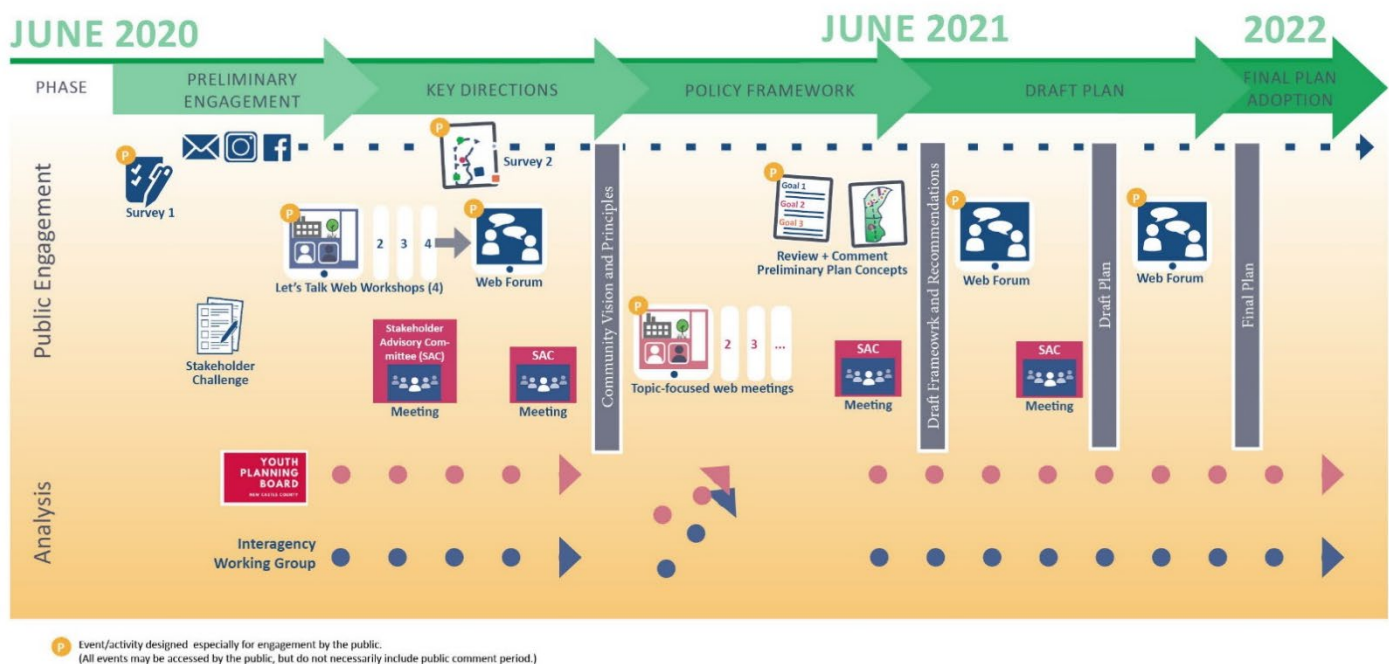


Figure 3: NCC2050 Planning Process

Phase 1: Preliminary Engagement

Engagement

Our work through Phase 1 focused on connecting with our residents and stakeholders to build awareness and involvement as we started the planning process. We also gathered ideas and perspectives on New Castle County as it is today and the issues that are important to the future. The issues identified were a critical piece in developing the Comprehensive Plan.

In response to the anticipated population growth that New Castle County will undergo, many residents voiced their concerns over uncontrolled growth, overdevelopment, sprawl, traffic, and loss of open space. Many agreed that growth policies that encourage development in existing developed areas, such as growth in municipalities, infill development, and revitalization of existing neighborhoods are appropriate strategies. Additionally, there was support for a higher density mix than the existing density mix for new development. Preserving open space and improving the safety and connectivity of biking and pedestrian routes were high priorities.

Residents play an equal role in this plan and I think this is great because in the chat, it has not only professional people but community people that have made points that are important to them and professionals as well. I hope that whatever is put in place is for the welfare of all.

– Dora Williams, Community Representative, Route 9 Monitoring, Deep Dive Session 1: Open Space, Conservation, Recreation, Environment, February 3, 2021

What these community conversations produced was a list of issues of concern and consensus-supported goals, objectives, and strategies to address them. Seventeen goals emerged:

1. New Castle County has a connected, well-maintained and well-loved network of open space (natural lands and recreational resources) that benefits all residents.
2. The natural environment of the county continues to be a distinguishing characteristic of our community, and the quality of our natural resources—air, water, land, ecosystems (plants and animals)—are continually improving and meeting the needs of present and future generations. Development/redevelopment patterns that consume less unbuilt “greenfields” and resource lands support conservation of our important natural resources.
3. Clean water is available to all residents now and in the future.
4. Healthy, safe, inclusive housing options throughout the County are diverse, meeting needs of all people while maintaining building design/form that integrates with existing communities.
5. New Castle County is a strong, resilient hub of the regional economy that provides a range of jobs and services to County residents.
6. All residents have the ability to participate in the economy and have access to living-wage jobs. Delaware’s workforce is strong and positioned for emerging industry and jobs as well as applying innovation and adaptation in traditional industries.

7. Farming continues to be as a viable way of life and contributes to economic resiliency and healthy communities (for its provision of food access and security, its preservation of farmland, and contribution toward community character).
8. All New Castle County residents will have safe, efficient, inclusive access to employment, retail services, parks, and other daily needs including by walking, bicycling, public transit, and emerging modes. The transportation and land use systems are integrated and support each other to create livable places and a vibrant county.
9. Transportation of people and goods is efficient and fair. The transportation system and land use/development are coordinated; development occurs in areas with ample existing or planned transportation infrastructure (and other infrastructure) and decisions are fiscally sound, inclusive, and fair for present and future generations.
10. Land uses, transportation, and other infrastructure complement each other, and neighborhoods and areas across the county are distinctive, attractive, functional, comfortable, and human scale. The physical environment is high quality, inclusively designed, retains value, and is fiscally sustainable.
11. The built environment and streetscapes promote physical activity and healthy lifestyles including options for walking and biking. All residents have safe, inclusive access to lead physically active and healthy lifestyles (see also Transportation).
12. The value and significance of the historic, prehistoric, and cultural resources in the county are known and promoted; significant resources are preserved for the benefit of residents and visitors.
13. Environmental protection, climate change mitigation, and adaptation are important considerations in all county policies. Our community's collective built environment—infrastructure, transportation, nature, and development patterns—are designed in a way that limits greenhouse gas emissions and protects our people and critical infrastructure from impacts of climate change.
14. Pursue a net zero built environment by following emerging technologies, and alternative regional and individual energy sources.
15. New Castle County's infrastructure and economic and social systems are strong and our communities are prepared for future climate-related and man-made/natural events; all residents will live in neighborhoods that are protected from negative impacts of incompatible non-residential land uses/activity and other hazards such as flooding (discrete and cumulative); and economic growth, prosperity and change in New Castle County is equitable and accessible by all.
16. Participation in planning and development represents the full diversity of the county.
17. Development, infrastructure, and change is well-planned and coordinated, achieving sustainable and effective public investment in our communities.

NOTE: The goals, along with objectives and strategies assigned to them, are available in detail in Appendix B. Their components are integrated into the relevant topic-specific chapters to follow.

Engagement activities during this phase included:

- Community Survey #1: June 24, 2020 – August 3, 2020
- First meetings of the Interagency Work Group: August 19, September 19, October 21, 2020
- First meetings of the Youth Planning Board: August 24, September 19, October 29, 2020
- First meeting of the Stakeholder Advisory Committee: October 26, 2020
- NCC2050 kickoff video ([YouTube](#))
- Informational flyer/brochure distribution at 10 county libraries: November 2020
- Stakeholder Challenge: July 2020 – October 2020
 - We asked civic associations, community groups, and other organizations to engage their membership and collectively respond to five broad questions related to key issues, priorities, and aspirations for their community in the coming decades.
- Public Virtual Workshops
 - Historic Preservation: June 8, 2020
 - Heavy Industrial Zoning: June 24, 2020
- NCC2050 Overview Virtual Presentations
 - Rotary Club of Middletown, Odessa, Townsend: July 29, 2020
 - Sierra Club Delaware Chapter: August 27, 2020
 - Committee of 100: September 17, 2020
 - New Castle County Council Land Use Committee: January 7, 2020 (prior to official plan kickoff)
- *NCC2050 Let's Talk* Web Workshop Series
 - A series of four virtual workshops to inform and discuss with our residents a diverse array of topics affecting the future of the County. Each workshop featured subject matter experts.
 - Our Transportation and Jobs: September 14, 2020
 - Our Homes and Neighborhoods: October 7, 2020
 - Our Places and Spaces: October 21, 2020
 - Our Environment and Nature: November 9, 2020
- Public Forum #1 (Fall Forum): November 18, 2020
 - The thoughts and ideas we heard from the community as part of each of the *NCC2050–Let's Talk* web workshops provided input for the Fall Forum. The forum was a key opportunity for stakeholders and the public to engage in dialogue about important issues to the community. The dialogue guided a more focused analysis and shaped the goals, objectives, future land use,

policy framework and preliminary strategies for NCC2050. The input from the

“Beautiful and safe neighborhoods that are safe, environmentally friendly and a lot of green spaces with tasteful businesses built with well-designed urban planning.”
— Public Participant, Our Homes and Neighborhoods
– Let’s Talk Workshop, October 7, 2020

Fall Forum led to the release of the Community Vision.

Analysis

During Phase 1, the existing conditions of New Castle County were examined. This included analyzing population and demographics, natural resources and conservation, open space and recreation, agricultural resources, historic preservation, land use and zoning, mobility, water and sewer, housing, community design, economic development, capital improvements, sub-area/corridor planning, and inter- and intra-governmental coordination.

Existing conditions and trends were integral in developing the County’s potential future scenarios that were evaluated in ***Phase 3 Policy and Framework***. Scenario planning is a way to look at what can happen in a range of possible future population and employment situations.

Phase 2: Key Directions

Engagement

Phase 2 engagement focused on building awareness and involvement and sharing what was learned with stakeholders and the public. The results of the preliminary engagement were used to craft a county-wide Vision Statement.

Engagement activities during this phase included:

- Interagency Work Group meetings
- Youth Planning Board meetings
- Stakeholder Advisory Committee meetings
- New Castle County Council Land Use Committee meeting: February 16, 2021
- Deep Dive Workshops
 - The Deep Dive Workshops were designed to further examine topics comprising the NCC2050 Comprehensive Plan. During these workshops, subject matter experts and attendees brainstormed and provided detailed input on draft goals, objectives, alternative future development possibilities, and strategies.
 - Open Space, Conservation, Recreation, and the Environment: February 3, 2021
 - Housing and Economic Development: February 24, 2021

- Infrastructure, Transportation, Water, and Sewer Service: March 17, 2021
- Thriving Places: Community Design and Historic Preservation: April 7, 2021
- Environmental Justice and Social Justice: Bringing It All Together: May 5, 2021

Analysis

Data collection and analysis continued on a range of attributes, amenities, issues, and concerns that were identified in Phase 1 Preliminary Engagement.

Phase 3: Policy and Framework

Engagement

Engagement activities during this phase included:

- Policy Framework Survey and Growing Better Places Survey
 - Between November 2020 and May 2021, these two surveys were conducted to better understand the issues that people feel are important for the Comprehensive Plan to address as well as preferred growth patterns for future development. The results of these surveys helped to guide the policy framework for the plan. The surveys were available on the NCC2050 website and were promoted via New Castle County listservs, social media, and NCC2050 online web events, with a total of 537 surveys taken. Respondents represented most areas of the County.
- Interagency Work Group meetings
- Youth Planning Board meetings
- Stakeholder Advisory Committee meetings
- New Castle County Council Land Use Committee meeting: May 18, 2021
- Public Forum #2: NCC2050 Future Scenarios Forum (Summer Forum): July 15, 2021-
- A discussion of the draft community goals, objectives, and strategies; existing conditions and trends; scenarios; and comparisons and tradeoffs.
- Web Surveys with Forum #2: Areas of Change Map (interactive map activity) and preferences/strategies prioritization survey

Analysis

During this phase, the County worked to craft goals, objectives, and strategies for the plan. The County also evaluated a variety of scenarios against the goals of the plan. (The scenario planning work is featured in full detail in Appendix E.)

Phase 4: Draft Plan

Drawing on the assets, issues, and goals identified in the previous three phases, each element of the Plan was prepared in draft form with accompanying goals and strategies. The draft elements were assembled into the overall Draft Comprehensive Plan.

Engagement

Engagement activities during this phase included:

- Community update meetings:
 - Springfield Community Association: September 30, 2021
 - Chapel Hill-West Meadow Civic Association: October 5, 2021
 - Old County Road Community: October 20, 2021
 - Council of Civic Organizations of Brandywine Hundred: October 21, 2021
 - Route 9 Monitoring Committee: October 21, 2021
 - League of Women Voters of New Castle County: October 25, 2021
 - Committee of 100: November 3, 2021
 - Greater Hockessin Area Development Association: November 15, 2021
 - Sierra Club—Delaware Chapter: November 16, 2021
 - Scottfield Civic Association: November 17, 2021
 - National Association of Housing & Redevelopment Officials (NAHRO), Delaware Chapter: November 18, 2021
 - Middletown-Odessa-Townsend Alliance: November 22, 2021, January 5, 2022, January 12, 2022
 - Bike Delaware: November 29, 2021
- Youth Planning Board meetings
- Information booth at Wilmington Blue Rocks Game: August 11, 2021
- NCC2050 plan overview video ([YouTube](#)): October 21, 2021
- New Castle County Council Land Use Committee meeting: November 2, 2021
- New Castle County Open Space Advisory Board: December 8, 2021
- Broadcasting plan update (brochure and video update) in hard-copy and electronic/social media.
- Community update newsletter included in the countywide annual sewer invoice mailing to over 127,000 addresses: February 2022.
- Public Forum #3: Draft Plan
 - December 9, 2021: In-Person Event
 - December 15, 2021: Virtual Event

Analysis

While the most significant analysis had been complete at this point, review and refinements of past analysis were completed, including discussion with colleagues in sister agencies and other organizations. Technical work also included further consideration and refinement of metrics and plan performance measures.

Phase 5: Review and Adoption

Following the public presentation of the Draft Comprehensive Plan in December 2021 (during Phase Four), revisions to the Draft Comprehensive Plan were made in coordination with County Council, County staff, and the public, resulting in the Final Draft Comprehensive Plan document. This document will be submitted to the Delaware Office of State Planning Coordination for review and comment as part of the Preliminary Land Use Service (PLUS) approval process. The County will reply to state comments in writing and submit a revised plan to the Office of State Planning Coordination for review.

During the period March 2022 – July 2022, the Department of Land Use intends to present the final draft plan to New Castle County Council, State Officials, the New Castle County Planning Board, key stakeholders, and the general public. The process concludes with a certification by the Governor in July 2022.

APPENDIX D: _____

Youth Planning Board Memo

**Bria Reed and James
Edwards, Co- Chairs**

**Members of the NCC
Youth Planning Board**



New Castle County Youth Planning Board

RECOMMENDATION

NCC@2050 Comprehensive Development Plan

May 26, 2021

DESCRIPTION y

The *NCC@2050 Comprehensive Development Plan* ensures New Castle County is maintaining its position at the forefront of land use innovation. The New Castle County Youth Planning Board has drafted a memo to be reviewed by the NCC Planning Board. This memo is a reflection of youth thought in NCC and will be reviewed in tandem with community wishes expressed during public forums.

BACKGROUND & ANALYSIS

The Youth Planning Board (YPB) is a program launched by the New Castle County Department of Land Use as a way to foster greater youth involvement in *NCC@2050: The Comprehensive Plan* update and in planning and land use activities in the future. While not an officially adopted decision- making body, the Youth Planning Board will provide recommendations on:

- (1) Reshaping the places in which we live, work, learn, and recreate environmentally and economically.
- (2) Directing the public services, infrastructure, and capital investments that make our communities livable like reliable public housing and public transportation.
- (3) Shaping the physical appearance of our neighborhoods while simultaneously preserving environmental, historical, and cultural assets you.

Main Focuses (majority of the group agreed on these issues):

1. Environmental issues

Preservation of the environment in New Castle County was a huge concern of many members of the Youth Planning Board. Taking care of the environment will play a huge role in our society. It will halt and/or slow down the ever increasing process of global warming, it will decrease the amount of engendered species within our community because they will have a clean home to live in, and taking care of the environment will help the health of humans to be better off. These issues were very important to our group because these issues are pressing and need immediate attention because of the carelessness of other generations, so a solution should begin with the younger generation.

2. Transportation and accessibility

Transportation and accessibility was also a main focus of the group due to Covid-19. During this past year, many people were constricted to staying in their homes all the time because people were now able to complete their daily tasks at home. Tasks like working, going to school, and even grocery shopping. Though staying at home became the new norm, people wanted to get out, and got to park and/or walk on sidewalks, but due to the lack of accessibility to sidewalks this was very hard. This caused the health of many to suffer. Many in the group also felt that some of the areas that bus stops are in are not safe for pedestrians, and that there should be more bus stops in other areas.

The NCC@2050 Comprehensive Development Plan will be approved by the year 2022. Numerous goals and objectives, like environmental and transportation issues can be found in the current comprehensive plan that address our needs and sustainability; however, the Youth Planning Board finds the following goals and objectives as being the fundamental and core principles to follow to achieve planning responsibilities:

Goals:

- *Advocate for programs like the Youth Planning Board that educate young people about how our communities are designed;*
- *Promote a convenient, but active lifestyle by increasing park accessibility;*
- *Expand public transportation to smaller cities to benefit residents and promote a sense of interconnectedness;*
- *Create bus stops in smarter locations where injury is less likely;*
- *Adding more charging stations for electric cars;*
- *Modernize local parks with new or refurbished equipment from recycled materials*
- *Restore vacant properties including homes and stores;*
- *Ensure environmental and wildlife conservation by using appropriate land use methods and cutting down on carbon emissions.*

Objectives:

Transportation and Accessibility

- *Plan additional sidewalks and pathways to access parks to promote a convenient, but active, lifestyle and reduce the need for automobile transportation;*
- *Plan for smarter bus stops that provide route updates and WiFi access (see Singapore transit system plan);*
- *Expand and improve quality and accessibility of public transportation;*
- *Promote public transportation in a way that is easily digestible to the common rider;*
- *Create additional charging stations for increasing usage of electric cars*

Environment and Natural Resources

- *Promote interconnectedness among parks;*
- *Include pieces of school art in public parks to create a personal connection between the people of NCC and their outdoor spaces;*
- *Restore vacant spaces/buildings in order to reduce the need for new construction*
- *Ensure environmental and wildlife conservation by using appropriate land use methods and reducing carbon emissions*

Housing and Community Design

- *Allot space for and promote local artists, musicians, and businesses to foster a unique community identity;*
- *Expand criteria for work protected under historical preservation efforts to include artistic expressions such as appropriate murals and graffiti;*
- *Establish an effort in New Castle County to empower local artists in order to facilitate public art centered around community character and positive local figures;*
- *Implement solar power, hydropower, and wind power as energy sources for newly constructed residential, office, and recreational buildings;*
- *Implement public education programs to lessen the stigma around the benefits of renewable energy;*
- *Place emphasis on the conservation of open spaces;*
- *Place emphasis on the involvement of several diverse stakeholder groups when considering community design and implementation;*

Economic Development

- *Continue facilitation of weekly farmers' markets;*
- *Implement community gardening and native plant programs*

Environmental and Social Justice

- *Consider minority voices during zoning process to ensure communities of color are not adversely affected;*
- *Investigate feasibility of subsidy for solar panel installation or normal bike usage;*
- *Increase public attention towards proper bike lines;*

- *Establish bike- share program in Wilmington and Newark (even if through private vendor) and develop incentives for bike usage*
- *Investigate feasibility of energy- producing pathway tiles (such as produced by Pavegen company) in order to increase public effort in combating climate change*

The goals of this memo capture the thoughts and opinions of the youth in New Castle County regarding community design and environmental and social injustices in our community. Through this memo, the Youth Planning Board aims to improve the quality of life of New Castle County's citizens and ecology. We will also make New Castle County more culturally eclectic when it comes to modernizing neighborhoods, cleaning up trash and recycling, and adding more technology- based accessories like charging stations and solar panels.

YOUTH PLANNING BOARD RECOMMENDATION

The Planning Board believes that the proposed conditions are based on sound land use planning principles and is in accordance with the *NCC@2050 Comprehensive Development Plan* and recommends that the New Castle County Council takes into consideration the above plan.

STATUTORY GUIDELINES

In the phraseology of *9 Delaware Code Section 203 (a)*, the Youth Planning Board finds that the recommended plan would promote the convenience, order, and welfare of the present and future inhabitants of this state.

Bria Reed, Chair
NCC Youth Planning Board

James Edwards, Chair
NCC Youth Planning Board

2021-2022 YPB Recommendations

Prepared by Co-Chairs Iveena Mukherjee and Collin Willard

May 3, 2022

Background

The NCC@2050 Comprehensive Development Plan provides a blueprint for future land use decision-making for New Castle County through 2050. This forward-thinking plan is key for ensuring the county is proactive in securing a more prosperous future for residents all across New Castle County. Since the plan forecasts several decades into the future, input from New Castle County youth is crucial in crafting goals and recommendations for what goes into this plan, as younger generations will inherit the reality that this plan shapes. Created in 2020, New Castle County's Youth Planning Board (YPB) aims to foster greater youth involvement in land use planning activities by including younger New Castle County residents in the planning process.

This memo covers the recommendations and objectives outlined by the 2021-22 New Castle County Youth Planning Board, building upon the recommendations made by the first YPB in 2020-21. Although YPB does not have the capacity to formulate or enact land use policy, these recommendations represent views held by a key stakeholder group in the long-term future of New Castle County.

Themes and Recommendations

Environment

YPB members were particularly passionate about environmental issues because of the ever-present threat that climate change poses to our future. YPB members acknowledge the urgent need to reduce our greenhouse gas emissions in transportation and economic activity, while also focusing upon mitigating existing environmental issues, such as the flooding that was caused by Hurricane Ida.

Recommendations

1. Improve the drainage code to combat flooding as storms increase in strength due to climate change. Options such as more permeable surfaces and rain/drainage gardens should be explored and implemented.
2. Focus on restoring superfund/brownfield sites, and improving public knowledge of these topics.
3. Promote alternative transportation methods to reduce vehicle miles traveled, a large contributor to emissions and pollution
4. Address water quality issues in New Castle County, specifically the presence of toxic chemicals and pollutants in waterways, and expand sewer systems to eliminate the need for septic tanks.
5. Promote native pollinator gardens or community food gardens in communities and schools to allow residents to have hands-on learning about environmental processes
6. Implement composting areas in neighborhoods or at community centers to limit food waste and allow the agricultural community to use said compost.

Conservation

While conservation is its own theme in this list, conservation is a priority among YPB members that is evident in each of our identified themes. YPB members emphasized the need to minimize the footprint of our built environment to protect natural ecosystems. As the county grows, it is crucial to consider natural ecosystems in new development, so that we prevent further destruction. In this regard, YPB members connected the importance of walkability and density in communities to the priorities of ecosystem conservation.

Recommendations

1. Limit the amount of development that occurs on open space or “farmland” to protect forests and farmland throughout New Castle County.
2. Natural environments (or areas that have been returned to their natural state) should consist of native and non-invasive plants and species that are suitable for the local environment
3. Promote greater community involvement when determining how open space is used or developed.
4. Increase outreach on the importance of preserving native ecosystems, specifically for the younger demographic in New Castle County, possibly through schools.

Housing

Housing affordability was a major topic discussed throughout the year, particularly as real estate prices have risen since the pandemic. Housing shortages and a lack of affordable options means that future generations will have limited choices, so this aspect of land use policy is key for keeping young people in New Castle County. Housing also has a key role in the environment, and YPB members recognize the need for changes to housing that reduce our collective carbon footprint.

Recommendations

1. Eliminate barriers for alternatives to single family housing so that residents have a greater diversity of housing options and more flexibility in the housing market (Ex. The “Missing Middle,” and ADU’s)
2. Promote mixed use development, both in new construction, as well as by removing barriers to mixed uses in heavily residential areas so that residents have easier access to essential goods and services.
3. Style and affordability in new development projects should correspond with existing neighborhood characteristics so that communities do not experience drastic changes in a short time frame.
4. Consider the residents impacted by gentrification throughout the process of new development to ensure residents are not displaced from their community.
5. Promote adaptive reuse to salvage vacant properties as a strategy to reduce the need for new development on open space.

Economy

Throughout the year, one of the major themes YPB focused on was the distribution of economic resources across geography. Group members understood and emphasized disparities in economic opportunity across the county, and how land use contributes to those disparities. YPB members also focused upon the importance of considering environmental sustainability in commercial and industrial land uses.

Recommendations

1. Expand outdoor community events during summer - similar to the Newark Main Street Al Fresco events that have occurred for the past few summers.
2. Promote infrastructure to support outdoor dining options for restaurants, like sidewalk bump-outs, and allow businesses to reuse parking spaces as dining space
3. Limit the number of strip malls and promote commercial land uses in walkable areas, so that businesses are accessible by more than just an automobile.

4. Equitable distribution of businesses, so that communities have access to jobs and can buy goods without having to travel far. Additionally, equitable distribution of fresh food access, so that food deserts do not exist.
5. Allow for pop-up street vendors and markets to be hosted in communities
6. Prioritize the rezoning of industrial areas to adapt to economic shifts, so that jobs are kept in New Castle County.

Transportation

YPB members were able to offer a unique perspective on transportation issues, since not every member is old enough to drive yet, and those who now are able to, could easily remember life before getting their license. Given this, YPB members identified some of the key issues of New Castle County's car-dependent infrastructure for people who are not able to drive. YPB members emphasized the need for more walkable infrastructure, and the mixed uses and density needed to make non-car modes of transportation viable. YPB members also pointed to necessary improvements to improve and optimize public transportation systems in New Castle County.

Recommendations

1. Reduce car dependency by zoning for more mixed use development
2. Create more walking and biking friendly infrastructure, such as detached bike lanes, traffic calming, and raised pedestrian crossings.
3. Amend parking minimum laws to decrease the amount of space dedicated towards parking, particularly in locations that are already accessible on foot or by bike.
4. Consider the demographic and walkability of new housing units, ensuring that every New Castle County citizen has access to reliable transportation, or walkable amenities.
5. Create public transportation hubs/centers in New Castle County that support out-of-state visitors traveling to other areas in Delaware (summer festivals like Firefly, Delaware Beaches, etc.), helping to reduce car dependency, congestion, and pollution on Delaware roads and in the air.
6. Identify areas with potential for high bus ridership and make improvements to routes based on community input through surveys (ie. Investigating where people travel in the state post-COVID and how to adapt the bus network to serve new route demand due to more types of commutes being prevalent.)

Environmental Justice

YPB members emphasized the inequity that is inherent within the distribution of environmental resources like parks and tree coverage, as well as environmental

hazards like industrial facilities and busy roadways. While YPB members called for an increased focus on sustainability, this effort needs to be equitable to ensure that disadvantaged New Castle County communities can also experience the benefits of environmental resources.

Recommendations

1. Ensure parks and recreational spaces are accessible in underserved, disadvantaged, and minority communities.
2. Ensure tree coverage and native plant life is equitably distributed to minimize urban heat island effects.
3. Devote specific attention to mitigating active polluting sources, which are largely concentrated near underserved communities, and brownfield remediation efforts in environmental justice communities.
4. Reduce traffic congestion in underserved communities
5. Ensure community advocates are at the table when making land use decisions in disadvantaged communities, so they are able to receive the benefits of environmental improvements rather than being displaced.

Other

Each of the aforementioned recommendations can be optimized by changes to how land use planning is conducted, especially targeting the views of key stakeholders.

Recommendations

1. Implement small goals along the way to ensure that the big goals at the end of 2050 are on track and accomplished.
2. Increase accessibility in land use decision-making through public outreach and education, to bring a more diverse and representative group of voices to the table.



Collin Willard, YPB Chair



Iveena Mukherjee, YPB Chair

APPENDIX E: _____

Future Scenarios & Analysis Documentation

Appendix E: Future Scenarios and Analysis

This appendix contains documentation of methods, logic, and related references/literature to the future scenarios development and analysis work. The document is divided into three parts:

Part A describes **existing conditions and current trends** to set a baseline against which alternative scenarios can be evaluated

Part B describes the **scenario planning process** and the **three alternative 2050 scenarios**, which were evaluated quantitatively

Part C describes the **results of the scenario planning process** for several key objectives and metrics as well as some of the **key implementation strategies** that would foster achievement of those outcomes.

Key findings from evaluation of existing conditions, current trends, and alternative future scenarios confirm opportunities to improve effective and efficient development patterns. Focusing new development toward infill or redevelopment opportunities in “smart location” communities, where substantial investment has already been made by both the public and private sectors, can minimize adverse effects. For many of the key objectives evaluated, the efficiencies embodied in smart locations result in reduction in per-capita use of resources that can offset the additional consumption of those resources created by higher population and employment totals associated with economic growth.

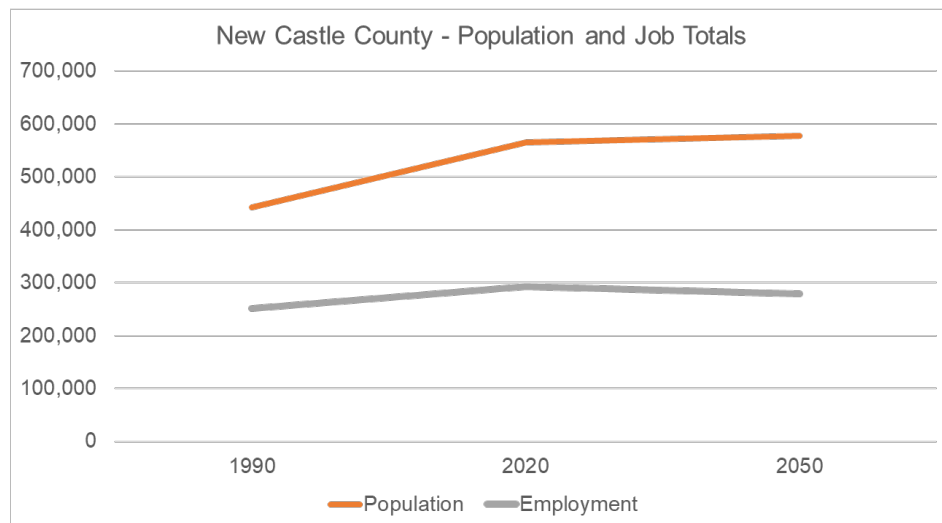
Part A. Existing Conditions & Trends

A foundational building block to any scenario planning process is an assessment of existing conditions and trends. This section illustrates a current snapshot of conditions in the County related to population, economy, land use and environment, and equity/social justice. This assessment was fundamental in creating and evaluating future growth scenarios as part of the NCC2050 planning process. Several highlights most relevant to the future scenarios include:

- Population is projected to grow only slightly, and employment is projected to decline slightly.
- Most of the industry sectors with high numbers of jobs in New Castle County have relatively high median wages, but most of them also require high levels of education. Thirty-seven percent of the current population in New Castle County has a bachelor’s degree or higher.
- Job attractors are located primarily in the northern part of the county, but recent housing growth has occurred largely in the southern part of the county, leading to a worsening housing/jobs mismatch.
- Infrastructure of all types is aging and will need investment to maintain its quality.
- Fifty-three percent of current housing units are one-unit single family houses and 30% of households are cost-burdened.
- Just over half of households within the County currently have easy and safe access to parks and open space (one mile or less with a low level of traffic stress).
- More than half of the County’s impervious surface areas are made up of parking lots.
- The vast majority of all travel happens by private car.
- While trending in a positive direction since 1990, there are still disparities in home ownership and unemployment rates between whites and non-whites in New Castle County.

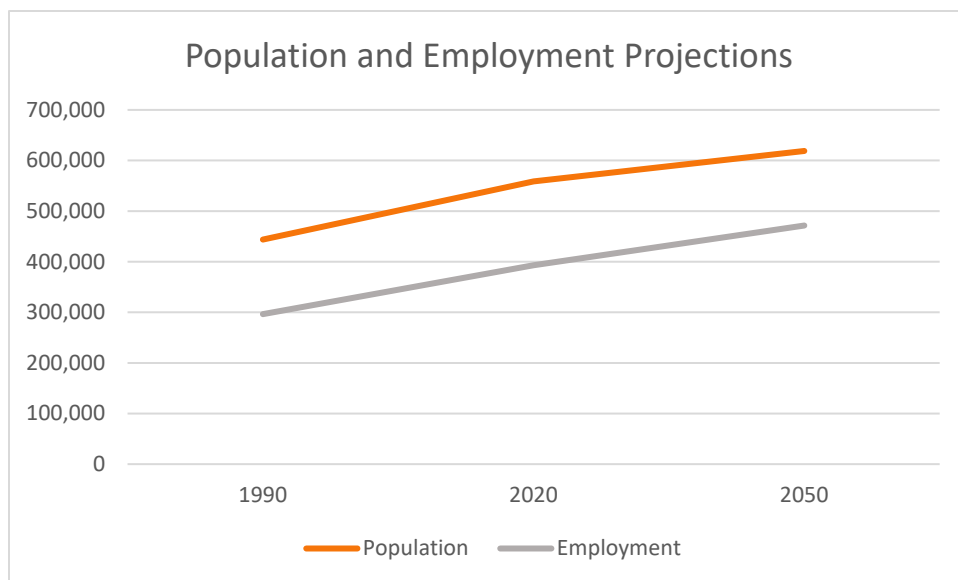
Population and Jobs

Population and employment projections tell us how many people and jobs can be expected within a long-range planning horizon, typically 20-30 years. NCC2050 will help guide growth and preservation for the next 30 years, to the year 2050. According to the Delaware Population Consortium, population in New Castle County has increased since 1990, but is projected to stay relatively flat, and employment is projected to decrease slightly between 2020 and 2050. Employment has stayed flat since 1990 and is projected to decrease by about 10,000 jobs by 2050.



Source: Delaware Population Consortium, 2019

Part of the scenario development process involved the evaluation of alternative population and employment projections. The County used Woods & Poole Economics, Inc., a firm that specializes in long-term county economic data and demographic data projections. Woods & Poole's database for all U.S. counties contains projections for every year through 2050. Each year Woods & Poole updates the projections with new historical data. The Woods & Poole forecasts project that New Castle County will have an increase in both population and jobs through the year 2050. This is a shift from the DPC's forecast, but it represents a possible alternative future, developed by a reputable economic analysis firm.



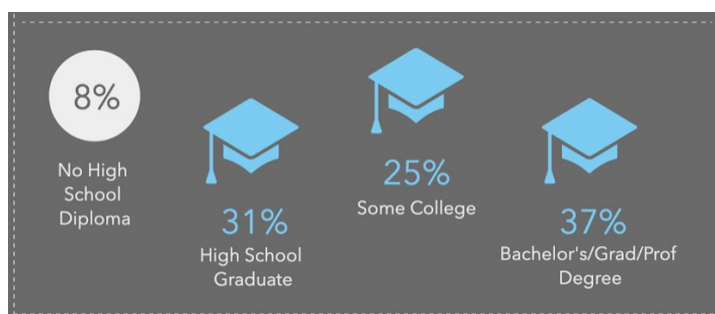
Source: Woods & Poole, 2021

Economy and Housing

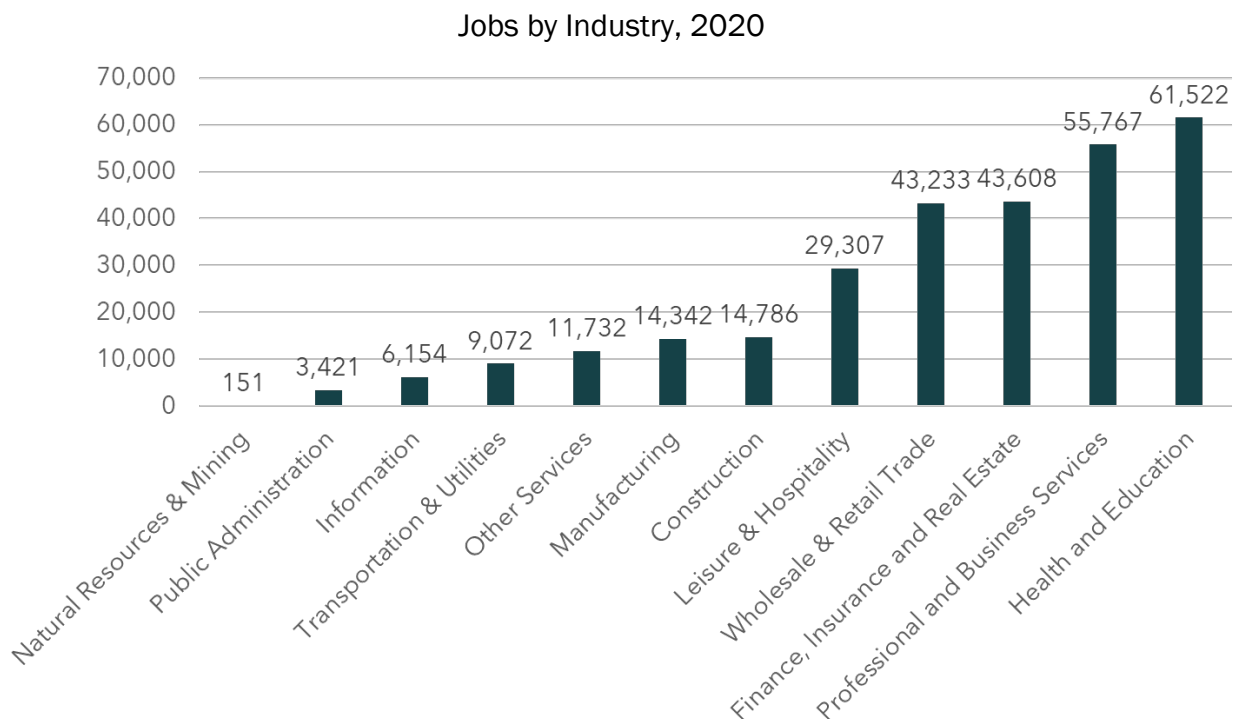
New Castle County used several sources of economy and housing related data to discuss existing conditions.

In terms of education, 62% of people in New Castle County have some college or bachelor's degree or higher, and 31% have only a high school diploma. In New Castle County, 91.6% of the workforce has at least a high school diploma, compared to 90.3% in Delaware and 88% in the United States. Thirty-seven percent of the workforce has a post-secondary degree (bachelor's degree or higher) in New Castle County, compared to 33.2% in Delaware and 33.1% in the United States.

Jobs in New Castle County are concentrated in leisure & hospitality, wholesale & retail trade, FIRE, business services, and health and education. New Castle County falls in the 99th percentile for percentage jobs in the FIRE sector among metro counties in the nation. Corporate and management sector is also very high. Top employers in the County include: Christiana Care (12,181), JP Morgan Chase (11,000), Bank of America (6,400), University of Delaware (4,500), and Nemours (3,795). Forty-one of the top 50 employers in the State of Delaware are in New Castle County. Industry diversity lower than that of other large metros in the region (based on Moody's data).

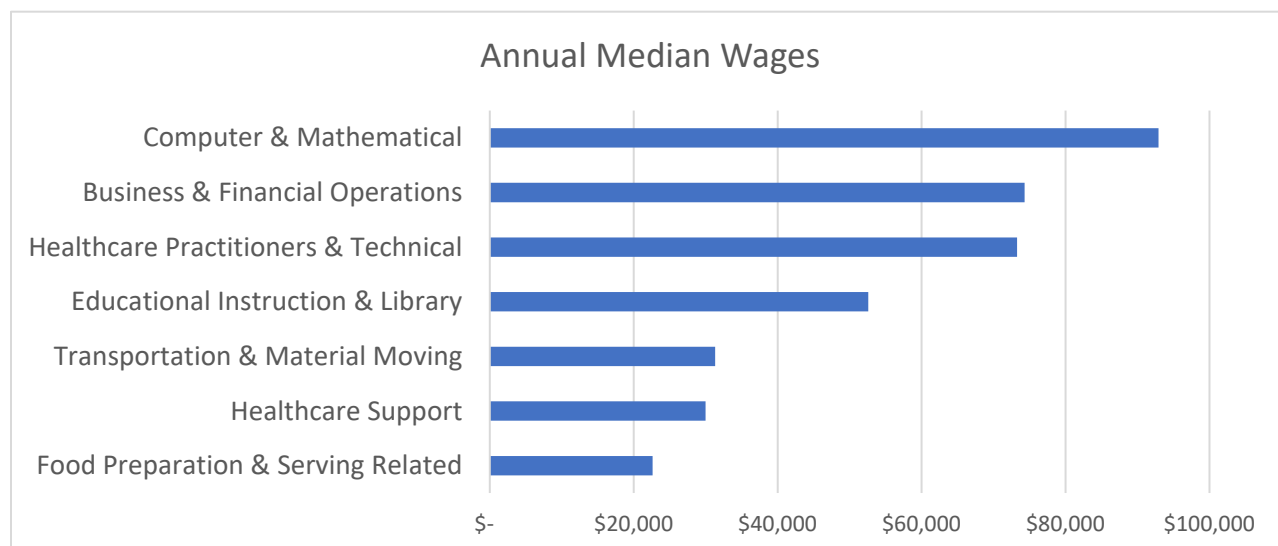


Source: ESRI Business Analyst, 2019



Source: WILMAPCO jobs by industry-2020 estimates

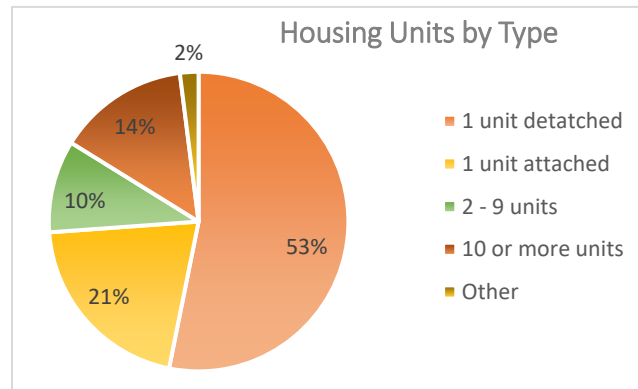
Most of the industry sectors with high numbers of jobs in New Castle County have relatively high median wages, but most of them also require high levels of education. What does this mean for the residents who do not have a college degree? How can we develop an economy that meets everyone's needs? How do we deal with emerging economic trends, such as a gig economy?



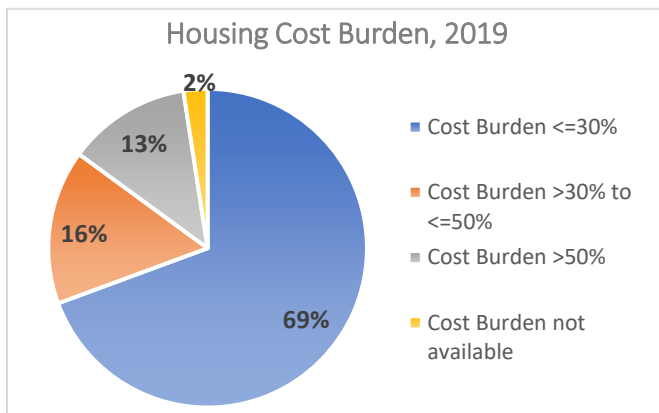
Sources: LMI Delaware Works, 2019-filtered for New Castle County
<https://lmi.delawareworks.com/Content/Information/OES.php>; Delaware Wages 2019 Report

Understanding the balance of jobs and housing across the county and the distribution and balance in specific areas of the county relates to economic conditions and travel patterns. The optimal jobs/housing ratio is 1.6 jobs per housing unit. Currently, the county is more of a housing resource than a jobs resource with 1.45 jobs/household overall, but the jobs/housing balance varies significantly in different parts of the county. The localized jobs/housing mismatch contributes to increased traffic and travel times associated with work trips.

A draft objective of NCC2050 is to increase the variety and range of price-points of safe, quality housing in diverse locations. In New Castle County, more than half of the housing units are one-unit detached houses, and 29% of households have costs that are higher than what is considered affordable. With changing demographics, household sizes are expected to continue to fall, and that changes preferences for housing types.



Source: U.S. Census Bureau, 2015 – 2019 American Community Survey



Source: U.S. Census Bureau, 2015 – 2019 American Community Survey

Approximately 30% of households in New Castle County are considered “cost burdened”. This means that they spend more than 30% of their income on housing related costs.

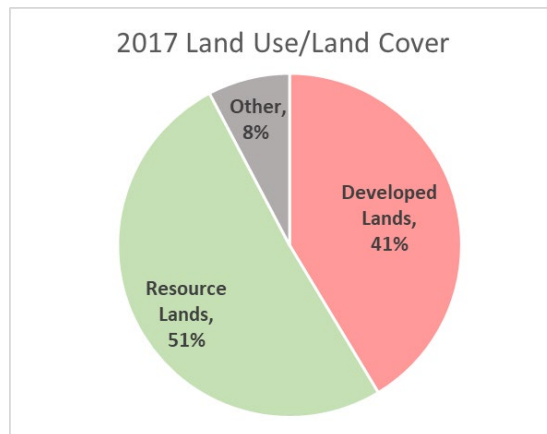
An increase in the diversity of housing options would result in more variety in housing costs, housing sizes, and housing densities. That variety makes it easier for people to match their housing needs (in terms of cost, size, and location) to what is available.

Land Use/Environment

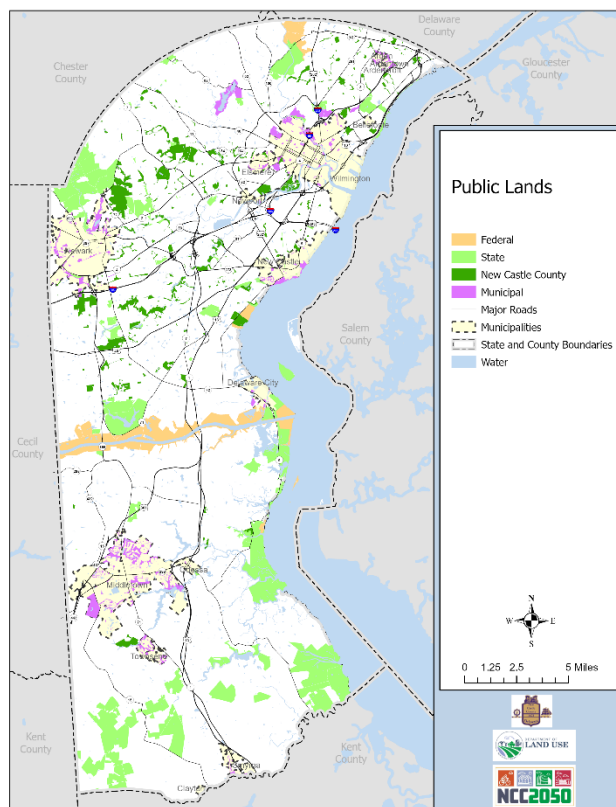
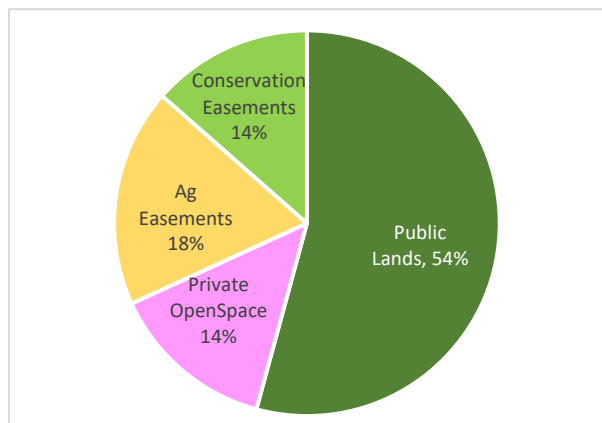
As of 2017, approximately 41% of New Castle County's land area was developed, and approximately half of the total county land area (51%) was made up of resource lands including agriculture lands, forest lands or wetlands. The remaining lands (8%) can be categorized as "other".

There are about 74,700 acres of protected lands in New Castle County, which means that the County is about 27.4% protected. It is estimated that A draft objective of NCC2050 is to preserve 30% of the County's land for open space in the next 30 years. The source of this information is the County's protected lands database, which is maintained by NCC GIS staff and includes agricultural preservation areas, parks, conservation easements, and private open space associated with development.

Protected Lands include public lands (not schools), agricultural easements, private open space, and private conservation easements. To reach the goal of 30% of the



Source: State of Delaware 2017 Land Use/Land Cover dataset

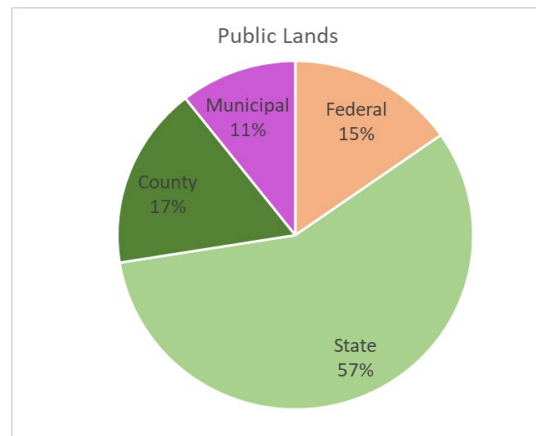


County being protected, the County would need to preserve approximately 7,100 more acres. This number was derived from calculating the current percentage of the County that is protected (based on the County's protected lands data). The percentage calculation includes municipal areas. The County is 2.6% short of the 30% protected goal, which equates to about 7,100 acres.

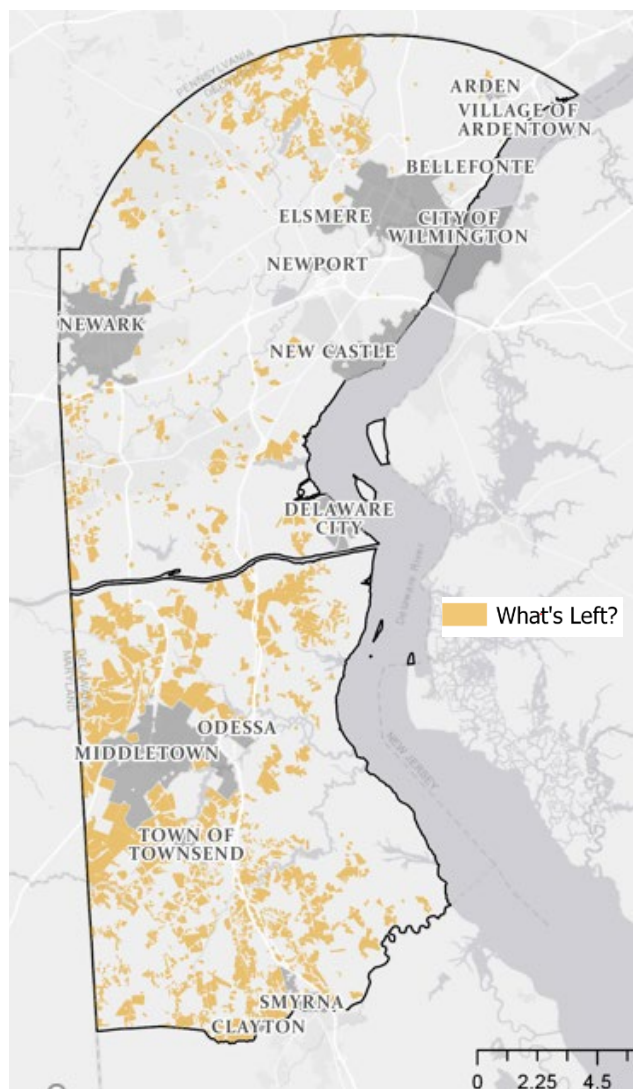
Public lands (including parklands) comprise approximately 41,146 acres of land in New Castle County. Fifty-seven percent these lands are owned by the State of Delaware, 17% owned by New Castle County, and the remaining 26% owned by municipal or the Federal Government. For more detailed information about uses of public lands, please see

The U.S. Geological Survey's map viewer [U.S. Geological Survey Map Viewer \(usgs.gov\)](https://www.usgs.gov/).

Based on a qualitative analysis done by the Parks & Recreation department, approximately 30% (about 2,000 acres) of the County owned parkland and open space is comprised of active recreation. If active recreation areas were not counted toward the County's land preservation goal of 30% protected, there would be a need to protect approximately 9,000 additional acres to reach the goal.



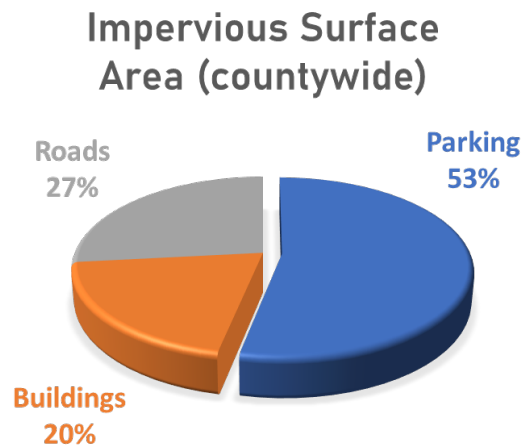
The remaining lands, or “What’s Left?”, can be defined as areas of the county that are currently undeveloped and may be further subdivided into residential development. This land is not already developed nor has any protections from development due to such things as preservation easements or important



natural resources, steep slopes, etc. This map does not reflect development potential for non-residential uses, nor does it recognize infill or redevelopment opportunity areas. This analysis was developed by NCC staff to get a sense of how much land is left within the County that has the potential for further subdivision. It includes S and SR zoning districts, and only includes areas that are greater than 5 acres in size. This analysis does not mean that the County supports the subdivision of these areas, but rather illustrates that these areas are not committed to either development or preservation. It illustrates those areas that could be most impacted (within S and SR zoning districts) by future development or preservation. Throughout much of New Castle County's history, growth and development have been focused in the northern portion of the County. Since 2000, this trend has changed, with an increasing number of new housing units being developed in southern New Castle County. Many of the newer developments in southern New Castle County consist of single-family homes on larger lots. This information is based on assessor's data, so it includes single family residential development for the county as well as

municipalities. It does not include multi-family structures built within this timeframe.

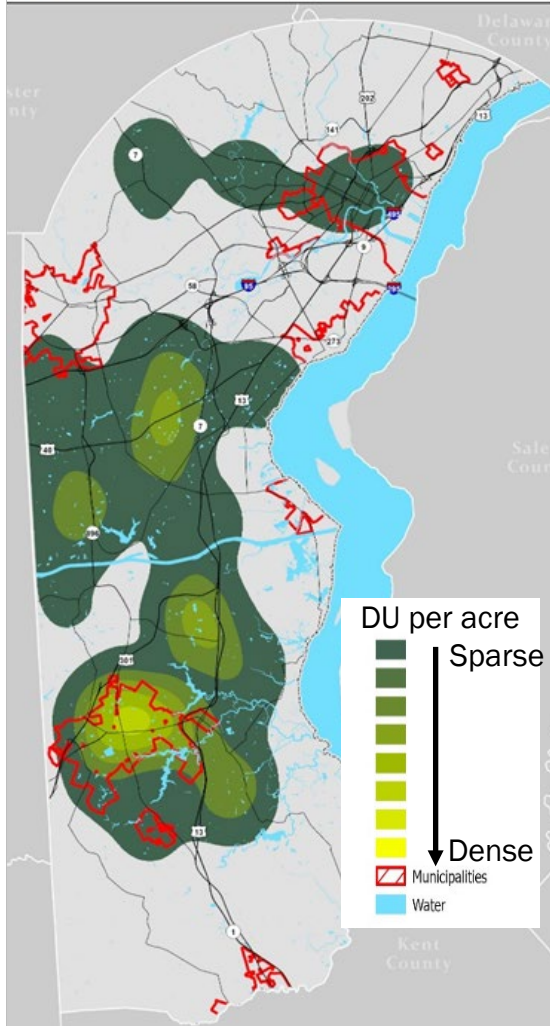
Between 2002 and 2018, more than 46% of all single-family detached dwellings in the county were constructed south of the C&D Canal. Most of this development was focused in and around Middletown with emphasis on suburban development in previously rural areas. Southern New Castle County's population (including incorporated areas) increased from 19,000 (4% of countywide population) in 1990 to 55,000 (10% of countywide population) in 2016. This high level of residential growth has begun to change rural communities and the character of the areas south of the C&D Canal.



Source: State of Delaware 2017 Land Use/Land Cover dataset, Urban 3 Analysis

A draft objective of NCC2050 is to improve surface water quality and reduce runoff from developed lands. Approximately 15% of the land area in New Castle County can be classified as impervious; defined as a hard surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. More than half (53%) of the total impervious surfaces in New Castle County are made up of parking lots, with the remaining 47% are buildings and roads. High parking requirements can increase the cost of housing, make it difficult for businesses to adapt to changing conditions, reduce redevelopment and infill activity, reduce walkability, and increase many different environmental impacts.

Single Family Dwellings, 2000 - 2020



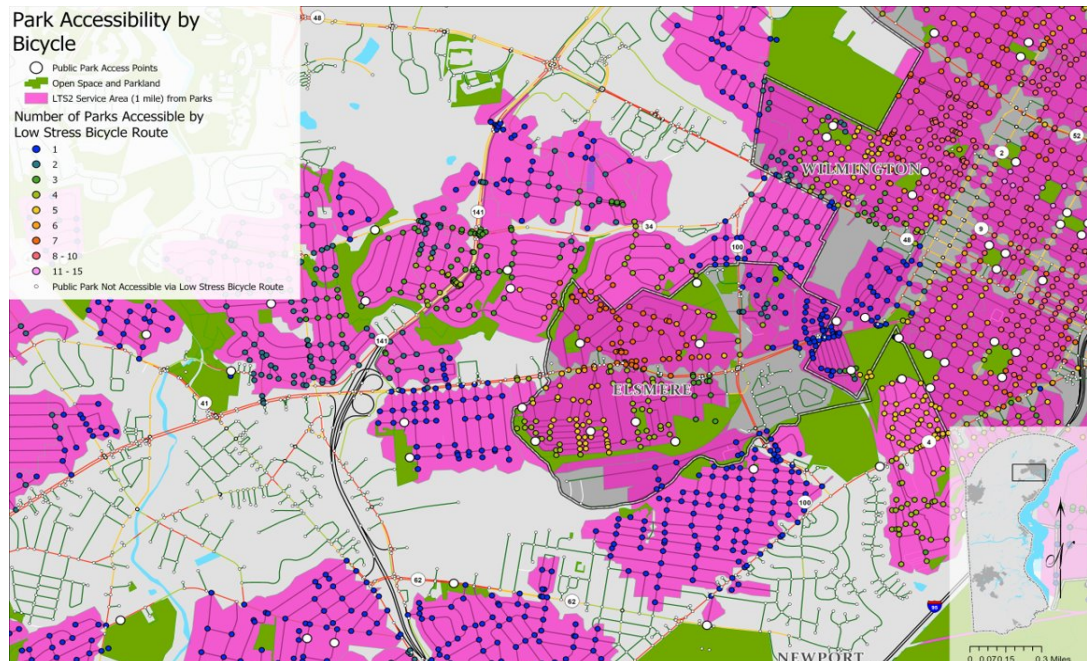
Overlays of satellite-based land use indicating what is tree or water or impervious are combined with State of Delaware land use designations to form the basis of this analysis. By subtracting known building footprints and roadways from the impervious area, an estimate of parking is derived for each kind of land use area. This allows each county land use designation to know how impervious surface is divided between buildings, roads, and parking.

Increasing the percentage of residents that have access to recreation and open spaces without a car is a draft objective of NCC2050. Access to parks and open space is an important part of overall community health and wellness. New Castle County has many parks that are available to the public. Development patterns and the transportation network can impact a community's ability to safely and easily access parks and open space. Based on an analysis developed by the Delaware Department of Transportation, approximately 55% of households within the County currently have easy and safe access to parks and open space (one mile or less with a low level of traffic stress).

Approximately 75% of housing units within New Castle County are located within one mile of parks and open space. A portion of

these households do not have safe access to these parks and open spaces (higher level of traffic stress).

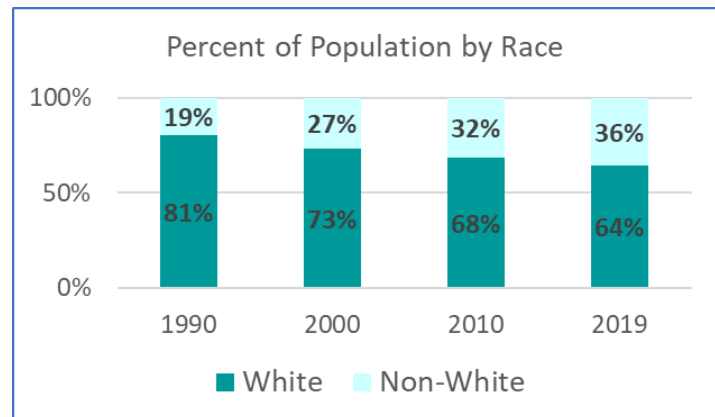
During the comprehensive planning process the public voiced support for combatting climate change. One effective method is through the reduction of greenhouse gas emissions. Approximately one-third of carbon dioxide emissions are from the transportation sector.



Source: Delaware Department of Transportation, 2021

Equity/Social Justice

Equity is an overarching issue in New Castle County and beyond. It is also complex and extends well beyond the ability of the comprehensive plan to fully address. Nonetheless, the comprehensive plan can be part of achieving more equitable communities. Race is one way of looking at equity. Achieving equity also involves evaluating age, income, disability access, and others.

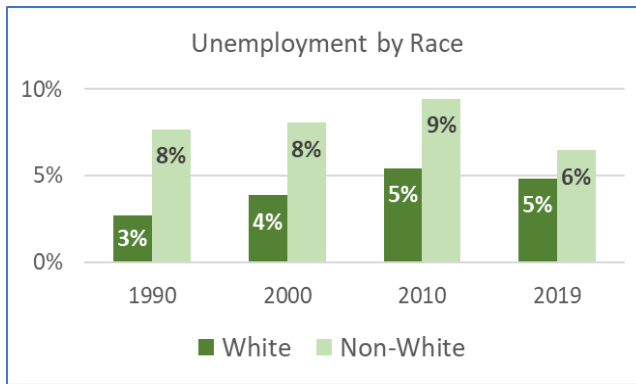


Source: IPUMS USA, University of Minnesota, www.ipums.org

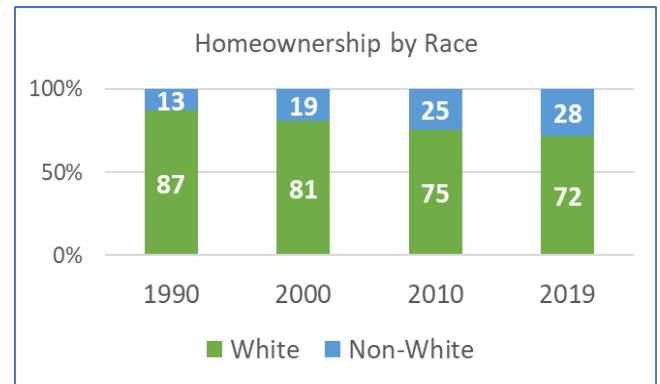
The indicators explored have a relationship with equity. There are several metrics illustrated that help shape a picture of how:

- population is growing more diverse, with the percentage of people identifying as “white only” decreasing since 1990.
- trends for the indicators shown, such as unemployment/employment and home ownership seem to be trending in the right direction in terms of equity
- there are still disparities in home ownership and unemployment rates between whites and non-whites

Continued tracking of data on sub populations is a strategy that can help toward improving equity.



Source: IPUMS USA, University of Minnesota, www.ipums.org



Source: IPUMS USA, University of Minnesota, www.ipums.org

Part B. Scenario Planning Process:

Scenario planning is an important tool for examining how alternative approaches for land use and zoning can help achieve the vision and goals expressed by the public through an examination of demographic, economic and environmental trends. Using data and information about recent trends and possible futures, scenario planning helps us to plan for the uncertain future. Analyzing the outcomes of different scenarios helps us understand the tradeoffs of different strategies and identify how those strategies may present opportunities or challenges depending on how the future unfolds.

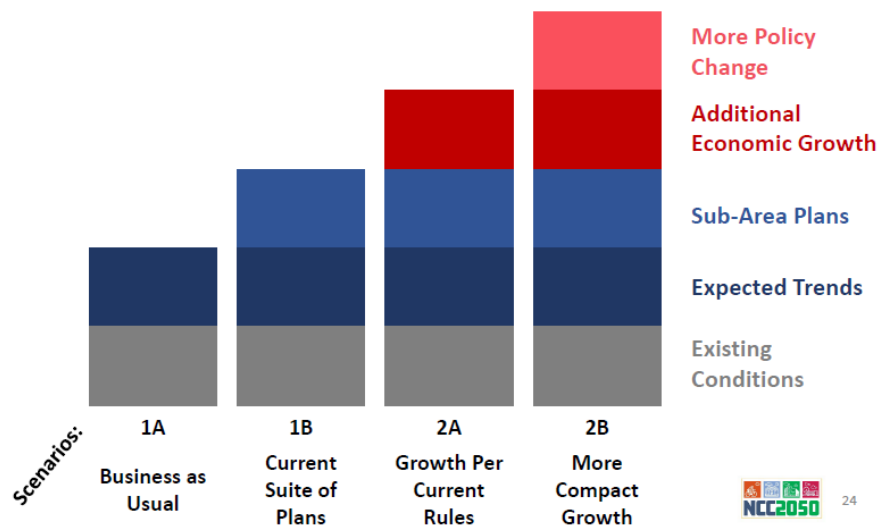
The examination of key measures of effectiveness under different development scenarios helps planners develop informed land use policies and regulations to address critical issues associated with community goals including:

- Regional and local economy
- Aging population
- Environmental and Social Justice
- Housing needs
- Aging infrastructure
- Climate change

Approach

We have derived four scenarios ranging from limited growth and retaining our current land use policies to an alternative future with higher levels of population and job growth and land use policies that have been supported through the comprehensive planning process. These scenarios examined existing conditions and accounted for expected trends. This foundation was built on through examining potential impacts from the implementation of our Sub-Area Plans (Community Area Master Plans, CAMPs¹), further economic growth and the implementation of additional land use policies. The graphic above depicts the building blocks for our scenarios.

Scenario Building Blocks



¹ The Community Area Master Plans are localized planning efforts that include Claymont (2015-2017), Route 9 (2015-2017), Concord Pike (US 202) (2018-2020), Southern New Castle County (2018-2020) and Churchmans Crossing (2020 - Future)

Policy Dials

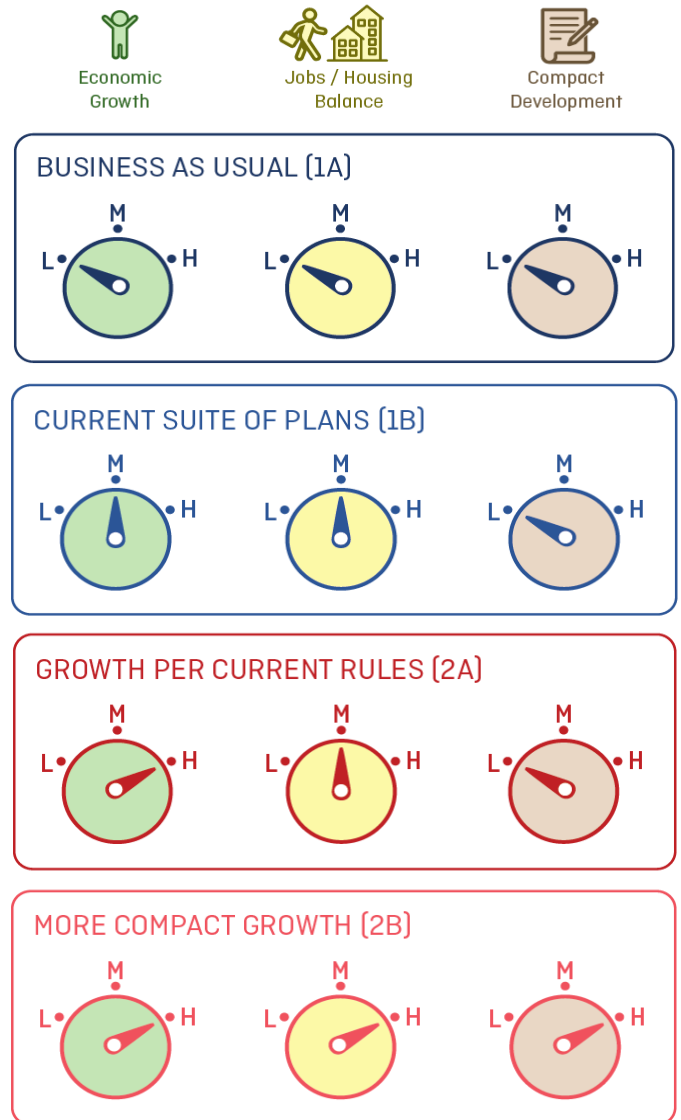
To provide a concise and understandable tool for discussion, we developed three “dials”; Economic Growth, Jobs/Housing Balance and Compact Development. Each dial represents the implementation and adoption of a variety of policies and regulations that positively impact each category. For the purposes of this document the dial indicators are:

- L – Current policies are maintained
- M – Moderate policy and regulatory changes are made
- H – Significant policy and regulatory changes are made

The scenarios are, most importantly, evaluations based on an honest appraisal of the strengths, weakness opportunities, and threats that our county will face in the years to come and as such should serve as an important planning tool.

Scenario Descriptions

The following paragraphs provide additional context for the four scenarios.



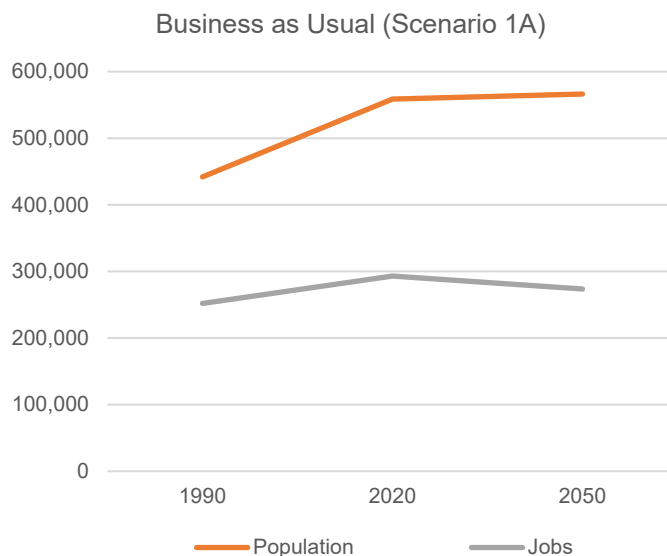
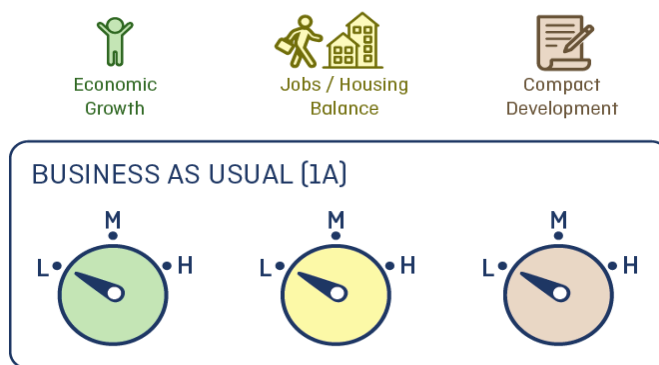
Business as Usual — Low growth with increasing costs. (Scenario 1A)

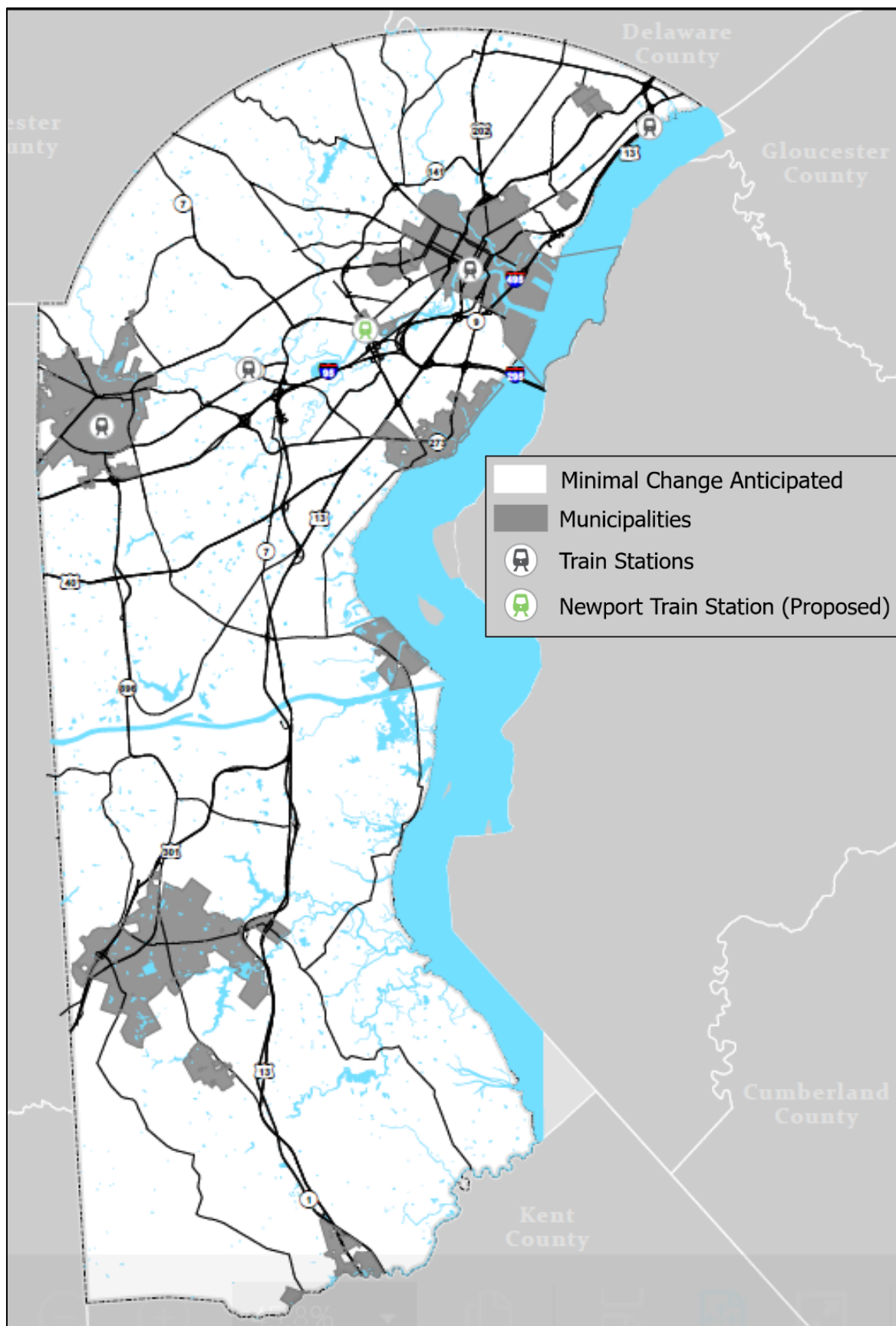
This scenario considers a future where the County does not alter its current land use policies or regulations (See Policy Dials, page 2). This approach assumes that the current CAMPs underway or recently completed are not formally adopted. Population and job forecasts are consistent with the official projections adopted by the Delaware Population Consortium.

Population would increase from about 559,000 to about 566,000 between 2020 and 2050 (having peaked between 2035 and 2040). Total jobs would potentially decrease from about 293,000 to about 274,000. Any changes to environment, conservation, preservation, economic or equity would be the results of our current policies. The result of this scenario is about 1.4 jobs per each household.

Considerations:

- Growing costs associated with infrastructure without a commensurate source of income (little population growth and slightly negative employment with same development patterns as in the past)
- Uses remain generally segregated and limited development of integrated housing/office/retail developments; few smaller housing options for singles, smaller families; older housing stock in developed areas of the county may result in decline or abandonment in some areas (likely older areas north of canal) without a focused effort to stem the tide of sprawl.
- Community relies primarily on automobiles to meet their daily travel needs; increased need for paratransit as older seniors are stuck in suburban areas; large surface parking lots predominate without change in policy.





Current Suite of Plans — Moderate growth with increasing costs, but actions to build from strengths help residents and businesses be resilient. (Scenario 1B)

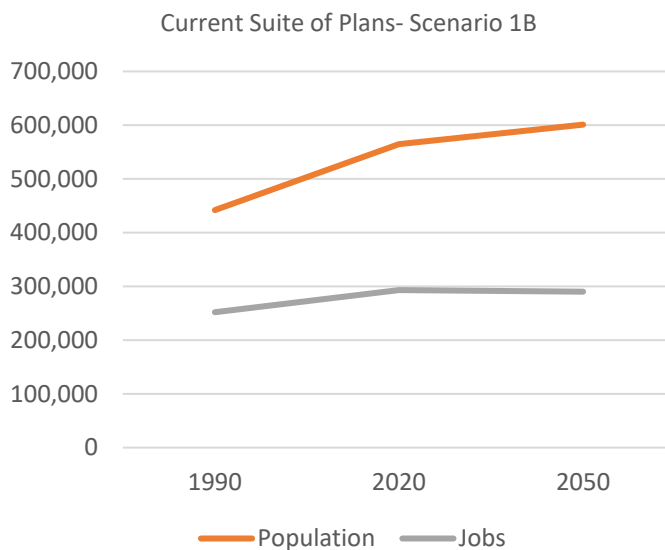
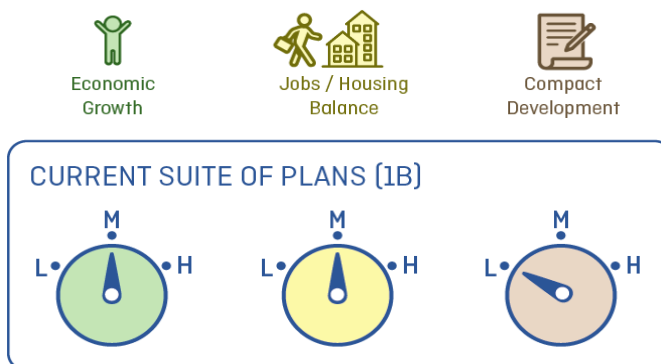
This scenario considers a future where the County adopts and implements the Community Area Master Plans (CAMPs, See page 6), however does not alter its current land use policies or regulations outside of the CAMPs.

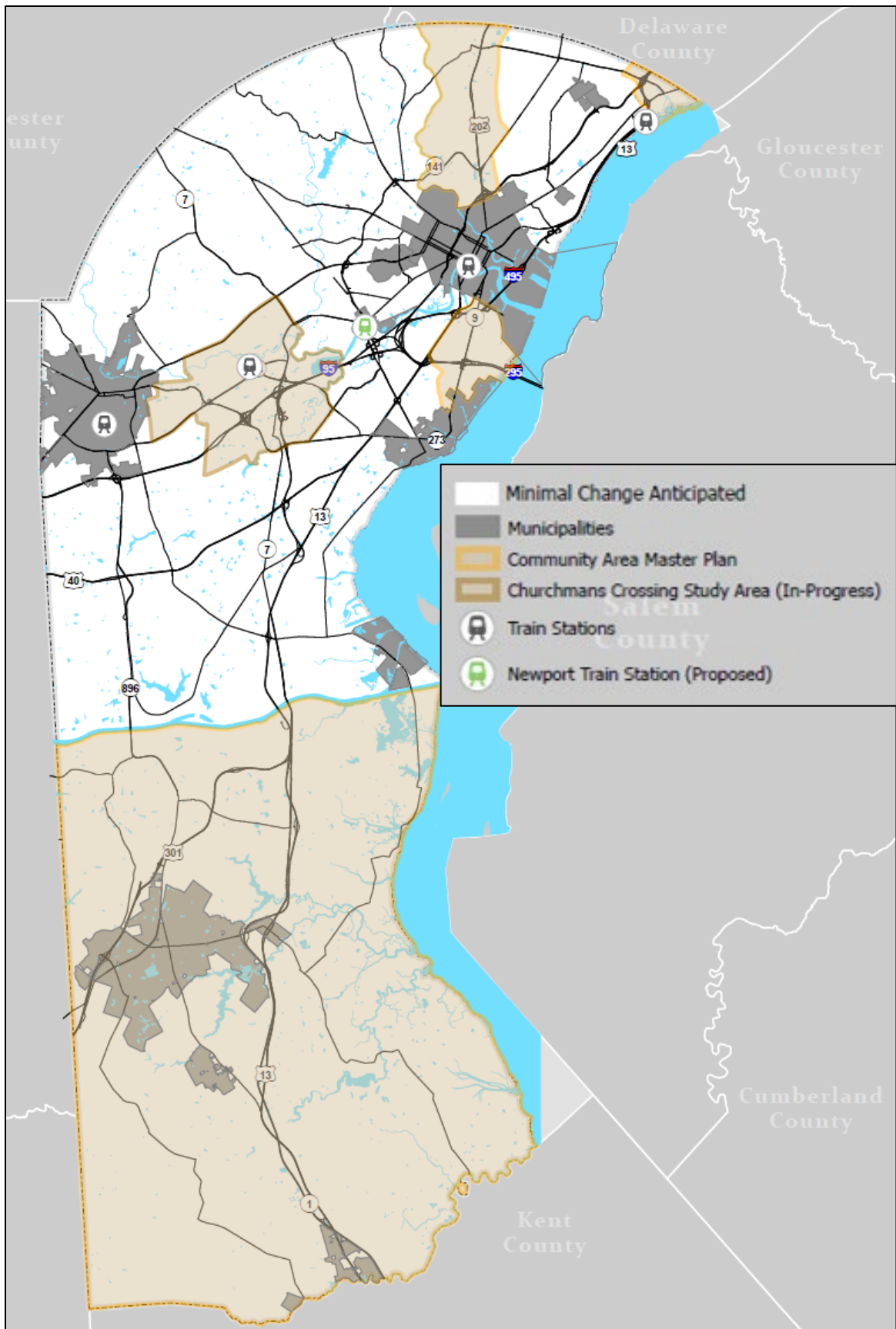
Outcomes differ from scenario 1A in that more compact development patterns, jobs/housing balance, increased housing options, and more walkable conditions are achieved in the CAMPs. Changes to environment, conservation, preservation, economic or equity would result from implementation of the CAMPs as well as the countywide continuance of our current policies.

Population and jobs forecast build on the official projections adopted by the Delaware Population Consortium in areas where CAMPs are implemented. Population would increase from about 559,000 to about 601,000 (about 35,000 more than currently projected) between 2020 and 2050 (having peaked between 2035 and 2040).

Total jobs would have a net decrease from about 293,000 to about 290,000 (about 16,000 more total jobs than currently projected and used in scenario 1a). The result of this scenario is about 1.4 jobs per each household.

Shift in development would be expected, but growth in population and employment remains modest.



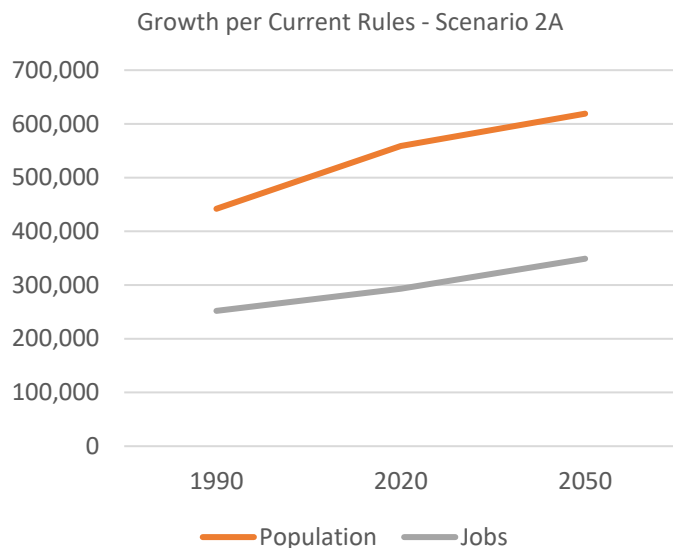
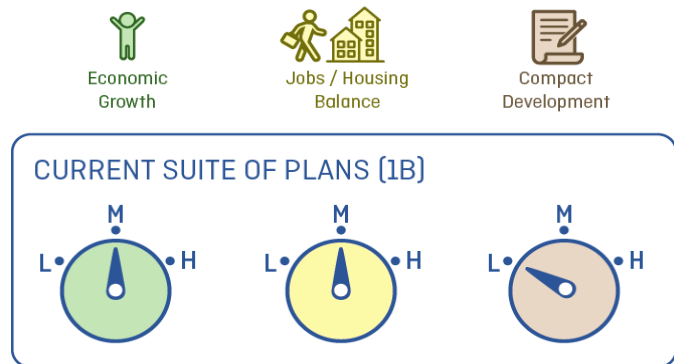


Growth per Current Rules —more population and jobs, but left mostly to the market and current regulations it results in more driving, lost farmland, etc. (Scenario 2A)

This scenario considers a future where the county experiences growth in jobs and population and adopts the Community Area Master Plans (CAMPs, see page 9), however their objectives are not fully achieved. Countywide, there would very limited changes in policy that would intervene with market forces.

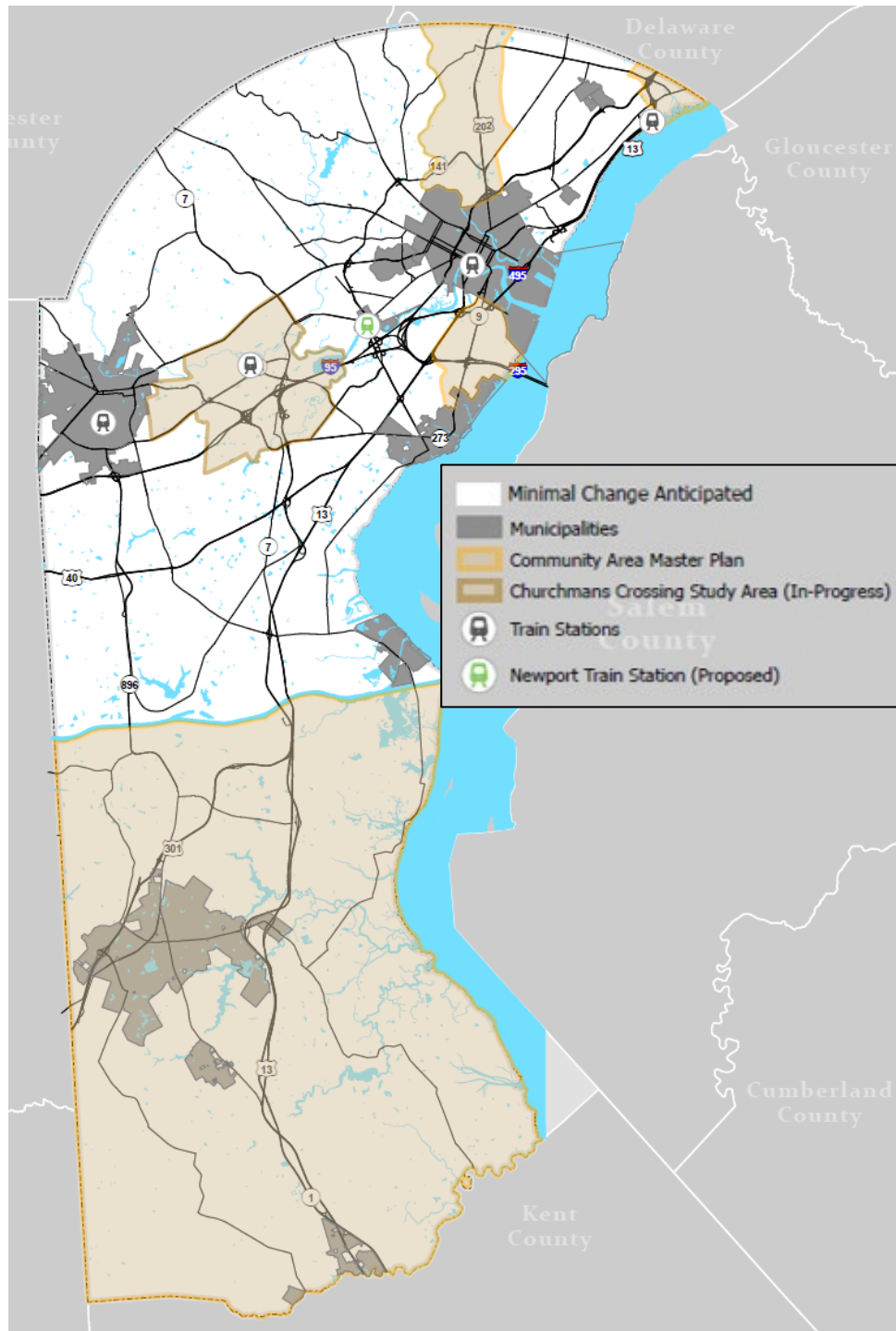
Considerations:

- Growth and associated development are expected to be driven by significant capacity that exists in residential and non-residential land.
- Market forces from delivery-based retail and associated change will spur growth in employment continues predominantly in northern county.
- Single-family development is the dominant form of development (southern county) leading to localized mismatch of jobs and housing potentially feeding more traffic congestion.
- Proximity to I-95, the Port of Wilmington, and major metropolitan areas like Baltimore, Washington, and Philadelphia, continue to attract warehouse and distribution centers with larger building footprints in more dispersed locations.
- More economic growth in a sprawl pattern exacerbates reliance on single-occupant vehicles. Transit, walking, and bicycling mode-share would remain low.



Population and jobs forecast build on the official projections adopted by the Delaware Population Consortium. Population would increase from about 559,000 to about 619,000 (about 53,000 more than currently projected) between 2020 and 2050. Total jobs would potentially increase from about 293,000 to about 350,000 (about 76,000 more than currently projected). The result of this scenario is about 1.6 jobs per each household.

Population and jobs forecasts are based on analysis performed by Woods and Poole Economics, Inc.²



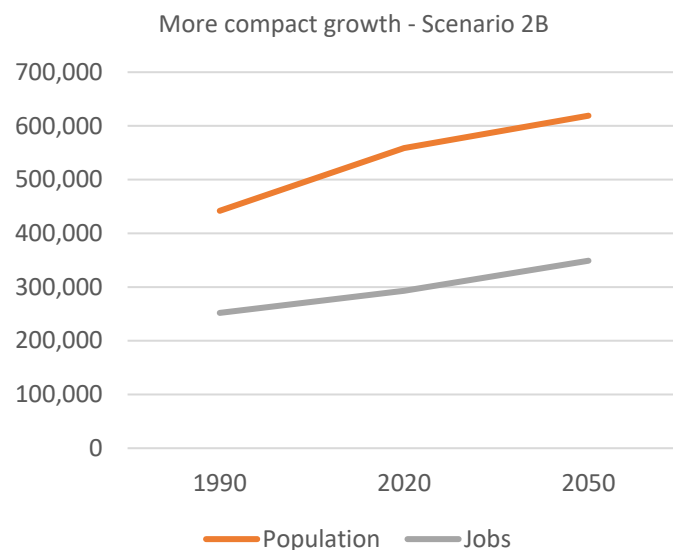
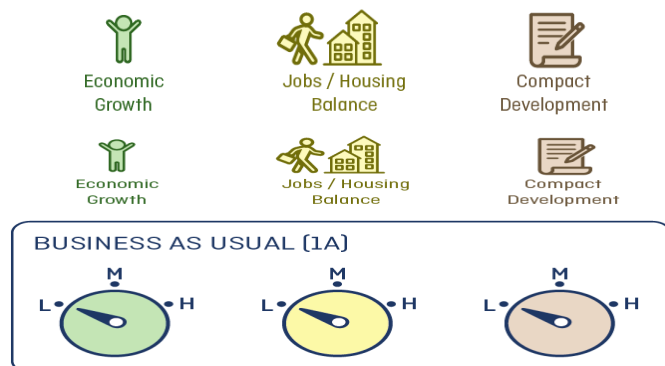
² Woods & Poole Economics, Inc. is a firm that specializes in long-term county economic data and demographic data projections. Woods & Poole's database for all U.S. counties contains projections for every year through 2050 for more than 900 variables. Woods & Poole has been making county projections since 1983.

More compact growth—higher growth in population and housing from various causes are guided with policy and strategies that focus on infill, redevelopment, and traditional neighborhood design. (Scenario 2B)

This scenario considers a future where the county experiences growth in jobs and population as a result of the adoption and successful implementation of the Community Area Master Plans (CAMPs, see page 12), as well as regulations that promoting growth to occur in a more compact pattern, in locations where existing shopping centers and other nonresidential uses may redevelop (see focus areas identified in purple³, page 12). Countywide, there would be changes in policy that would achieve the Community Vision.

Considerations:

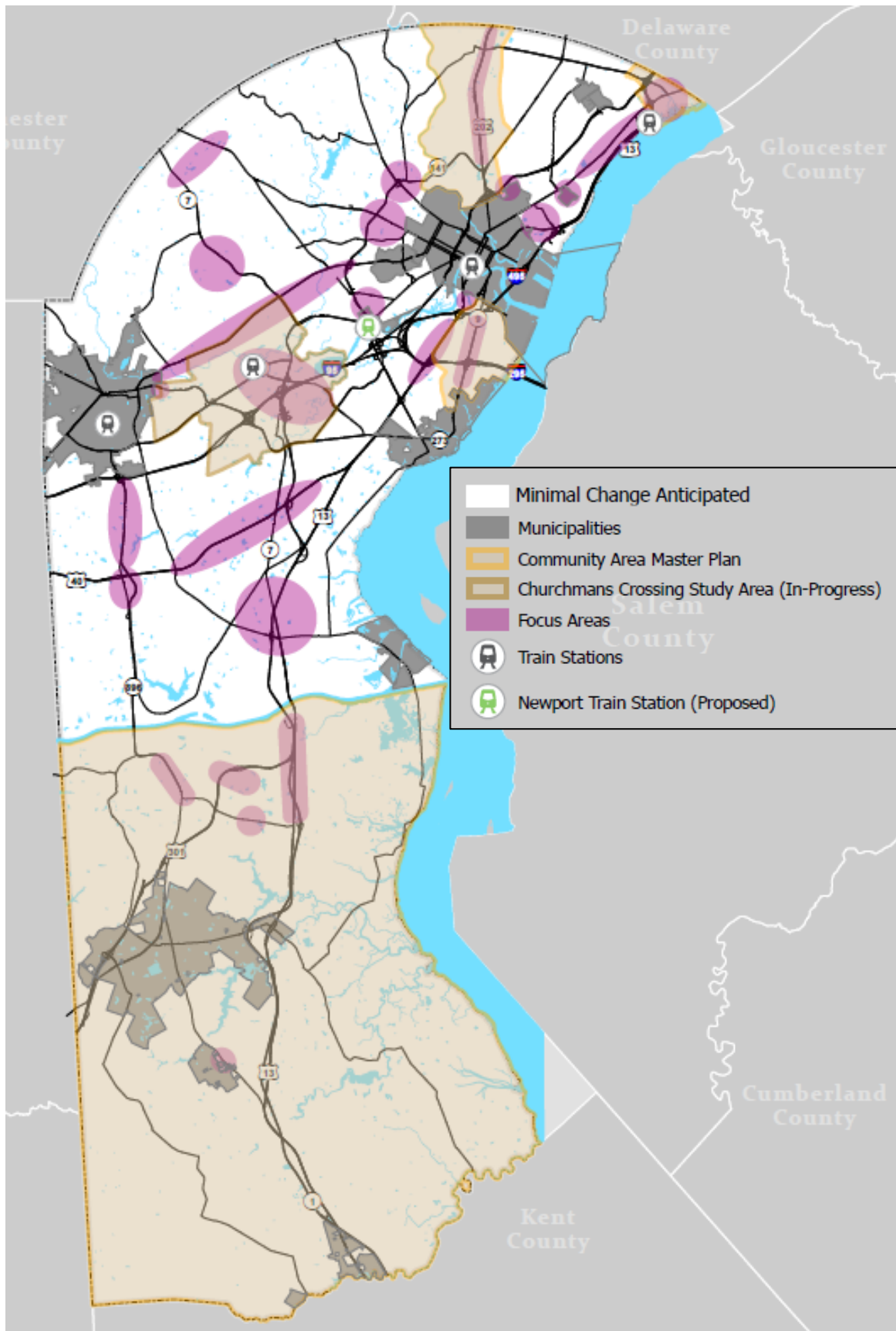
- In order to attract young professionals who value living in areas with identifiable centers, transit, and a mix of retail and housing, the County focuses development in the areas around transit hubs like Churchman's Crossing, Newport, and Claymont. Walkable places with mixed use and variety of housing types would arise and density of population and jobs would support better transit service.
- Housing options offering greater variety in price, size, and form than today are available throughout the county. This would achieve a better balance of affordability in “areas of opportunity”, matching forecasted demand (aging population, need for more affordable options, smaller unit options to meet desires of non-family households).
- Reduction in surface parking and impervious surface opens up potential for redevelopment/infill particularly in growth areas and also supports water quality improvement countywide.



³ Focus areas are locations that may change in use and form over the next 30 years. Any such change should encourage placemaking principles, while being sensitive to adjacent uses and communities.

Population and jobs forecast build on the official projections adopted by the Delaware Population Consortium. Population would increase from about 559,000 to about 619,000 (about 53,000 more than currently projected) between 2020 and 2050. The result of this scenario is about 1.6 jobs per each household. Total jobs would potentially increase from about 293,000 to about 350,000 (about 76,000 more than currently projected). Population and jobs forecasts are based on analysis performed by Woods and Poole Economics, Inc.⁴

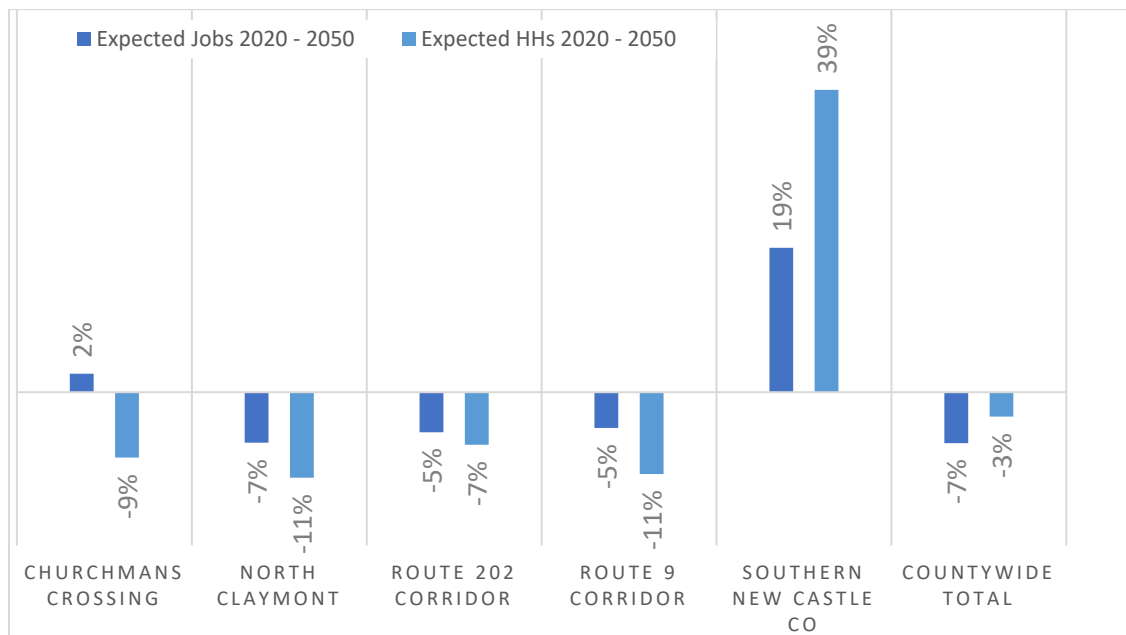
⁴ Woods & Poole Economics, Inc. is a firm that specializes in long-term county economic data and demographic data projections. Woods & Poole's database for all U.S. counties contains projections for every year through 2050 for more than 900 variables. Woods & Poole has been making county projections since 1983.



Technical Methodology for Population and Employment Allocation

In order to measure the impacts of alternative scenarios, the New Castle County Department of Land Use developed a methodology to allocate projected jobs and households to transportation analysis zones (TAZs) by scenario. The base data for the analysis is the 2020 TAZ base data and projections provided by WILMAPCO and based on the Delaware Population Consortium's (DPC) countywide projections.

Scenario 1A, "Business as Usual", does not change the default allocation of jobs and households from the original WILMAPCO version. The distribution of jobs and households largely follow existing development patterns and existing site development plans across the County and municipalities. In this Scenario, Southern New Castle County grows, while many other areas of the County decline in both jobs and households.



Scenario 1B, "Current Suite of Plans", assumes that the current draft Community Area Master Plans (CAMPs) are adopted and implemented, including Rt. 202/Concord Pike, Southern New Castle County, North Claymont, and Route 9. It also assumes that the "balanced growth" scenario that was developed as part of the ongoing Churchman's Crossing CAMP process is adopted and implemented. In this scenario, the DPC's forecast and WILMAPCO allocation was assumed for areas outside of the CAMPs.

Scenarios 2A and 2B applied a basic land use suballocation model that considered two different opportunities for allocating additional growth reflected in the Woods and Poole econometric forecasts to subareas within New Castle County (including municipalities). Scenario 2A, Growth per Current Rules, assumes that the CAMPs underway or recently completed are adopted, but recognizes that without further policy direction, market forces will tend to continue to disperse growth to greenfields areas to a degree greater than desired. In Scenario 2B, additional strategies to promote compact growth help direct growth to CAMPs and municipalities. The suballocation model applied a development suitability approach to identify how available land, development densities and diversity, infrastructure

investment, and jobs accessibility would define development attractiveness, with weights refined to reflect different policy objectives.

The following table shows how each of the four scenarios allocate growth to several key areas within the counties, including the three largest municipalities (Wilmington, Newark, and Middletown), the five CAMP areas, and the remainder of the county (including other smaller municipalities). The leftmost four columns show the 2020 and 2050 total population and employment for each subarea per the adopted Peninsula model totals; the numbers in these columns are constant across all four scenarios and presented to facilitate comparison of the changes in Scenarios 1B, 2A, and 2B to the business as usual totals in Scenario 1A.

The next two columns show the 2050 projected population and employment totals for each of the scenarios (recognizing that Scenario 1A is the same as the baseline).

The next two columns show “target” 2050 population and employment totals for the current suite of plans in Scenario 1B. The definition of “target” includes one estimate of plan yield for the CAMPs plus maintenance of adopted forecasts elsewhere in the county. These target estimates are not formal elements of the comprehensive plan, yet form useful context regarding the general amounts and types of development considered as CAMPs were developed. Note that Middletown is both a municipality but also part of the planning for the Southern New Castle County plan.

Finally, the rightmost columns show the difference between the scenario totals and the target values. Some of the values in these rightmost columns are set by definition, including:

- The differences in Scenario 1A show the degree to which the targets for the CAMPs (including Middletown as noted above) differ from the adopted forecasts
- Scenario 1B is defined as achieving the target values in all areas of the County
- The suballocation process in Scenarios 2A and 2B are designed to maintain countywide totals per Woods and Poole econometric forecasts, but are not required to hit any other target totals specifically.

Evaluation of the 2050 projections in each scenario and the difference between the scenario totals and the target values yield several observations:

- The attractiveness of CAMPs should be enhanced with supporting strategies that can generally be applied on a countywide basis.
 - In Scenario 2A where greater econometric growth is assumed, the market for growth is attracted not only to the CAMPs, but also:
 - More compact growth is attracted to Wilmington and Newark (with each municipality attracting between 3,000 and 14,300 more residents or jobs than in the baseline scenario. and a substantial market exists
 - Less compact growth is attracted to “other” areas of the county with 24,000 more residents and 33,000 more jobs in those other areas than in the baseline scenario
 - Therefore, in Scenario 2A, the CAMPs achieve different growth patterns than their targets would suggest, and in particular the Route 202 corridor,

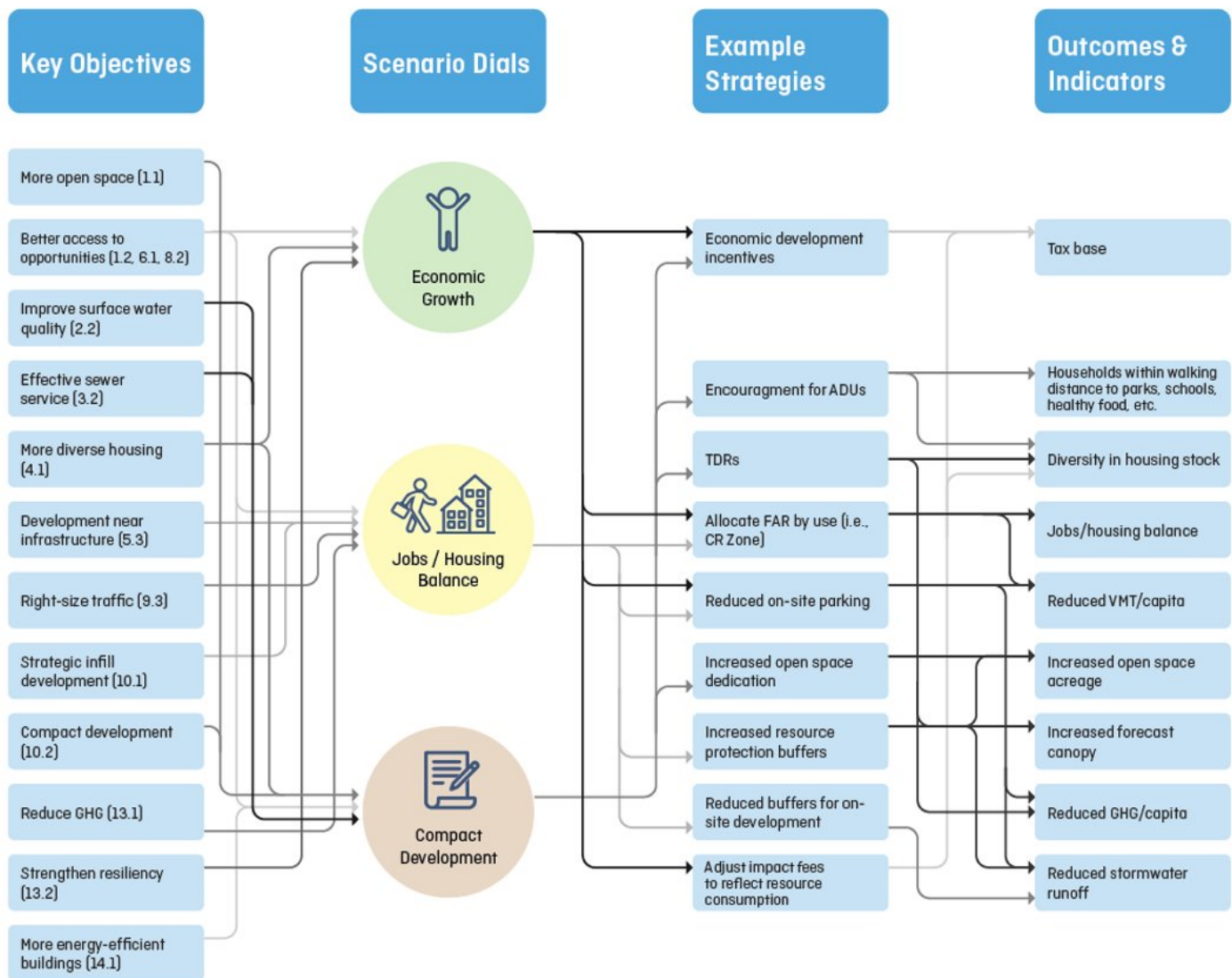
Churchman's Crossing and North Claymont do not reach the full potential envisioned by the targets.

- In Scenario 2B, with policies supporting more compact growth in New Castle County, the county attracts a greater number of people and jobs in the CAMPs so that their 2050 totals are closer to the target values

Summary Group		2020 Baseline		2050 Baseline (DPC)				2050 Scenario Projections			2050 "Target"		2050 Scenario Difference from "Target"	
		POP	EMP	AU	POP	EMP	AU	POP	EMP	AU	POP	EMP	POP	EMP
1A Business as Usual														
Municipalities	Wilmington	71,790	61,002	132,792	69,342	52,316	121,658	69,342	52,316		69,342	52,316	-	-
	Newark	38,583	30,193	68,776	39,530	28,000	67,530	39,530	28,000		39,530	28,000	-	-
	Middletown	21,114	7,180	28,294	22,045	7,420	29,465	22,045	7,420		22,045	9,844	-	(2,424)
CAMPS	Route 9 Corridor	16,893	10,349	27,242	15,698	9,869	25,567	15,698	9,869		15,698	9,869	-	-
	Route 202 Corridor	13,740	23,222	36,962	14,047	22,011	36,058	14,047	22,011		23,056	23,102	(9,009)	(1,091)
	Churchmans Crossing	36,653	34,481	71,134	36,235	35,326	71,561	36,235	35,326		57,191	38,061	(20,956)	(2,735)
	North Claymont	4,771	2,637	7,408	4,647	2,464	7,111	4,647	2,464		7,430	11,574	(2,783)	(9,110)
	Southern New Castle Co	41,085	4,458	45,543	48,567	5,330	53,897	48,567	5,330		50,563	5,330	(1,996)	-
Other	Other	319,499	119,395	438,894	316,277	110,832	427,109	316,277	110,832		316,277	110,832	-	-
	TOTAL	564,128	292,917	857,045	566,388	273,568	839,956	566,388	273,568		601,132	288,928	(34,744)	(15,360)
1B Current Suite of Plans														
Municipalities	Wilmington	71,790	61,002	132,792	69,342	52,316	121,658	69,342	52,316		69,342	52,316	-	-
	Newark	38,583	30,193	68,776	39,530	28,000	67,530	39,530	28,000		39,530	28,000	-	-
	Middletown	21,114	7,180	28,294	22,045	7,420	29,465	22,045	9,844		22,045	9,844	-	-
CAMPS	Route 9 Corridor	16,893	10,349	27,242	15,698	9,869	25,567	15,698	9,869		15,698	9,869	-	-
	Route 202 Corridor	13,740	23,222	36,962	14,047	22,011	36,058	23,056	23,102		23,056	23,102	-	-
	Churchmans Crossing	36,653	34,481	71,134	36,235	35,326	71,561	57,191	38,061		57,191	38,061	-	-
	North Claymont	4,771	2,637	7,408	4,647	2,464	7,111	7,430	11,574		7,430	11,574	-	-
	Southern New Castle Co	41,085	4,458	45,543	48,567	5,330	53,897	50,563	5,330		50,563	5,330	-	-
Other	Other	319,499	119,395	438,894	316,277	110,832	427,109	316,469	111,412		316,469	111,412	-	-
	TOTAL	564,128	292,917	857,045	566,388	273,568	839,956	601,324	289,508		601,324	289,508	-	-
2A Growth per Current Rules														
Municipalities	Wilmington	71,790	61,002	132,792	69,342	52,316	121,658	77,851	66,549		69,342	52,316	8,509	14,233
	Newark	38,583	30,193	68,776	39,530	28,000	67,530	42,557	32,224		39,530	28,000	3,027	4,224
	Middletown	21,114	7,180	28,294	22,045	7,420	29,465	24,885	11,112		22,045	9,844	2,840	1,268
CAMPS	Route 9 Corridor	16,893	10,349	27,242	15,698	9,869	25,567	16,721	11,236		15,698	9,869	1,023	1,367
	Route 202 Corridor	13,740	23,222	36,962	14,047	22,011	36,058	15,457	24,396		23,056	23,102	(7,599)	1,294
	Churchmans Crossing	36,653	34,481	71,134	36,235	35,326	71,561	39,712	40,757		57,191	38,061	(17,479)	2,696
	North Claymont	4,771	2,637	7,408	4,647	2,464	7,111	4,955	2,896		7,430	11,574	(2,475)	(8,678)
	Southern New Castle Co	41,085	4,458	45,543	48,567	5,330	53,897	56,150	15,864		50,563	5,330	5,587	10,534
Other	Other	319,499	119,395	438,894	316,277	110,832	427,109	340,653	144,158		316,469	111,412	24,184	32,746
	TOTAL	564,128	292,917	857,045	566,388	273,568	839,956	618,941	349,192		601,324	289,508	17,617	59,684
2B More Compact Growth														
Municipalities	Wilmington	71,790	61,002	132,792	69,342	52,316	121,658	73,970	66,864		69,342	52,316	4,628	14,548
	Newark	38,583	30,193	68,776	39,530	28,000	67,530	42,481	32,327		39,530	28,000	2,951	4,327
	Middletown	21,114	7,180	28,294	22,045	7,420	29,465	23,518	11,219		22,045	9,844	1,473	1,375
CAMPS	Route 9 Corridor	16,893	10,349	27,242	15,698	9,869	25,567	17,137	10,312		15,698	9,869	1,439	443
	Route 202 Corridor	13,740	23,222	36,962	14,047	22,011	36,058	17,917	23,174		23,056	23,102	(5,139)	72
	Churchmans Crossing	36,653	34,481	71,134	36,235	35,326	71,561	54,157	37,030		57,191	38,061	(3,034)	(1,031)
	North Claymont	4,771	2,637	7,408	4,647	2,464	7,111	7,661	7,223		7,430	11,574	231	(4,351)
	Southern New Castle Co	41,085	4,458	45,543	48,567	5,330	53,897	50,506	16,173		50,563	5,330	(57)	10,843
Other	Other	319,499	119,395	438,894	316,277	110,832	427,109	331,595	144,871		316,469	111,412	15,126	33,459
	TOTAL	564,128	292,917	857,045	566,388	273,568	839,956	618,942	349,193		601,324	289,508	17,618	59,685

Compromises and Tradeoffs

We are a socioeconomically diverse county and as such compromises and tradeoffs are necessary to chart an equitable future for all residents. It is important that when we consider our potential future, that the land use policy and regulation decisions that we make will strive towards meeting the aspirations of our community vision.



Part C. Indicators and Impacts

Through the comprehensive planning process, we have identified seven key objectives , along with indicators and metrics for evaluating the tradeoffs and compromises of the scenarios that we have analyzed.

Indicator	Metrics examples
<ul style="list-style-type: none">• Mix of uses• Diversity, distribution of housing options• Access to parks/open space• Preserved land• Vehicle miles of travel and carbon footprint• Fiscal impact• Equity	<ul style="list-style-type: none">• Jobs / housing ratio• Change in capacity for different housing types, sizes; dispersion versus concentration• Households within 1mile access of parks via low-stress, non-motorized routes• Acres of land preserved• VMT per capita; access in target areas based on VMT and average housing size• Tax base, revenue/cost, provision/level of services• Analysis at sub-population levels (this indicator/metric relate to all others)

Balancing Jobs & Housing

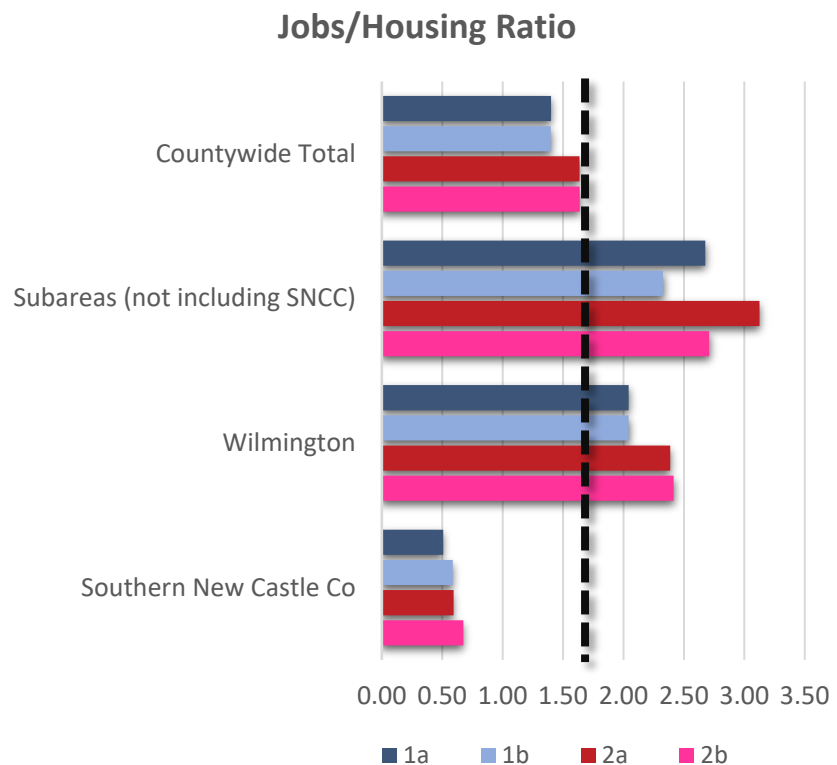
Having a good balance between jobs and housing ensures the continued viability of the county with adequate jobs for our residents. Having both a countywide and more localized balance between jobs and housing enhances accessibility of residents to job opportunities and can have a positive impact on traffic, as residents do not need to travel as far to work. On a regional basis, 1.6 jobs per household is the optimal ratio based on the average number of employed residents per household. In general, the same 1.6 ratio is an optimal balance at any scale. But many developments are entirely residential or commercial, a result of decades of practices separating uses based on both public health concerns associated with noxious effects of early 20th century commercial uses as well as market preferences. So it is appropriate in localized areas to have a forecast jobs/housing ratio that either exceeds (as in job centers) or is less than (residential areas) the 1.6 ratio. In short, for local areas, the objectives are not to achieve a 1.6 job/housing balance, but rather to shift closer to that 1.6 ratio over time.

The chart to the right examines the potential impact of the scenarios on the balance of jobs and housing countywide and at a local level. The dark dashed vertical line shows the 1.6 jobs/housing ratio. At a countywide basis, the totals in Scenarios 1A and 1B retain the county's position (including the municipalities) of being somewhat residential-heavy, a characteristic based in part on the degree to which the county serves as a provider of jobs as a satellite of the greater Philadelphia region. Scenarios 2A and 2B provide a better balance between jobs and housing.

Wilmington is the largest jobs center in New Castle County, and as the Woods and Poole economic growth in Scenarios 2A and 2B are distributed it is logical that some of that growth would be attracted to Wilmington, despite pushing its jobs/housing balance slightly further away from the balance. Within the County, however, the four CAMPs north of the canal are even greater jobs centers than Wilmington when measured by the jobs/housing ratio. The value of the policy adjustments in Scenario 1B (approving the CAMPs with greater mixed use) and Scenario 2B (creating policies that incent more compact, mixed-use development) help bring those CAMPs closer to balance than their corresponding starting points in Scenarios 1A and 2A respectively. And finally, while the policy efforts do also help bring Southern New Castle County closer to jobs/housing balance, the lack of regional accessibility limits the attractiveness of areas south of the canal for many commercial uses other than industrial uses that require large lot development and local goods and services (such as stores, schools, and medical services).

Achieving a better balance of jobs and housing can be fostered through a number of strategies including:

- Revisions to the mixed-use zoning regulations to reduce barriers to both vertical and horizontal use mixes
- Form-based code (regulate in ways that focus on building form and design rather than use)
- Designate target redevelopment and community growth areas for mix of uses; apply flexible regulations and incentives (e.g., Sub-area master plans, Complete Community Enterprise Districts, Transportation Improvement Districts) that help tailor both street design and traffic concurrency requirements/metrics so that development better supports transit, walking, and bicycling)



Jobs/housing balance is calculated by dividing the number of jobs by the number of households within a geographic area. The jobs/housing balance varies by scenario because of the differences in total jobs and households being projected for the county as a whole and the differences in allocation of the projected growth by TAZ (Transportation Analysis Zone).

Housing Diversity

More than half of the housing units in New Castle County are one-unit detached houses, with 29% of all households have costs that are higher than what is considered affordable, meaning that more than 30% of family budget devoted to rent/mortgage costs. With changing demographics that includes an overall aging population household sizes are expected to fall.

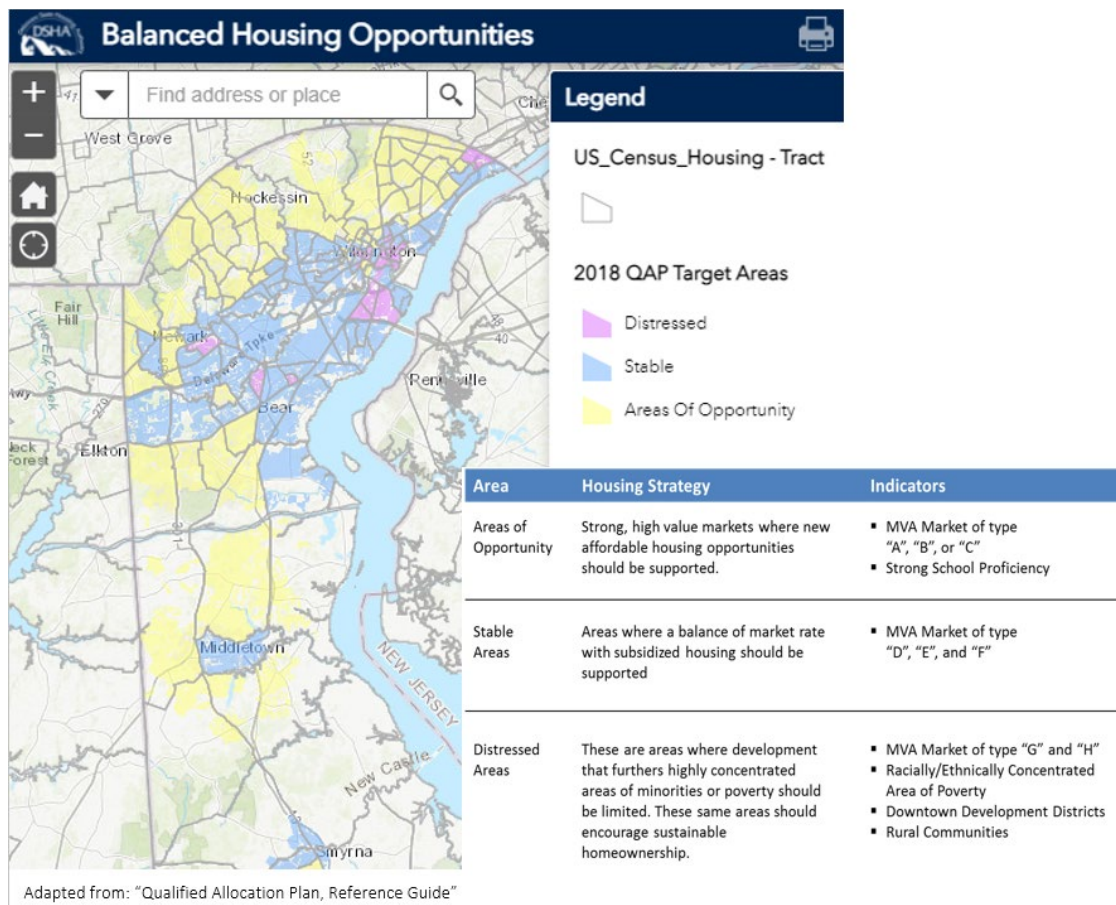
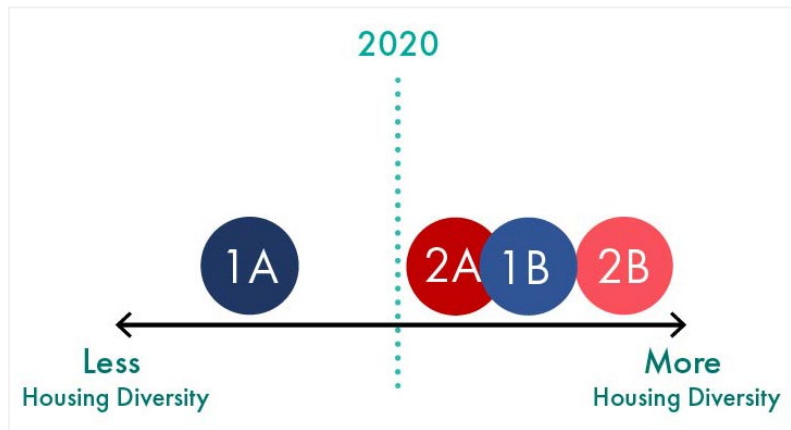
An increase in the diversity of housing options will provide more variety in housing costs, housing sizes, and housing densities to meet our future needs matching residents' housing needs (in terms of cost, size, and location) to housing supply.

For us to have a diverse equitable housing market meeting the needs of all residents we should consider strategies such as:

- More permissive zoning regulations in residential districts to allow a greater variety of complementary housing types geared to the greater diversity of household types
- Detached Accessory Dwelling Units (ADUs) by-right in all residentially zoned areas to foster housing unit diversity, as ADUs tend to be smaller and affordable than the primary residence on a given parcel.
- Development standards based on building design and form with density caps based on square footage rather than an allowed number of units to promote smaller and more affordable unit sizes
- Adjustments to impact fees based on housing unit size as opposed to a flat per unit basis to incentivize smaller, more affordable units
- Reduction or flexibility of parking space requirements to reduce housing costs
- Develop a regional housing strategy with incentives toward affordable housing in identified opportunity areas
- Procedural incentives (e.g., fast track permitting and approval) for development proposals that improve housing diversity. (Note that streamlined procedural incentives can apply toward implementing any functional strategy.)
- Incorporate moderately priced dwelling units (MPDUs) in all major developments
- Leveraging opportunities to link housing strategies with American Rescue Plan

Through scenario evaluation, there was a correlation between adoption of compact development policies with higher growth and housing diversity, favoring policies in Scenario 2B. The business as usual approach in Scenario 1A would result in slightly less housing diversity than currently exists in 2020; all three of the other scenarios increase housing diversity above 2020 levels.

The housing diversity indicator was created by calculating the number of new projected households in areas of high housing opportunity, defined by the Delaware State Housing Authority's Qualified Allocation Program Reference Map. Areas of high opportunity are defined as, "Strong, high value markets, many with high performing schools, where new affordable housing opportunities should be supported."⁵



Access to Park and Open Space

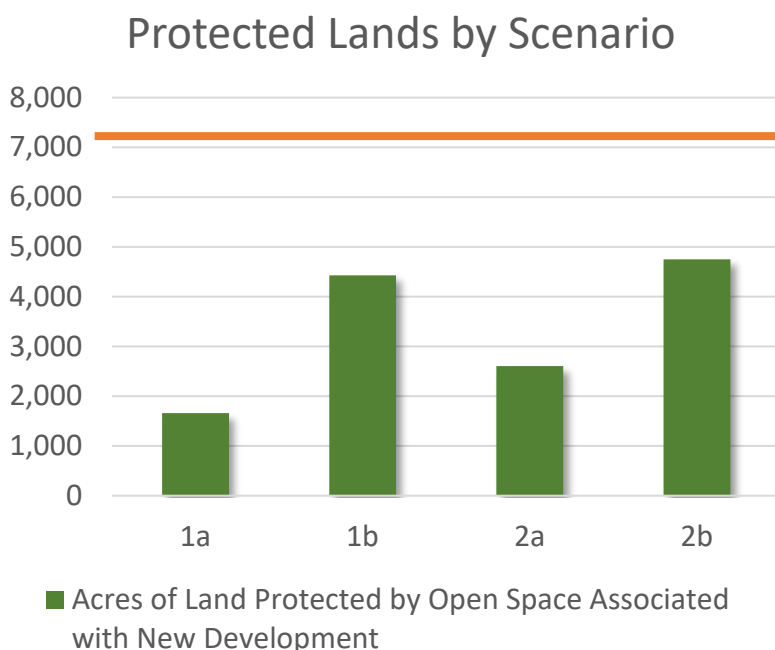
Approximately 27% of the county is currently protected from development through the development process (open space), easements and as parkland. During the comprehensive planning process the public voiced support for preserving 30% of the county's land by

⁵ 2021 Delaware Qualified Allocation Plan, <https://arccg.is/11TWyS>

2050. This will require preserving more than 7,000 additional acres of land in the next 30 years.

When evaluating the scenarios it was apparent that those that actively promoted policies of compact development and land preservation (1B & 2B) will come closest to reaching our goals. These scenarios would use open space resulting from development, along with land preservation programs that are not directly linked to development in order to achieve the goal of preserving 30% of the County's land area by 2050.

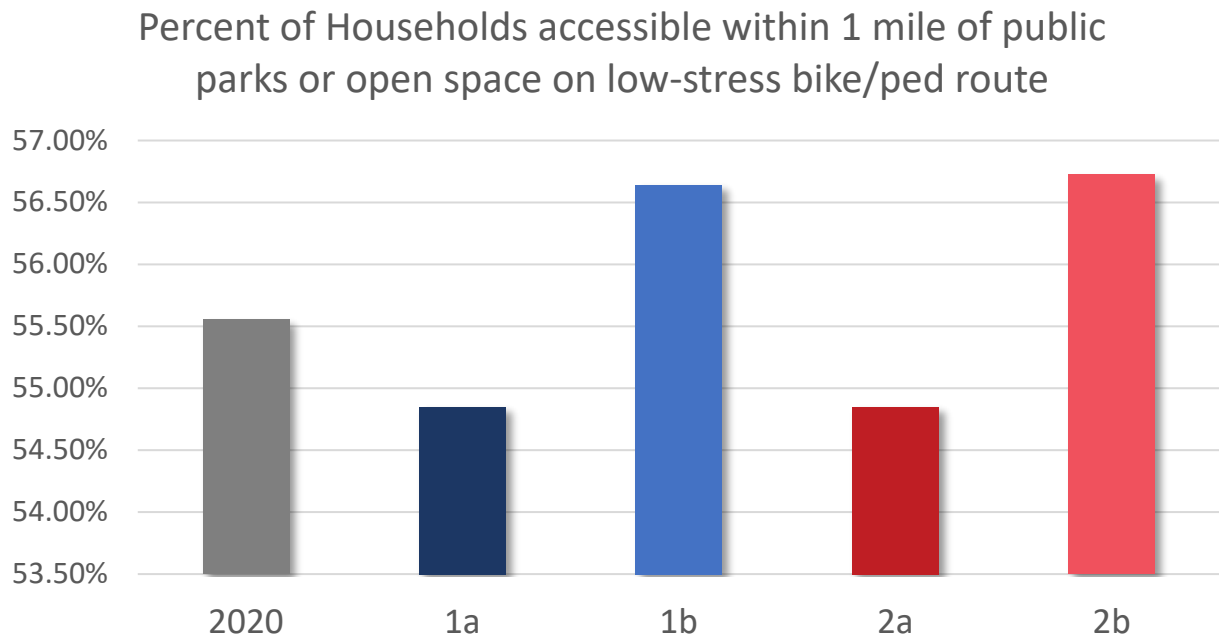
The analysis for estimating the number of acres of protected lands that result from development evaluated the number of protected lands generated per housing unit from 1997 – 2020, using the County's subdivision tracking database and open space GIS files. This equates to approximately 0.26 acres per housing unit. These assumptions were carried forward to 2050 by scenario. A major factor in this analysis is that there are many subdivisions that have development potential. If a new unit is built in one of these existing subdivisions, they do not generate new open space. Scenarios 1b and 2b assume a policy or regulatory change regarding mixed use development. These scenarios assume that each new unit in a mixed use development generates the same number of acres of open space as residential subdivisions, even though mixed use developments do not currently have the same requirements.



The public also voiced support for increasing safe bicycle access to parkland. Currently, about 55.5% of households have access to public parks by a low stress bicycle route within a 1 mile distance. When evaluating scenarios only those that actively promote compact development and actively promote land preservation and multimodal transportation opportunities increase access to public parks.

This indicator builds off of the existing conditions analysis developed by the Delaware Department of Transportation, which measures the number of housing units with access to public parks or open space via low stress bicycle or pedestrian routes. Scenarios 1B and 2B assume that several small area plans are fully implemented, including recommendations to improve bicycle and pedestrian access to parks and open space. This would mean that, in Scenarios 1B and 2B, there is an assumed increase in the percentage of residents in these areas with low stress access to parks or open space. This analysis assumes an increase in the number of residents with low-stress access to open space in Churchman's Crossing, Route 9, and Route 202/Concord Pike. The analysis assumes that the current percentage

of the population within the rest of the County with access to parks and open space within one mile stays consistent with the percentage of households that have access in 2020.



Important strategies to help us achieve this goal include:

- Implement the NCC Bike Plan which includes many bicycle facilities (both along roads and on independent alignments) that will improve the network of low-stress routes.
- Ensure safe, comfortable non-motorized facilities are included in development and redevelopment plans, with an emphasis on connecting on-site development activities to areawide pedestrian and bicycle networks.
- Develop a countywide long-range Parks Master Plan that includes assessment of multi-modal and equitable access.
- Develop a countywide Vision Zero plan in conjunction with DeIDOT and WILMAPCO to strive to reach zero traffic fatalities by 2050, with a focus on vulnerable non-motorized travel modes.
- Identify communities that have inadequate access to open space and recreational opportunities and prioritize preservation and design of open space areas to serve these communities.
- Ensure that existing parks and open space are sufficient to serve the population.

Reduction of Impervious Surfaces

Impervious surfaces such as parking lots have a direct detrimental impact on ground water, runoff and in some instance flooding. Parking makes up about 53% of all impervious surfaces in the county.

Public comment during the comprehensive planning process supports protecting our water resources and reducing flooding. Parking reduction strategies are most viable in areas of the county with compact development and a mix of uses so that greater potential exists to walk and bike rather than drive to destinations and a “park once” approach for trips made by car.

National Land Cover Data from the US Geological Survey (USGS) identifies developed areas as generally low, medium, or high density. Based on the composition of development in each TAZ, a regression analysis was performed to link development acreage with impervious surface, reflecting the fact that higher density development has less per-capita impervious surface (due to a variety of market-based economics, but exemplified by the concept that a two-story building can house twice the amount of human activity for a given amount of rooftop). For each of the scenarios the number of activity units (population plus jobs) assigned to a given TAZ was used to generate an estimate of impervious surface. For scenarios 1B and 2B, an additional analysis was performed to reduce parking lot spaces in TAZs where sufficient development density exists to promote non-auto travel and a “park once” policy.

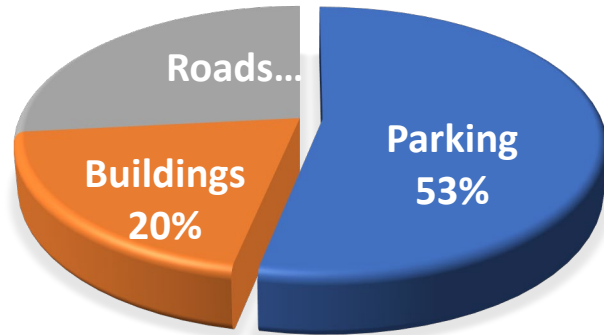
Policies examined in Scenario 2B will have the greatest impact on reducing impervious surfaces countywide, considering both per-capita rates (acres per activity unit which is described as population plus jobs) as well as total acreage even given the higher levels of activity units in Scenarios 2A and 2B.

- Scenario 1A: 30,800 total (or 0.037 per activity unit)
- Scenario 1B: 31,100 total (or 0.035 per activity unit)
- Scenario 2A: 31,500 total (or 0.033 per activity unit)
- Scenario 2B: 30,500 total (or 0.032 per activity unit)

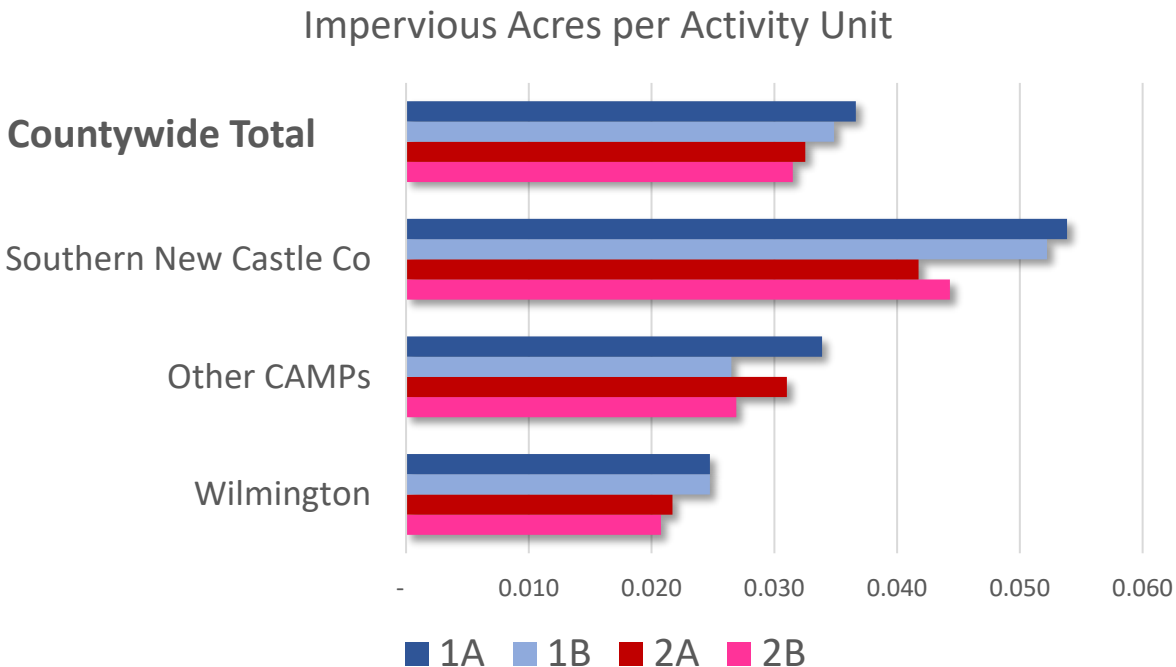
Important strategies to help us achieve this goal include:

- Change parking space requirements in the land development code to reduce the tendency to “overpark” a development site, including:
 - Reducing minimum parking space requirements
 - Establishing maximum parking space requirements

Impervious Surface Area
(countywide)



- Reflecting development context so that parking requirements are most flexible in development centers where non-auto travel options are robust
- Encouraging the unbundling of reserved parking space from uses so that the reservation of a parking space is an economic choice of the customer rather than a given, sunk cost.
- Promote mixed-use development which has the greatest potential to generate short trips by walking or biking
- Incentivize low-impact development (LID) techniques (e.g. linear stormwater management, green roofs) that help promote stormwater infiltration on-site



Greenhouse Gas Emissions/Vehicle Miles Traveled (VMT)

During earlier phases of the comprehensive planning process, there was public support for combatting climate change. One effective method is through the reduction of greenhouse gas emissions. With about 1/3 of CO₂ emissions being the result of automobiles, policies that reduce VMT should be encouraged. Policies examined in Scenario 2B will have the greatest impact on reducing countywide VMT based on targeted compact growth, even considering the greater number of total activity units (population plus jobs) in Scenarios 2A and 2B. Reducing VMT has benefits beyond contributing to reducing the county's carbon footprint.

National Land Cover Data from the US Geological Survey (USGS) identifies developed areas as generally low, medium, or high density. Based on the composition of development in each TAZ, a regression analysis was performed to link development acreage with VMT generation reflected in the Peninsula Model for 2020 and 2050 Scenario 1A, reflecting the fact that higher density development has less per-capita VMT due to higher non-auto driver mode shares and shorter trip lengths by auto. For each of the scenarios the number of activity units (population plus jobs) assigned to a given TAZ was used to generate an

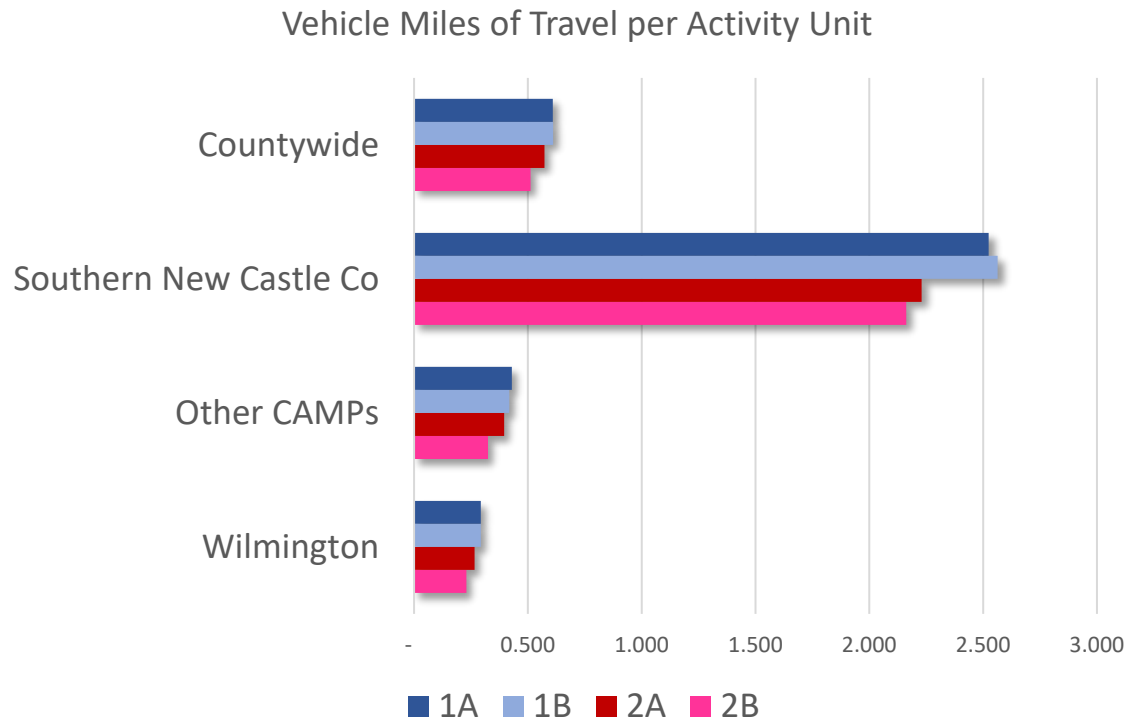
estimate of VMT by TAZ. For scenarios 1B and 2B, an additional analysis was performed to reduce parking lot spaces in TAZs where sufficient development density exists to promote non-auto travel and a “park once” policy.

Reduced VMT also has direct benefits of reduced fuel consumption, emissions, and traffic congestion and has indirect benefits associated with a range of public health metrics from asthma to obesity. Estimates for typical weekday peak period countywide VMT generation in 2050 are:

- Scenario 1A: 512,000 total (or 0.61 per activity unit)
- Scenario 1B: 544,000 total (or 0.61 per activity unit)
- Scenario 2A: 555,000 total (or 0.57 per activity unit)
- Scenario 2B: 495,000 total (or 0.51 per activity unit)

Important strategies to help us achieve this goal include:

- Promote mixed-use development to shorten trip lengths by any mode and allow a greater proportion of trips to be satisfied by walking, bicycling, or transit
- Strengthen Transportation Demand Management (TDM) activities that are designed to reduce reliance on single-occupant vehicle demand, particularly during peak commuting periods, and can be organized in three general categories
 - Policies (i.e., financial incentives to live near your work, pricing for auto use via parking charges, tolls, or other fees/taxes)
 - Projects (i.e., non-motorized facilities like sidewalks and bike paths, ensuring complete streets designs for new and reconstructed roadways, improving roadway safety through Vision Zero initiatives that focus on better quality of service for vulnerable users using non-motorized travel modes)
 - Services (i.e., expanded transit services, access to information on transportation options, organized activities to promote ridesharing)
- Reduced parking availability where alternative travel options exist
- “Green building” incentives (e.g., such as provided in the US Green Building Council’s Leadership in Energy and Environmental Design project rating system)
- Pursue clean energy sources such as solar and hydro
- Reduced building energy/water resource consumption (e.g., routine maintenance to improve efficiency, energy-conscious design and operations, new fixtures oriented toward reduced resource consumption, pricing to address peak demands)
- Carbon sequestration (e.g., reforestation and afforestation)

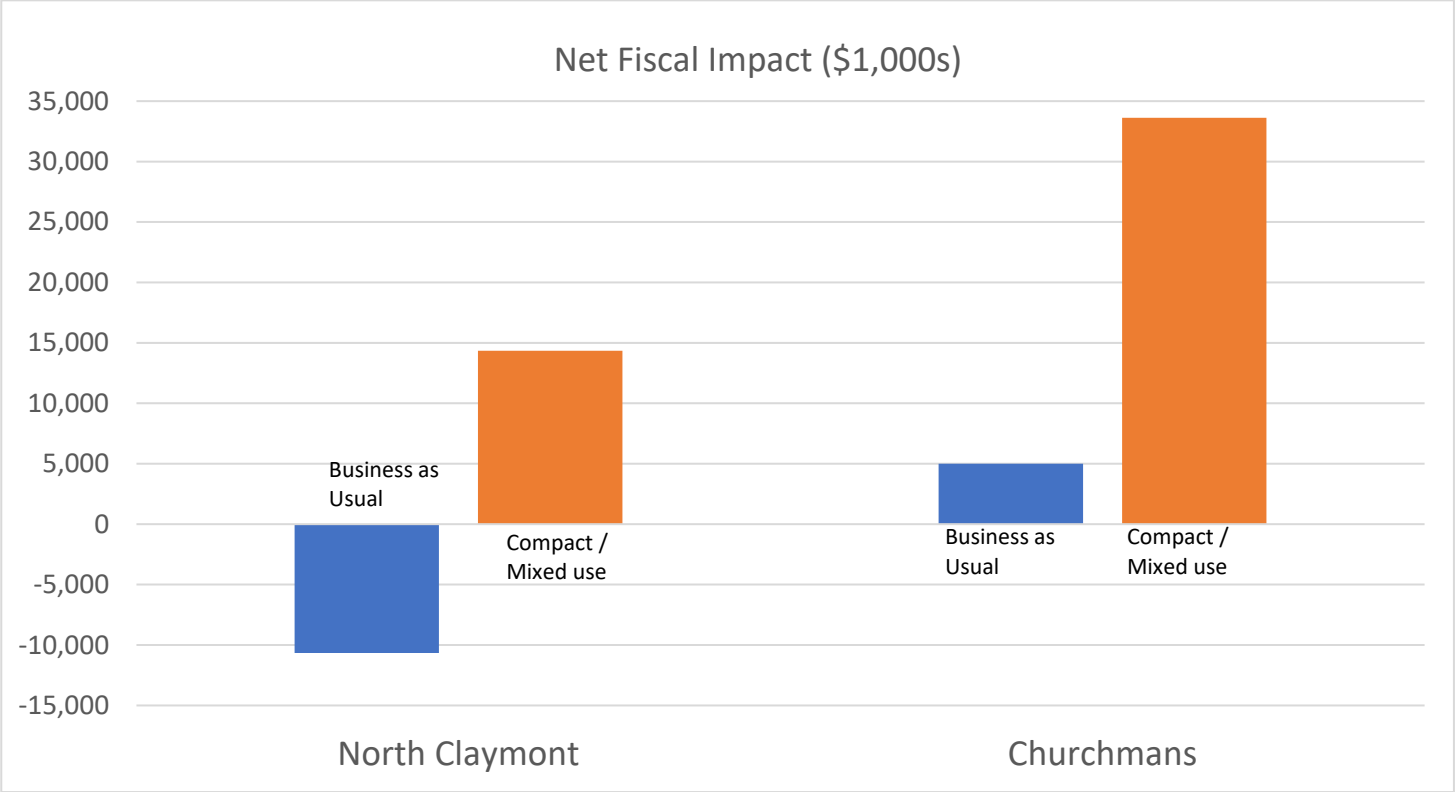


Fiscal Impact

The objective of fiscally sustainable development is about achieving a future where the public or community revenue meets or exceeds the public costs to provide services and infrastructure to that development. This is complex because of the complexities of public finance and the way different infrastructure and services are provided by different levels of government.

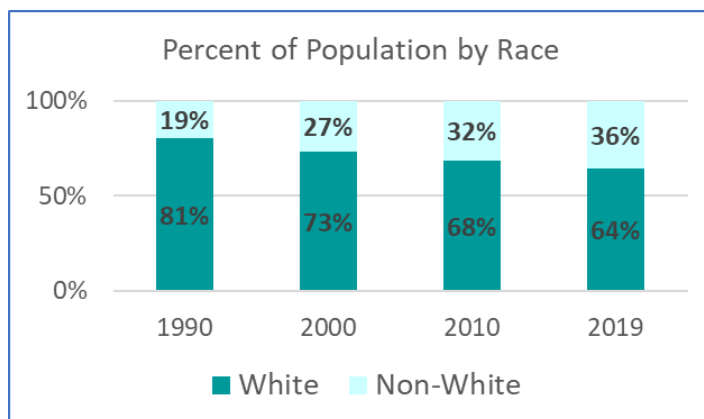
As part of the Community Area Master Planning process, New Castle County looked at a fiscal comparison of a “business as usual” approach versus a “compact/mixed use” approach to development in two sub-areas of the County (North Claymont and Churchman’s Crossing).

The chart shows that a compact/mixed use approach results in a more favorable net fiscal impact (public revenue minus costs) than the “business as usual” approach. This analysis does not represent a countywide fiscal picture but can help us understand how alternative scenarios and strategies can impact fiscal impacts in sub-areas of the County.



Equity/Social Justice

Equity is an overarching issue in New Castle County and beyond. It is also complex and extends well beyond the ability of the comprehensive plan to fully address. Nonetheless, the comprehensive plan can be part of achieving more equitable communities. Race is one way of looking at equity. Achieving equity also involves evaluating age, income, disability access, and others.



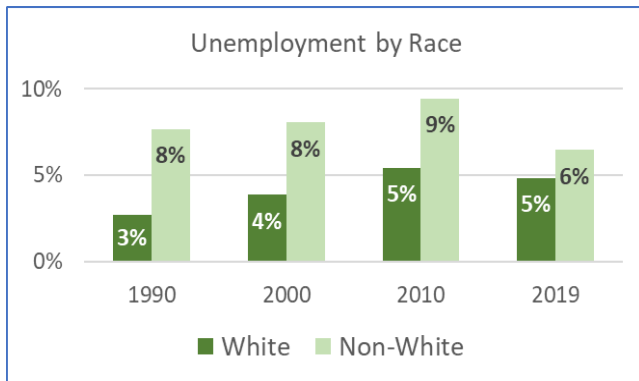
Source: IPUMS USA, University of Minnesota, www.ipums.org

The indicators explored have a relationship with equity. There are several metrics illustrated that help shape a picture of how:

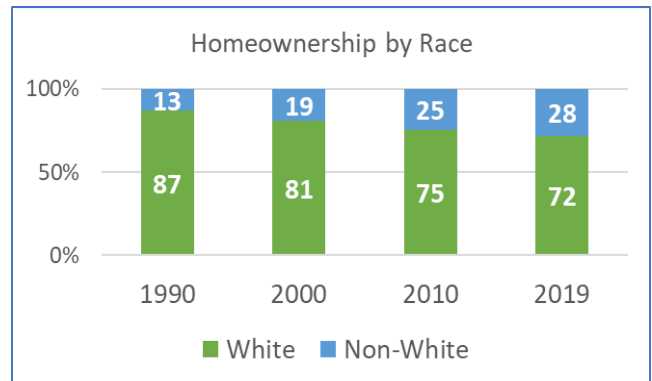
- population is growing more diverse, with the percentage of people identifying as “white only” decreasing since 1990.
- trends for the indicators shown, such as unemployment/employment and home ownership seem to be trending in the right direction in terms of equity
- there are still disparities in home ownership and unemployment rates between whites and non-whites

Several strategies can help improve equity of access to opportunities in New Castle County, including those previously described particularly in considering affordable housing, as well as other elements listed below:

- Increasing diversity of engagement in community planning activities
- Considering areawide impact caps on stressors to the natural and human environment (such as exposure to pollutants) that reflect cumulative effects over time
- Examining inequalities in access to the digital economy, particularly important as goods and services become increasingly marketed and accessed through online forums
- Continued tracking of data on various sub populations such as by income, race, or limited English proficiency is an overarching strategy that can help toward improving equity across all comprehensive plan goals and objectives



Source: IPUMS USA, University of Minnesota, www.ipums.org



Source: IPUMS USA, University of Minnesota, www.ipums.org

APPENDIX F: _____

Community Area Master Plan Key Recommendations

Community Area Master Plan Key Recommendations

Route 9 Corridor Key Recommendations

Goal: Improve health and quality of life of residents by improving access to jobs, education, healthy foods, active recreation opportunities, community services, and affordable residential development.	
Objectives	NCC2050 Plan Element
Encourage development and redevelopment into identified centers on Route 9 Corridor.	NCC2050 Priority #1, Economic & Community Development Element (Objective 5.3), NCC2050 Priority #11 (Future Land Use Map)
Promote market rate and affordable housing options in development and redevelopment efforts.	NCC2050 Priority # 8, Housing Element (objective 4.2)
Strategies	NCC2050 Plan Element
Promote neighborhood-serving uses along Route 9.	NCC2050 Priority #11 (Future Land Use Map)
Focus for-sale and rental multifamily housing adjacent to the new library in Center 3 - Hillview Avenue.	NCC2050 Priority #11 (Future Land Use Map), Community Planning and Design Element
Work with DeIDOT and the Delaware River and Bay Authority (DRBA) to ensure pedestrian and bicycle improvements are made to the Corridor	Priority #9, Mobility and Transportation Element (Objective 8.2)

Goal: Understand and mitigate cumulative environmental and health concerns	
Objectives	NCC2050 Plan Element
Improve health and quality of life of residents of the Route 9 Corridor, especially in the Eden Park Gardens and Hamilton Park neighborhoods.	Priority Recommendation #2, Environmental / Social Justice Element (Objective, 15.2)
Address environmental injustice by working to minimize and equalize the effect of environmental hazards among all people regardless of race, ethnicity, or income level.	Priority Recommendation #2, Environmental / Social Justice Element (Objective, 15.2)
Strategies	NCC2050 Plan Element
Work with DNREC, State Division of Public Health, and Route 9 Monitoring Committee to address air quality and environmental concerns	Priority Recommendation #2, Environmental / Social Justice Element (Objective, 15.2), Priority Recommendation #6, Economic and Community Development Element (Objective 6.2)
Continue to explore ways to improve health and quality of life and continue to promote the appropriate buffering and separation of industrial from residential uses.	Priority Recommendation #2, Environmental / Social Justice Element (Objective, 15.2),
Work with companies, DeIDOT, DRBA, and Port, State and County police to ensure monitoring and enforcement of truck traffic routing. Support the implementation of the Port of Wilmington Access Study.	Priority Recommendation #2, Mobility and Transportation Element (Objectives 9.1 and 9.2)
Explore mitigation measures including and in addition to street sweeping to address concerns about dust and air quality.	Priority Recommendation #2, Environmental / Social Justice Element (Objective, 15.2), Mobility and Transportation Element (Objective 9.1)
Establish a process, which includes robust community engagement, to review the appropriateness and location of all existing industrial activities and their proximity to adjacent communities, and to propose measures to address environmental and health harms associated with such industrial activities, paying particular attention to the safety of vulnerable communities.	Priority Recommendation #2, Environmental / Social Justice Element (Objective 15.2)
Support closer engagement and collaboration between DNREC and the Route 9 community on understanding and addressing environmental health concerns.	Priority Recommendation #2, Environmental / Social Justice Element (Objective, 15.2), Priority Recommendation #6, Economic and Community Development Element (Objective 6.2)
Undertake a “Mechanisms for Fair Community Relocation Study,” as proposed in the Route 9 Master Plan, to determine the most equitable strategies for any potential future housing relocations in Eden Park and Hamilton Park, specifically, along with other New Castle County Communities.	Priority Recommendation #2

Goal: Examine land uses in the Corridor and consider zoning adjustments as needed. Incentivize economic development, including mixed-use and mixed-income development.	
Objectives	NCC2050 Plan Element
Consider rezoning strategies to limit industrial and residential growth in the areas to reduce incompatible land uses.	Priority Recommendation #2, Environmental / Social Justice (Objective 15.2), NCC2050 Priority #11 (Future Land Use Map)
Encourage initial development and redevelopment efforts into Center 3 - Hillview Avenue, to leverage the investment and energy of the newly-opened Route 9 Library and Innovation Center.	NCC2050 Priority #9, NCC2050 Priority #11 (Future Land Use Map), Community Planning and Design Element (Objective 10.1)
Use large underutilized commercial properties and undeveloped land as potential redevelopment sites.	NCC2050 Priority #11 (Future Land Use Map), Community Planning and Design Element (Objective 10.1)
Strategies	NCC2050 Plan Element
Pursue Downtown Development District designation in area around Center 3 as outlined in the 2014 Route 9 Innovation District Plan.	NCC2050 Priority #1, NCC2050 Priority #11 (Future Land Use Map), Community Design (Objective 10.1)
Rezone industrial land at and south of Rogers Road to allow for mixed-use development to prevent future industrial expansion or development.	Priority Recommendation #2, Environmental / Social Justice (Objective 15.2), NCC2050 Priority #11 (Future Land Use Map), Community Planning and Design Element (Objective 10.1), Mobility and Transportation Element (Objective 8.1)
Explore additional land use and zoning implementation mechanisms such as an overlay zoning district. This will ensure building forms respect the scale and character of the surrounding neighborhoods and will ensure that buildings front closer to the street and have pedestrian access to and across Route 9.	NCC2050 Priority #11 (Future Land Use Map), Community Design (Objective 10.1)
Explore implementing land use and zoning strategies, including designating industrial uses affecting local air quality as conditional/special uses, including chemical manufacturing facilities and facilities that store, crush, and/or process concrete, and establishing air quality mitigation and air monitoring measures as requirements for conditional/special use approval.	Environmental/ Social Justice
On a case-by-case basis and with community support, explore implementing land use and zoning strategies to phase out existing industrial uses and/or conflicts located within 2500 ft. of residential or other sensitive uses (such as schools, daycares, playgrounds, hospitals, apartment buildings, nursing homes, etc.), or introduce buffering so as to widen the gap between the conflicting uses beyond 2500 ft. on an expeditious timeframe that improve quality of life, advances equity, and protects public health.	Environmental/ Social Justice Future Land Use and Implementation

Key Recommendations Claymont

Goal: Encourage Design that Builds on Community Strengths.	
Objectives	NCC2050 Plan Element
Promote the creation of a multimodal attractive walkable, transit-oriented environment with the Claymont Regional Transportation Center as a centerpiece.	Mobility and Transportation (8.2)
Preserve and respect the history of the area.	Historic Preservation (12.1)
Limit the visibility of surface parking lots and encourage structured parking.	Mobility and Transportation Community Design (New GOS)
Strategies	
Revise the Unified Development Code (UDC) and zoning designations in the North Claymont Study area to both incentivize and implement redevelopment consistent with the North Claymont Area Master Plan Vision. Key updates include:	Community Design (10.1)
Support the construction of the Claymont Regional Transportation Center.	Mobility and Transportation
Include compact residential development within a comfortable walking distance of train station.	Mobility and Transportation (8.2)
Encourage office development, particularly office uses above ground-floor retail, near the train station as part of vibrant mixed-use land use pattern. The transit-oriented development around the station is strongly encouraged to include residential.	Mobility and Transportation (8.2)
Provide convenient accessibility from both the sidewalk and parking areas, with parking located along the streets and behind buildings. Streetscapes shall be designed in accordance with best design practices to encourage walkability.	Mobility and Transportation (8.2)
Develop a street grid that will both encourages walking and biking and disperse traffic.	Mobility and Transportation (8.1)
Encourage new development to complement the existing style and scale of Claymont, particularly regarding historic properties and new development, such as Darley Green.	Historic Preservation (12.1)
Require new development or redevelopment within North Claymont to include an evaluation of impacts to historic resources.	Historic Preservation (12.2)
Consider using space near the new train station to celebrate local history.	Historic Preservation (12.1)
Encourage the water tower on the former Tri-State Mall site to be used as a branding opportunity for Claymont.	Historic Preservation (12.1)
Encourage structured parking whenever possible, particularly near the train station. All facades of structured parking buildings should be indistinguishable from adjacent architectural context.	Community Design (New GOS)
Encourage placement of off-street surface parking lots behind buildings and buffer from roadways, access roads, neighborhoods, and commercial areas with trees and other vegetation.	Community Design (New GOS)
Take advantage of topography [and height]to access views of waterfront.	Housing (Priority Rec #8)

Goal: Foster a Variety of Housing.	NCC2050 Plan Element
Objectives	

Encourage housing for 55+ and assisted living facilities.	Housing (Priority Rec #8)
Include development of housing for a variety of incomes and in variety of types, including mixed-use.	Housing (Priority Rec #8)
Plan for new residential areas with views of the waterfront and protect existing views	Housing (Priority Rec #8)
Strategies	
Incorporate universal design features to help ensure that people age in place.	Housing (Goal 4)
Encourage and incentivize development and redevelopment that fosters the creation of place through mixed-use with ground-floor office and retail, multifamily dwelling facilities and transit-oriented development around the Claymont Regional Transportation Center	Housing (Priority Rec #8 Strategy #1)
Encourage and incentivize diversity of housing and density for a range of household incomes.	Housing (Priority Rec #8 Strategy #1)

Goal: Promote Economic Development and Expand Job Opportunities.		NCC2050 Plan Element
Objectives		
Provide job opportunities through support for industry and retail, including small, local businesses.		Economic and Community Development (priority Rec #5)
Support job training opportunities (including a potential satellite campus).		Economic and Community Development (priority Rec #5)
Encourage development of a greater variety of restaurants, shops, and entertainment destinations.		Economic and Community Development (priority Rec #5)
Strategies		
Explore partnerships that incentivize hiring and training local community members in local industry and manufacturing, fund necessary infrastructure improvements to support industry and retail and build on efforts by the Claymont Renaissance Development Corporation (CRDC).		Economic and Community Development (priority Rec #5 Strategy #2)
Consider seeking an Economic Empowerment designation for North Claymont.		Economic and Community Development (priority Rec #5 Strategy #2)
Evaluate the feasibility of a small business or manufacturing incubator space within light industrial/flex development areas.		Economic and Community Development (priority Rec #5 Strategy #1)
Develop an economic development outreach website and/or documents that include a description of available properties and incentives.		Economic and Community Development (priority Rec #5 Strategy #2)
In areas designated, allow for a range of uses focused on manufacturing and innovation, potentially including incubator spaces to help grow small businesses.		Economic and Community Development (priority Rec #5 Strategy #1)
Explore medical uses, such as hospital or medical offices or training/educational uses, such as a technical school or satellite campus.		Economic and Community Development (priority Rec #5 Strategy #1) (Priority Recommendation #6, 6.2.2)
Promote local businesses through festivals, coordinated marketing and small business incentives. Facilitate development of a permanent or seasonal farmers' market.		Economic and Community Development (priority Rec #5 Strategy #1)
Work with the community to refine a brand or identity for all of Claymont.		Economic and Community Development
Foster a range of shops and entertainment tenants that cater to a variety of visitors and residents throughout the day. Encourage the development of a marina entertainment area on the Delaware River, which would provide public access to the river, with potential for riverfront dining, recreation and other opportunities.		Economic and Community Development (priority Rec #6 Strategy #1)

Goal: Create a Safe, Healthy, and Welcoming Community.		NCC2050 Plan Element
Objectives		
Create gateways to the community and improve wayfinding.		Economic and Community Development
Enhance safety of existing neighborhoods and ensure safety of newly developed areas.		Economic and Community Development Needs to be addressed in Intergovernmental Coordination Section
Buffer existing and new residential, commercial, institutional, and open space areas from industrial areas.		Environmental/ Social Justice (Priority Rec #2, 15.2.2 and 6.2.3)
Expand opportunities for improved community health and wellness.		Economic and Community Development
Strategies		
Work with DelDOT, developers and the community to create branding as well as a wayfinding system in Claymont that includes enhancements to the National Park Service's Washington-Rochambeau Revolutionary Route National Historic Trail (W3R) route, encourages active living through design, and establishes visual gateways to Claymont, with an aesthetic that matches other directional signage and the results of any "re-branding" efforts.		Economic and Community Development (8.2)
Ensure that walking paths are well-lit, especially when they provide vital connections, such as the pedestrian bridge and other routes to the train station. Work with neighborhoods within to identify areas with a need for enhanced street-lights, and secure funding for installation.		Economic and Community Development (8.2)
Ensure consistent and frequent enforcement of property maintenance violations and communication of requirements.		Economic and Community Development (8.2)
Ensure State and County-owned properties are properly maintained.		Economic and Community Development (8.2)
Incentivize property improvements and increased owner-occupied housing within existing neighborhoods.		Economic and Community Development (8.2)
Monitor implementation of the Master Plan and build out of the area to help ensure that emergency service pace with growth.		Economic and Community Development (8.2) Intergovernmental Coordination 17.4.1
Create a community assistance program to fund community-led property upgrades and small-scale community projects (e.g. façade improvements, community gardens), increase outreach related to existing opportunities, and support local organizations in seeking grant opportunities to make community improvements.		Economic and Community Development (8.2)
Buffer existing single-family neighborhoods and all new residential areas from incompatible uses consistent with the 2020 Environmental Conditions Assessment, North Claymont Area Master Plan, Claymont, DE by Brightfields, Inc		Environmental/ Social Justice (Priority Rec #2, 15.2.2 and 6.2.3)
Investigate and improve healthy food access.		Economic and Community Development (Priority Recommendation #6, 6.2.2)

Goal: Increase the Network of Open Space and Recreation Facilities.		NCC2050 Plan Element
Objectives		
Provide access to more public open space and recreation facilities, including parks.		Recreation and Open Space (1.2)
Designate public access areas on the waterfront.		Recreation and Open Space (1.2)
Continue the East Coast Greenway and provide more off-road trails.		Recreation and Open Space (1.2)
Strategies		
Provide access to green spaces and natural resources, including the Delaware River and Naamans Creek.		Recreation and Open Space (1.2)
Encourage a wide range of parks and open spaces that including indoors and outdoors passive and active recreation opportunities and community gardens		Recreation and Open Space (1.2)
Incorporate plazas and other gathering spaces into developments.		Recreation and Open Space (1.2)
Evaluate expanding the public park program in the study area including the former railway north of the Robinson House, along Naamans Creek and the Delaware river trails and other active and passive recreation areas, and potentially a connection to Fox Point State Park.		Recreation and Open Space (1.2) Environmental/ Social Justice (Priority Rec #2, 15.2.2 and 6.2.3)
Improve facilities at existing parks and plazas.		Recreation and Open Space (1.2)
Encourage the development of a marina entertainment area on the Delaware River, which would provide public access to the river, with potential for riverfront dining, recreation, and other opportunities.		Recreation and Open Space (1.2)
Explore a new connection to the waterfront area between the Northeast Corridor rail line and the Delaware River, such as tunnels and roadways.		Recreation and Open Space (1.2)
Incorporate recommended trails and related guidelines into Delaware's First State Trails and Pathway Plan and WILMAPCO's New Castle County Bicycle Master Plan.		Recreation and Open Space (1.2)
Encourage the East Coast Greenway to include Claymont potentially includes route modifications with Marcus Hook.		Recreation and Open Space (1.2)

Goal: Protect and Restore the Environment.		NCC2050 Plan Element
Objectives		
Enhance Naamans Creek waterway.		Climate Change/ Environment
Mitigate existing and future air, water, land, light and sound pollution.		Environmental/ Social Justice (Priority Rec 15.2.1)
Strategies		
Require stormwater best management strategies for new developments near Naamans Creek and Delaware River. Ideally, these areas should be park-like and accessible to the public via trails.		Climate Change/ Environment (Priority Rec #9)
Continue to monitor for air, water, land, light and noise pollution concerns that might trigger protective actions, and report regularly to the public and elected officials on findings.		Environmental/ Social Justice (Priority Rec 15.2.2 & 6.2.3)
Work with DeIDOT and community to keep speed limits low, provide measures for traffic calming and reduce traffic noise.		Mobility and Transportation (Objective 9.1.2) Environmental/ Social Justice (Priority Rec #2, 15.2.2 and 6.2.3)

Goal: Improve Local and Regional Multimodal Transportation Connections.		NCC2050 Plan Element
Objectives		
Promote safe facilities for people walking and bicycling.		Mobility and Transportation (8.1)
Relocate the existing train station to become a more convenient and appealing facility.		Mobility and Transportation
Improve transit service within Claymont.		Mobility and Transportation
Strategies		
Work to include all modes of travel-sidewalks, access to transit stops, provisions for bicycle travel and parking for development and redevelopment plans.		Mobility and Transportation (8.2)
Encourage developments to utilize multi-modal design guidelines in accordance with DeIDOT's Complete Streets policy, this includes various AASHTO guidance manuals, the NACTO Urban Street Design Guide and other professionally accredited guidance and standards.		Mobility and Transportation (8.2)
Provide wide, well-buffered sidewalks on both sides of streets throughout study area.		Mobility and Transportation (8.1)
Work with DeIDOT to include street trees within all sidewalk buffer areas or curb lawns.		Mobility and Transportation
Work with DeIDOT to provide safe, comfortable crosswalks at signalized intersections and interstate crossings.		Mobility and Transportation (8.1)
Coordinate well-lit, well-signed walking routes.		Mobility and Transportation (8.1)
Ensure separated bicycle facilities or shared off-road facilities on all main roadways.		Mobility and Transportation (8.1)
Continue to participate in the Claymont Regional Transportation Center development process, and encourage and facilitate the development of a mixed-use, walkable transit hub in a manner that is consistent with the Master Plan recommendations.		Mobility and Transportation
Work with DeIDOT to implement recommended transportation projects into the Regional Transportation Plan (RTP) and prioritize for inclusion in the Transportation Improvement Program (TIP).		Mobility and Transportation
Encourage bus stops and circulation designed to link present residential and commercial land uses and future development, include amenities (pull offs, bus shelters) that encourage the use of public transit are integrated with the Claymont Regional Transportation Center.		Mobility and Transportation (8.2)
Work with DeIDOT and the community to evaluate and maintain speed limits to ensure that they are appropriate for a walking environment as the primary design consideration.		Mobility and Transportation (8.1)
Developing a framework for public private partnerships that make structured parking more economically feasible and attractive to developers, particularly near the train station.		Mobility and Transportation
Work with DeIDOT to determine the if it is appropriate to designate the NCAMP area as a Complete Community Enterprise District (CCED) (or a Transportation Improvement District (TID), if necessary), to ensure that road capacity projects are only built when necessary and have no negative effect on transit, access, pedestrian safety and comfort, or on the percentage of trips that can be made by bicycle under low traffic stress conditions.		Mobility and Transportation

Key Recommendations 202 Master Plan

Goal: Build upon Market Assessment to create a sustainable commercial environment and an attractive multimodal corridor	
Objectives/Strategies	NCC2050 Plan Element
Assess existing development patterns and guide appropriate future development consistent with the Concord Pike (US 202) Master Plan and Unified Development Code (UDC) provisions; Coordinate with the Corridor Monitoring Advisory Group to ensure new development and redevelopment is consistent with the Concord Pike Master Plan and community vision	NCC2050 Priority #1, NCC2050 Priority #6, NCC2050 Priority #9, Community Planning and Design Element (Objectives 10.1, 11.1), Historic Preservation Element (Objective 12.2), Transportation and Mobility Element (Objectives 8.1, 8.2)
Revise the redevelopment provisions of the UDC to encourage redevelopment consistent with the principles of The Concord Pike (US 202) Corridor Master Plan and the Guiding Principles for Development	NCC2050 Priority #11 (Future Land Use Map), NCC2050 Priority #9, Community Planning and Design Element (Objective 10.1)
Develop land use policy that encourages context sensitive commercial redevelopment in the identified Target Redevelopment Areas (TRA)	NCC2050 Priority #1, NCC2050 Priority #9, NCC2050 Priority #11 (Future Land Use Map)
Incentivize economic development and diverse redevelopment of underutilized property, including mixed-use and mixed-income development with accessible retail and recreation opportunities to residential	NCC2050 Priority #1, Community Planning and Design Element (Objective 10.1), Economic and Community Development Element (Objectives 5.2, 5.3)
Encourage installation of various site improvements that promote mixed use, shared open space, and amenities consistent with the Concord Pike Corridor Master Plan recommendations and public input	NCC2050 Priority #9, Community Planning and Design Element (Objective 10.1)
Provide opportunity to redevelop and infill existing commercial properties to promote a sense of “place”	NCC2050 Priority #9, Community Planning and Design Element (Objective 10.1)
Maintain land use policy that further encourages conservation and preservation of neighborhood character. Should neighborhoods seek to further integrate adjacent non-residential development within the fabric of their community the UDC empowers the community to pursue a Neighborhood Preservation Overlay District that provides residents with further opportunity to guide such development In the case of historic properties, the County will work with property owners to encourage them to pursue a Historic Overlay zoning designation. The County will also continue to evaluate properties for historical significance along the corridor. Additionally, the County will consider providing additional protections for historical resources through the land development process	NCC2050 Priority #9, Community Planning and Design Element (Objective 10.1), Historic Preservation Element (Objective 12.2)

Goal: Provide more walkable environments, reduce speeding, relieve heavy traffic, and improve accessibility and safety for pedestrians and bicyclists, including trails and crossings, in the Concord Pike Master Plan area

Objectives/Strategies	NCC2050 Plan Element
Design and install safer pedestrian and bicycle improvements that prioritize visibility, buffer from traffic, and safer crossings near intersections	Mobility and Transportation Element (Objective 8.1)
Coordinate with DeIDOT, WILMAPCO, and other agencies to guide both on-site and off-site improvements to provide safer pedestrian and bicycle conditions	Mobility and Transportation Element (Objective 8.1)
Consider creation and establishment of a Transportation Improvement District (TID)	Mobility and Transportation Element (Objective 8.2)
Prioritize non-motorized projects using the LTS analysis tool. Given the large number of recommended projects, a technical effort will be needed to prioritize the most important projects.	Mobility and Transportation Element (Objective 8.2)
Further explore multiway concepts along the corridor	Mobility and Transportation Element (Objective 8.2)
Examine feasibility and cost analysis of pedestrian overpass/underpass options at key locations along corridor for travel and recreational users	Mobility and Transportation Element (Objective 8.2)
Explore/promote longer term transit options along corridor, including intercounty service and vanpool services	Mobility and Transportation Element (Objective 8.2)

Goal: Protect existing natural areas and open space while mitigating existing environmental impacts and preventing potential impacts due to development; Consider environmental impacts due to physical land use and transportation improvements

Objectives/Strategies	NCC2050 Plan Element
Work with developers to preserve existing open space and help create new natural open spaces	NCC2050 Priority #2, Conservation Element (Objective 2.3)
Encourage redevelopment and mitigation of existing Brownfield sites	NCC2050 Priority #2, Economic and Community Development Element (Objectives 5.2, 5.3)

Southern New Castle County Key Recommendations

Goal: Ensure the goals, objectives, and strategies of the Southern New Castle County Master Plan (SNCC MP) guide official county land use policy.	
Objectives	NCC2050 Plan Element
Adjust zoning definitions and designations for clarity, predictability, and alignment with the development goals and objectives of the SNCC MP	NCC2050 Priority #11 (Future Land Use Map)
Coordinate planning and implementation with other levels of government	Intergovernmental Coordination Element (Objective 17.1), Utilities, Water & Sewer Element (Objective 3.2)
Establish Corridor Hub Growth Areas	NCC2050 Priority #11 (Future Land Use Map)
Strategies	NCC2050 Plan Element
Establish caps on the maximum base site areas permitted for lower density single housing type development options in the Suburban (S) zoning district	NCC2050 Priority #11 (Future Land Use Map)
The definition of SR in Article 2 of the UDC should be revised to read that SR zoned land is not intended to be sewerred in the future and should remain zoned as SR., and where appropriate, land identified as having high agricultural or environmental value should be zoned in a manner to adequately protect the resource	NCC2050 Priority #11 (Future Land Use Map), Water & Sewer (Objective 3.2)
New Castle County and the Delaware Office of State Planning Coordination should work together to ensure the State Strategies map considers the final recommendations of this Master Plan, including designation of areas for growth and areas for preservation	NCC2050 Priority #11 (Future Land Use Map), Land Use & Growth Policy Map
New Castle County and the incorporated towns should continue coordination and collaboration on development, infrastructure, and policies to support the achievement of the goals and objectives of this plan, including the use of joint planning areas	Intergovernmental Coordination (Objective 17.1), Water and Sewer (Objective 3.2)
Identify and rezone parcels and amend the Future Land Use Map to ensure that the properties are developed in accordance with the Smart Code provisions of the UDC	NCC2050 Priority #11 (Future Land Use Map)
Create a new Future Land Use category – Hamlet and Village Areas	NCC2050 Priority #11 (Future Land Use Map)
Consider removing the Hamlet and Village provisions from the Suburban zoning district and create a Hamlet and Village zoning district	NCC2050 Priority #11 (Future Land Use Map)

Goal: Ensure that residents of Southern New Castle County have access to the amenities and services that help them to maintain a high quality of life.	
Objectives	NCC2050 Plan Element
Increase opportunities for “aging in place,” including access to quality healthcare and graduated care for aging population	Mobility (Objective 8.1), Housing (Objective 4.2), Community Planning & Design (Objective 10.2), Economic & Community Development (Objective 6.1), Environmental & Social Justice (Objective 6.1)
Increase locally grown food (production and consumption)	Economic & Community Development (Objective 7.1)
Strategies	
Evaluate existing inclusionary housing programs and consider providing additional incentives to increase production of affordable family units in high-opportunity areas	Housing (Objective 4.1)
Expand the availability of quality rental stock for low-to-moderate income households by conducting additional outreach to landlords on the County’s Small Area Fair Market Rent program	Housing (Objective 4.1)
Expand transportation connectivity to enhance access between housing opportunities and other essential daily needs	Mobility (Objective 8.2), Environmental & Social Justice (Objective 8.2)
Implement forthcoming strategies from the County’s Land Preservation Task Force Agriculture Committee, focusing on supporting agriculture as part of a thriving local economy	Economy & Community Development (Objective 7.1)

Goal: Prioritize environmental and farmland preservation in Southern New Castle County while providing access to trails, parks and other natural spaces.

Objectives	NCC2050 Plan Element
Improve surface water and groundwater quality	Conservation (Objective 2.2, Objective 3.1)
Improve air quality	Conservation (Objective 2.1)
Protect important, quality natural resources, including open space for wildlife	Conservation (Objective 2.3)
Prepare for impacts of sea level rise	Climate Change/Resiliency & Emergency Preparedness/Hazard Mitigation (Objective 13.2, Objective 15.1)
Preserve farmland	Conservation (Objective 1.1, Objective 7.1) Recreation & Open Space (Objective 1.1)
Strategies	
Update sewer service area maps and finalize the sewer facility plan to better manage growth and infrastructure	Conservation (Objective 3.2), Water & Sewer (Objective 3.2)
Encourage new development in Sewer Service Areas and regulate septic use for low-density development consistent with County Septic Policy	Conservation (Objective 3.2), Water & Sewer (Objective 3.2)
Consider additional safeguards for Water Resource Protection Areas (WRPAs) and the public water supply	Conservation (Objective 3.1), Water & Sewer (Objective 3.1)
Ensure consistency between proposed sewer service areas and other growth management maps and policy	Future Land Use Map New Castle County Land Use Growth Policy Maps Conservation (Objective 3.2), Water & Sewer (Objective 3.2)
Collaborate with other agencies to achieve a reduction in Vehicle Miles Traveled (VMT)	Mobility (Objective 8.1, Objective 9.3, Objective 13.1, Climate Change/ Resiliency & Emergency Preparedness/Hazard Mitigation (Objective 13.1, Objective 14.2) Priority Rec #4 (14.2.2)
Encourage energy efficiency and renewable energy in design of communities and buildings	Climate Change/ Resiliency & Emergency Preparedness/Hazard Mitigation (Objective 13.1, Objective 14.1) (Priority Rec #4)
Work with DNREC WILMAPCO Air Quality Subcommittee to evaluate air quality and related issues and develop an action plan	Conservation (Objective 2.1), Climate Change/ Resiliency & Emergency Preparedness/Hazard Mitigation (Objective 13.1, Objective 14.1)

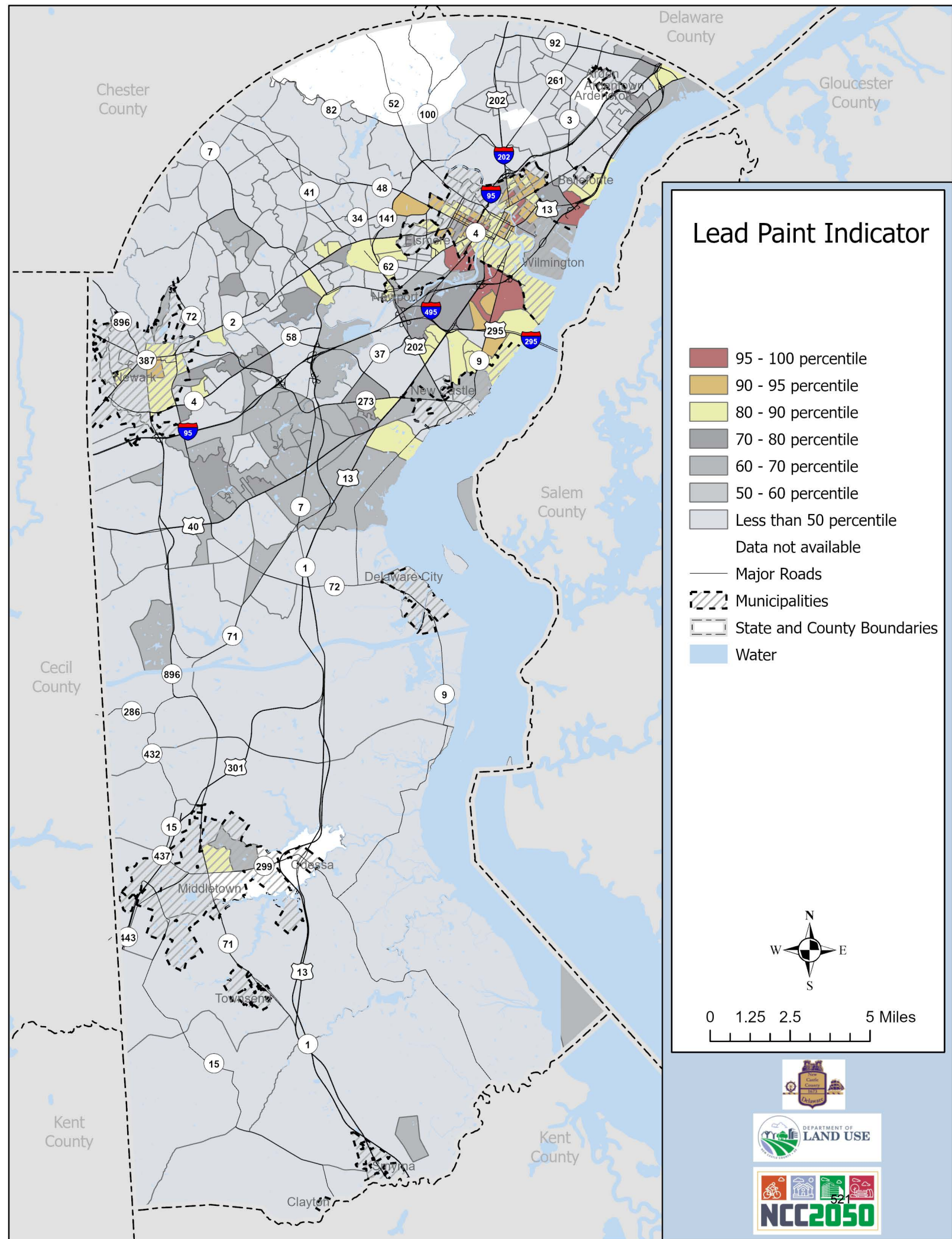
Establish a strategy for Priority Protection Areas, including incentives, financing, and regulations	Open Space and Recreation (Objective 1.2), Land Use and Growth Policy Map, (Priority Rec #3)
Update natural areas inventory and conservation strategy; track natural resources and progress	Conservation (Objective 2.3, Objective 2.4)
Establish land use regulations that strike a better balance of useable and passive open space that are integrated between developments and regional park plan	Open Space and Recreation (Objective 1.1, Objective 1.2)
Collaborate with DNREC and other organization to further protect Critical Natural Areas	Conservation (Objective 2.3)
Reduce the amount of development in areas at risk for sea level rise impacts through downzoning, transfer of development rights or purchase of development rights	Climate Change/ Resiliency & Emergency Preparedness/Hazard Mitigation (Objective 13.2)
Educate property owners who are within at-risk areas	Climate Change/ Resiliency & Emergency Preparedness/Hazard Mitigation (Objective 15.1)
Support farmers by improving existing programs and adding new incentives and remove barriers to supplemental income	Economic & Community Development (Goal 7)
Establish/revise land use regulations to permit farmers to not only develop their property but retain the viability of the agricultural use	Conservation (Objective 1.1), Open Space and Recreation Economic and Community Development Strategy 7.1.3

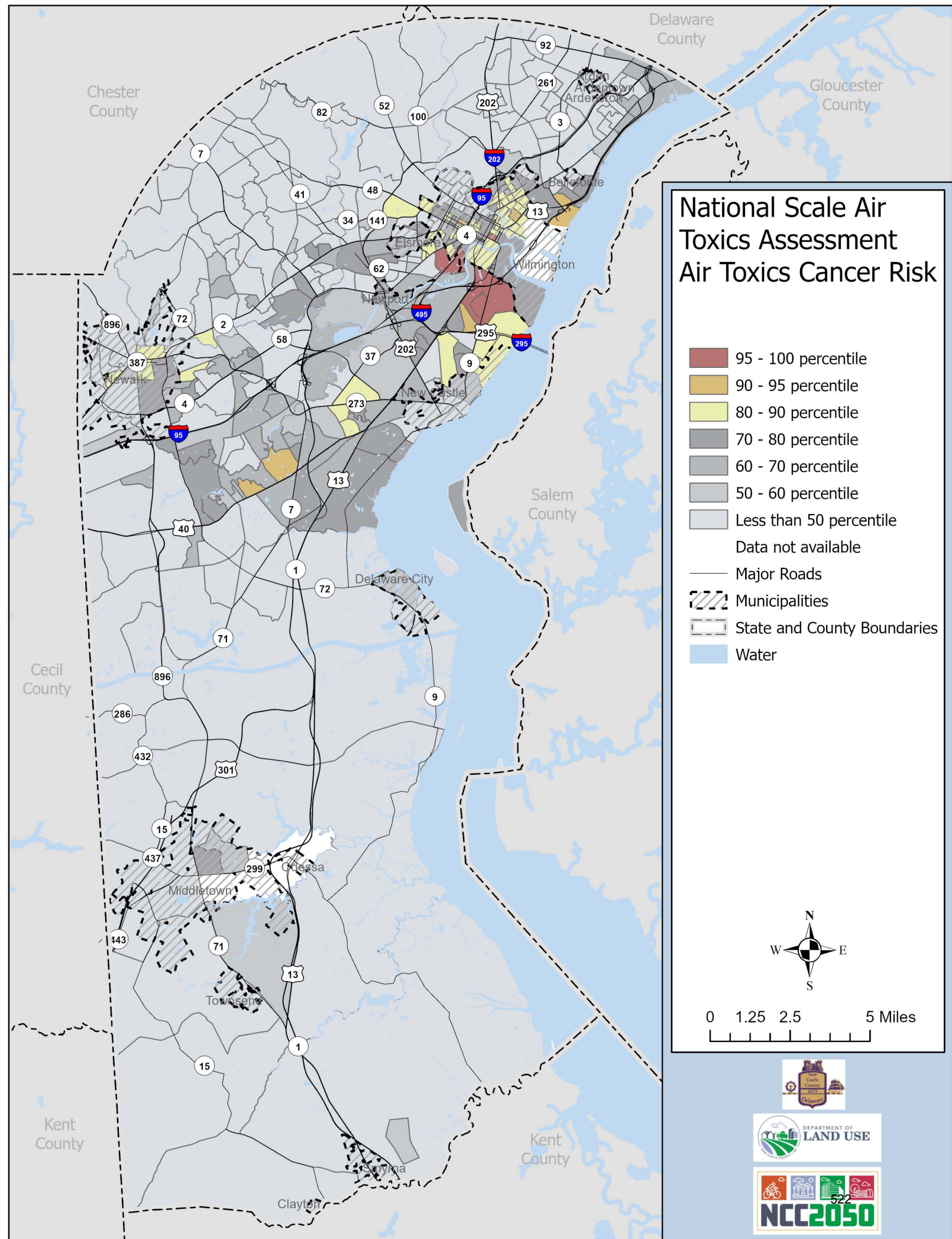
Goal: Ensure that development and redevelopment in Southern New Castle County are compatible with and enhance the existing community character.	
Objectives	NCC2050 Plan Element
Enhance/encourage the continued preservation of rural/small-town/historical character	Community Design (10.2)
Provide/facilitate development of denser, more walkable development with mixed use	Community Design (New GOS & 10.2)
Strategies	
Foster the creation of relatively dense, walkable village centers in unincorporated areas	Community Design (Goal 11) Priority #1 Strategy 17.3.2
Encourage planned growth and preservation by reducing the area planned for future sewer service and establishing a farmland preservation program	Conservation (3.2, 3.2.2)
Consider whether road segments identified in “The Southern New Castle County Scenic River and Highway Study” should be formally nominated under the State’s Byways Program, and/or given further protection	Historic Preservation (12.2.11)
Implement Land Preservation Task Force and Historic Preservation Working Group recommendations that enhance open space and preservation of historic resources in southern New Castle County	Open Space and Recreation (1.1.1)/ Historic Preservation
Encourage the identification, protections and preservation of historically significant resources using Historic Overlay Zoning and Historic Review Board process	Historic Preservation (12.2.2)
Encourage the continued use of historic structures through adaptive reuse	Historic Preservation (12.2)
Create policies and regulations that encourage mixed-use and walkable environments in targeted locations	Community Design (New GOS & 10.2)
Explore changes to existing building and zoning codes to permit multifamily housing, and smaller lot sizes	Housing (4.1)

Goal: Ensure that Southern New Castle County has a strong and diversified economy.	
Objectives	NCC2050 Plan Element
Encourage more local, diverse job centers, facilitating shorter commutes	Economic and Community Development (8.2)
Support small local businesses	Economic and Community Development (5.2.1)
Support/incentivize diversification of industries, and foster opportunities for higher income jobs; living wage/trade/union jobs with retirement benefits	Economic and Community Development (5.2)
Facilitate access to more training and education opportunities	Economic and Community Development (6.1)
Strategies	
Identify development opportunities that will attract private investment to appropriately zoned districts	Economic and Community Development
Consider collaborative approaches to economic development focusing on growing within municipal boundaries	Economic and Community Development
Facilitate smaller scale support for small businesses (see EDGE Grant, SBDC)	Economic and Community Development (5.2, 6.1)
Promote local agricultural enterprises and businesses that are consistent with Southern New Castle County's rural character	Economic and Community Development (Goal 7)
Conduct a complete economic and industry gap analysis to identify Southern New Castle County industry clusters and opportunities	Economic and Community Development
Collaborate with towns to develop place-based approaches to economic development, building on community assets (e.g., local food, agritourism, strong schools, green economy, etc.) and infill	Economic and Community Development (5.1.1, 5.2.1)
Leverage New Castle County Innovates Program, Delaware Edge Grant, DDD programs to support retention, recruitment, and expansions of businesses in Southern New Castle County towns and centers	Economic and Community Development
Explore the potential for a Job Training Center in Middletown	Economic and Community Development (5.2.4, 6.1)
Work with the Small Business Administration to target Southern New Castle County businesses for credit and education programs	Economic and Community Development

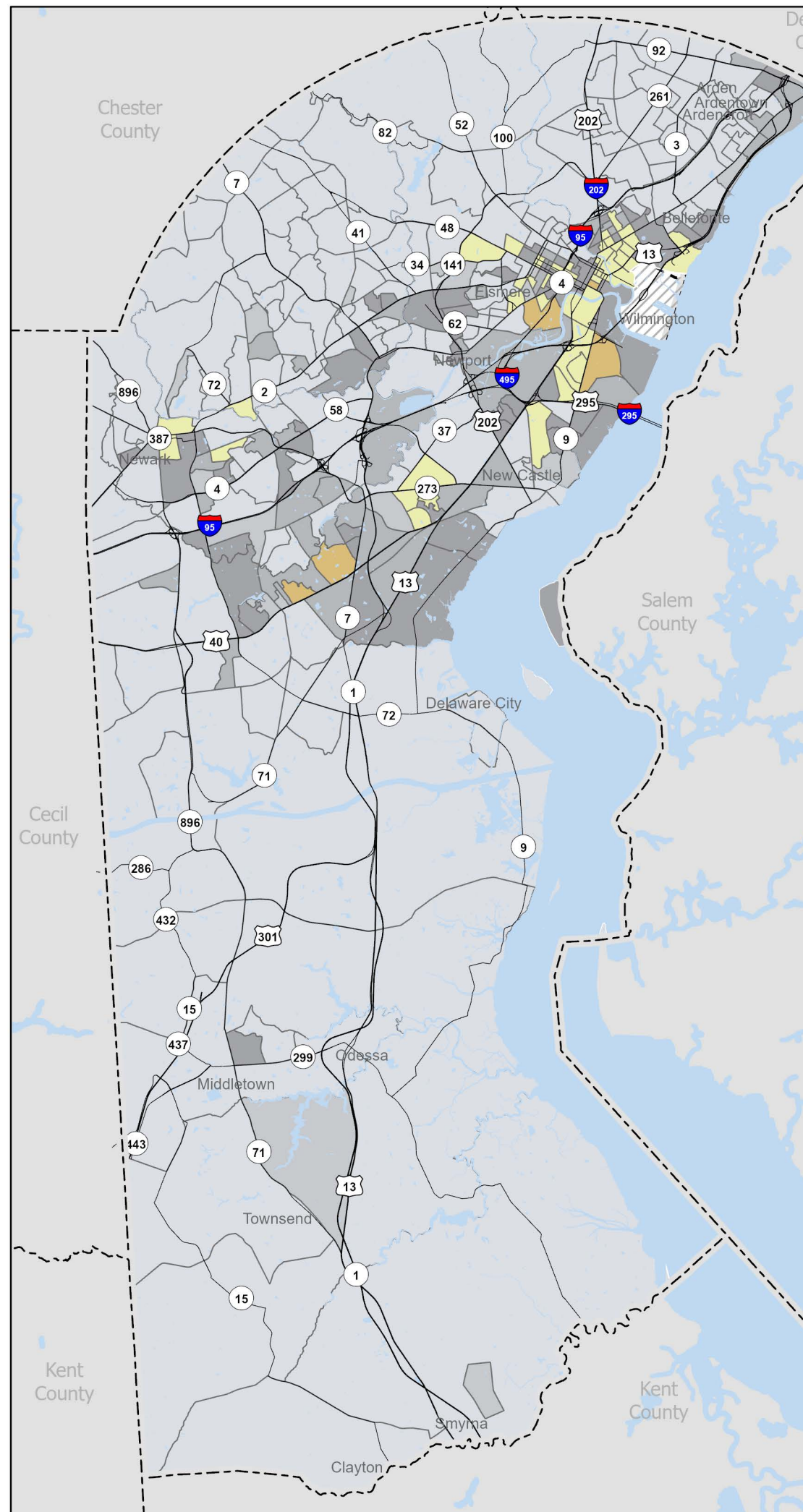
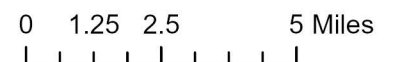
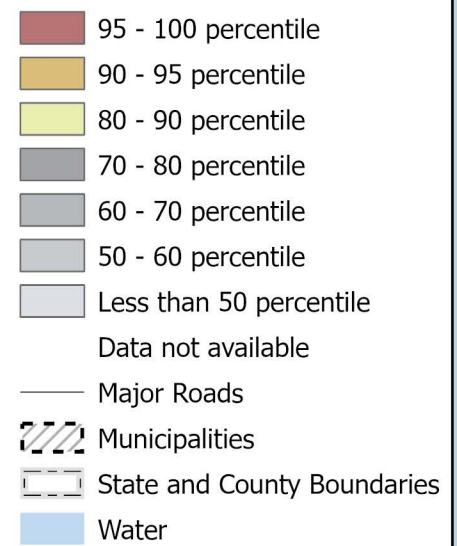
APPENDIX G: _____

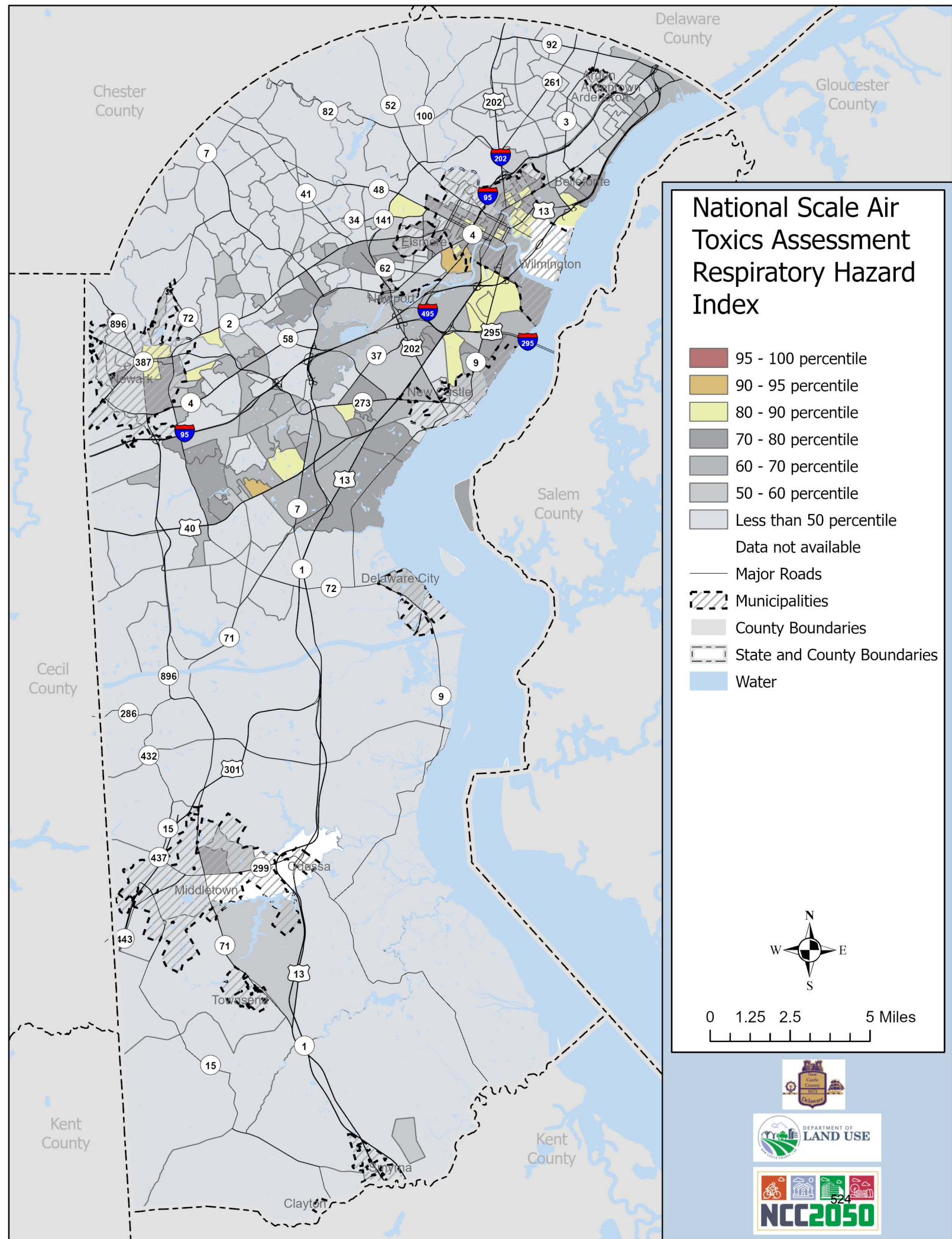
EJScreen Indicators

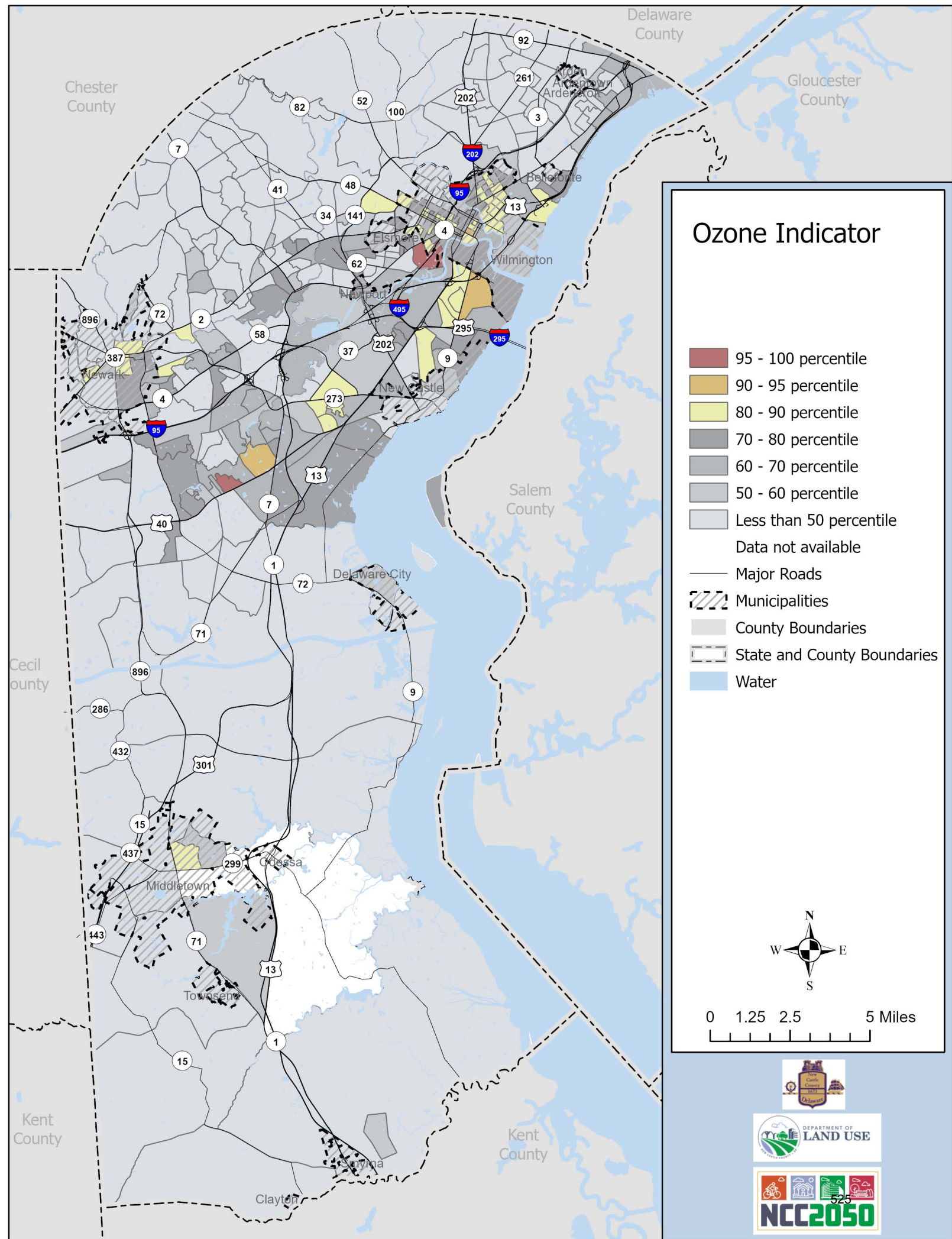


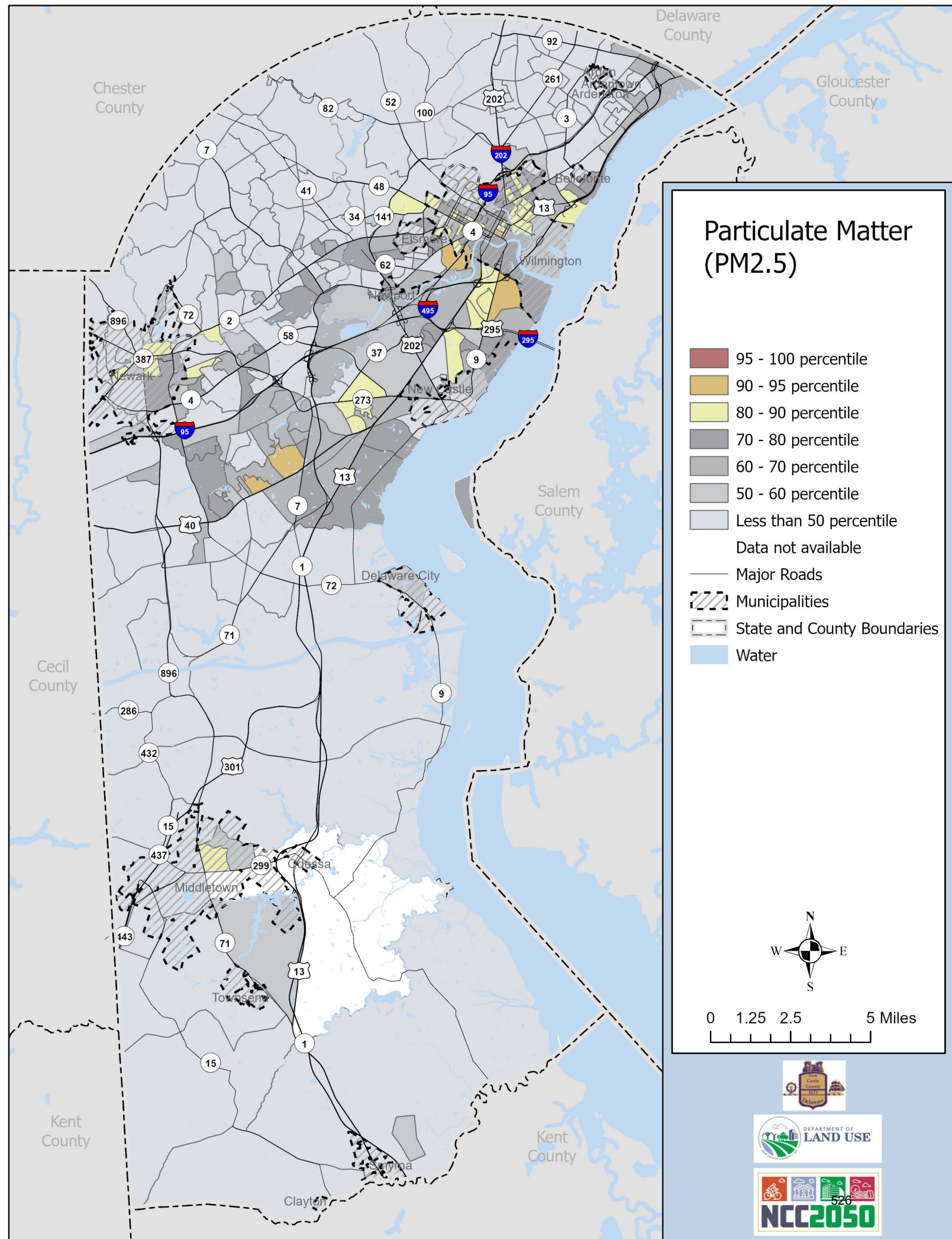


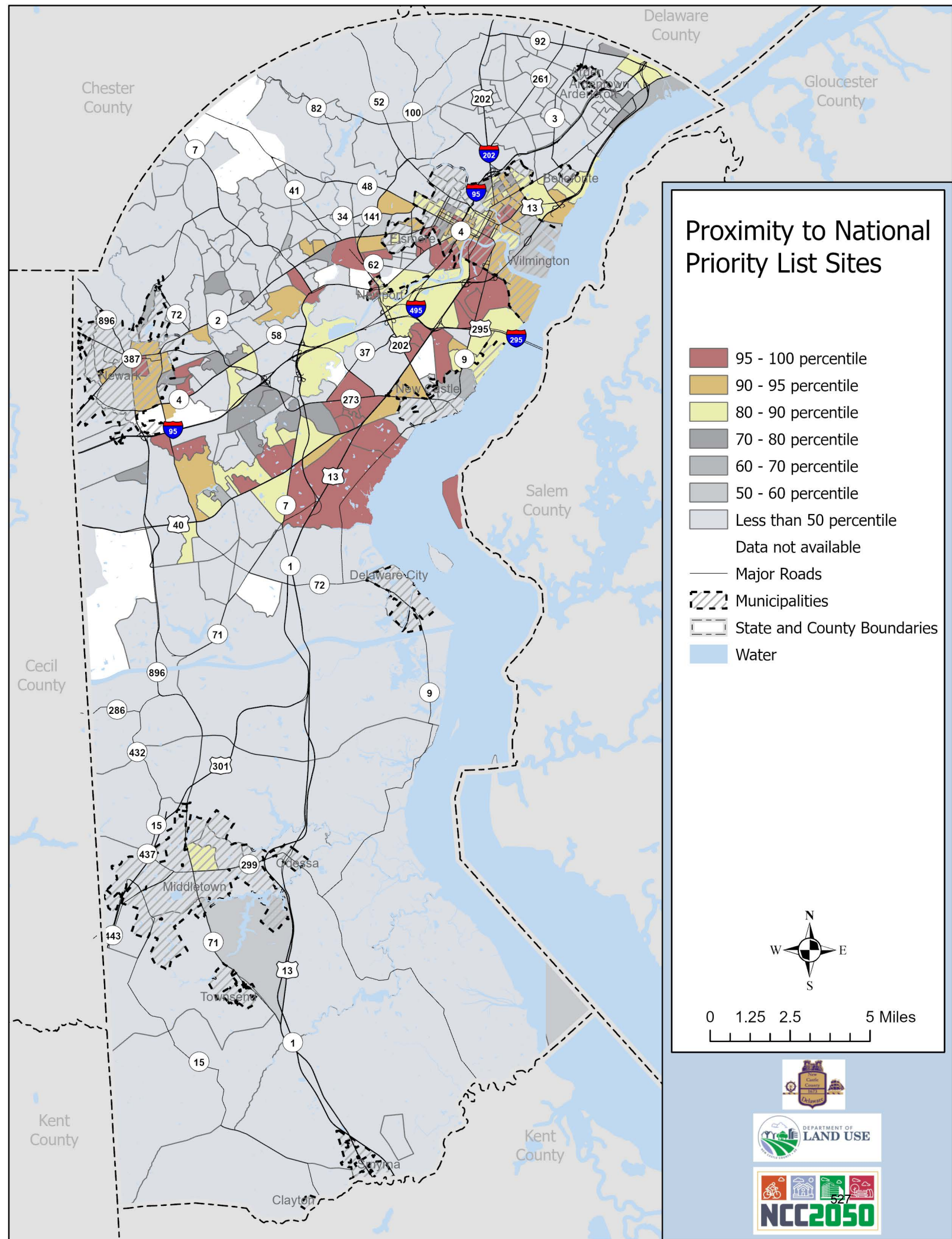
National Scale Air Toxics Assessment Diesel Particulate Matter (DPM)

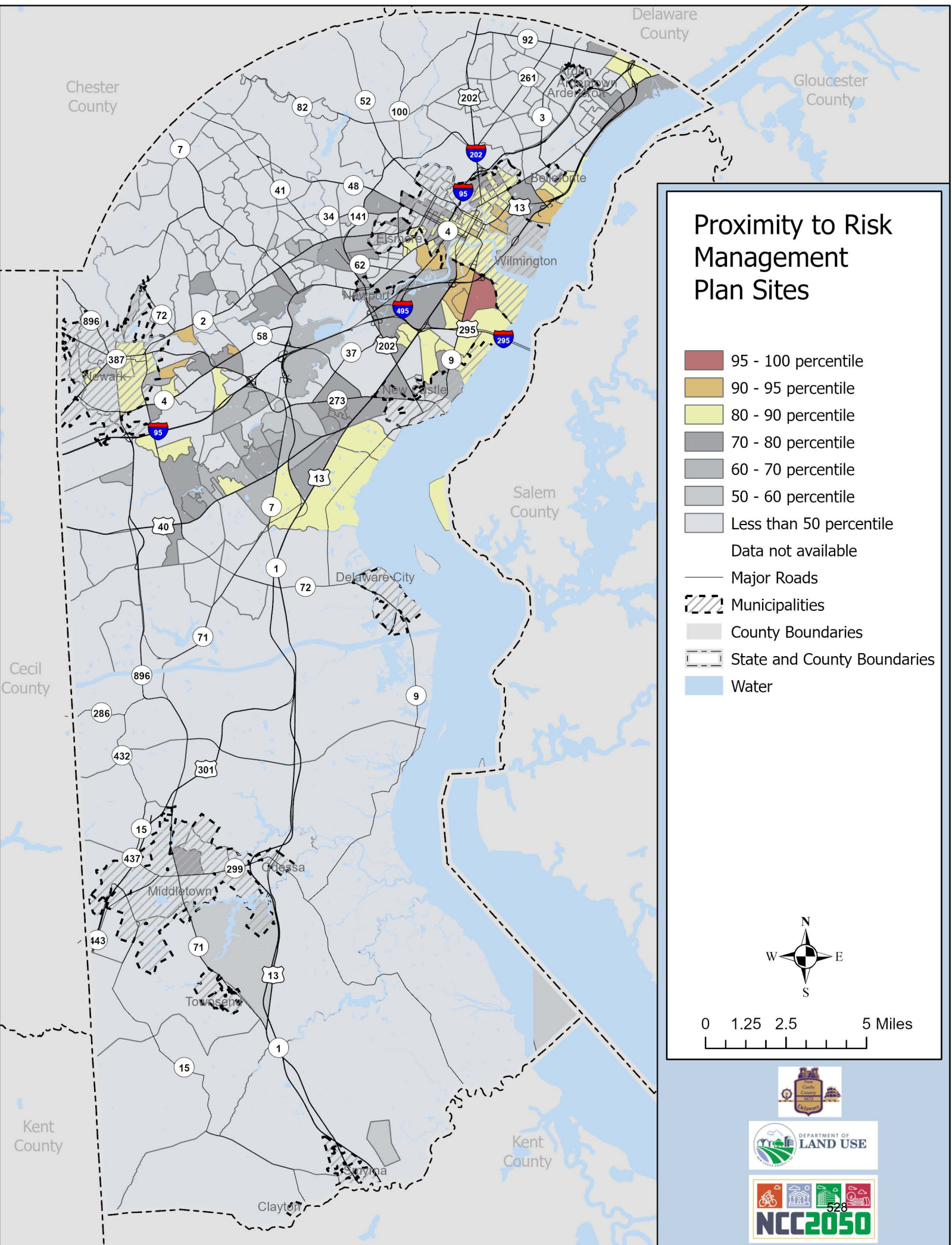


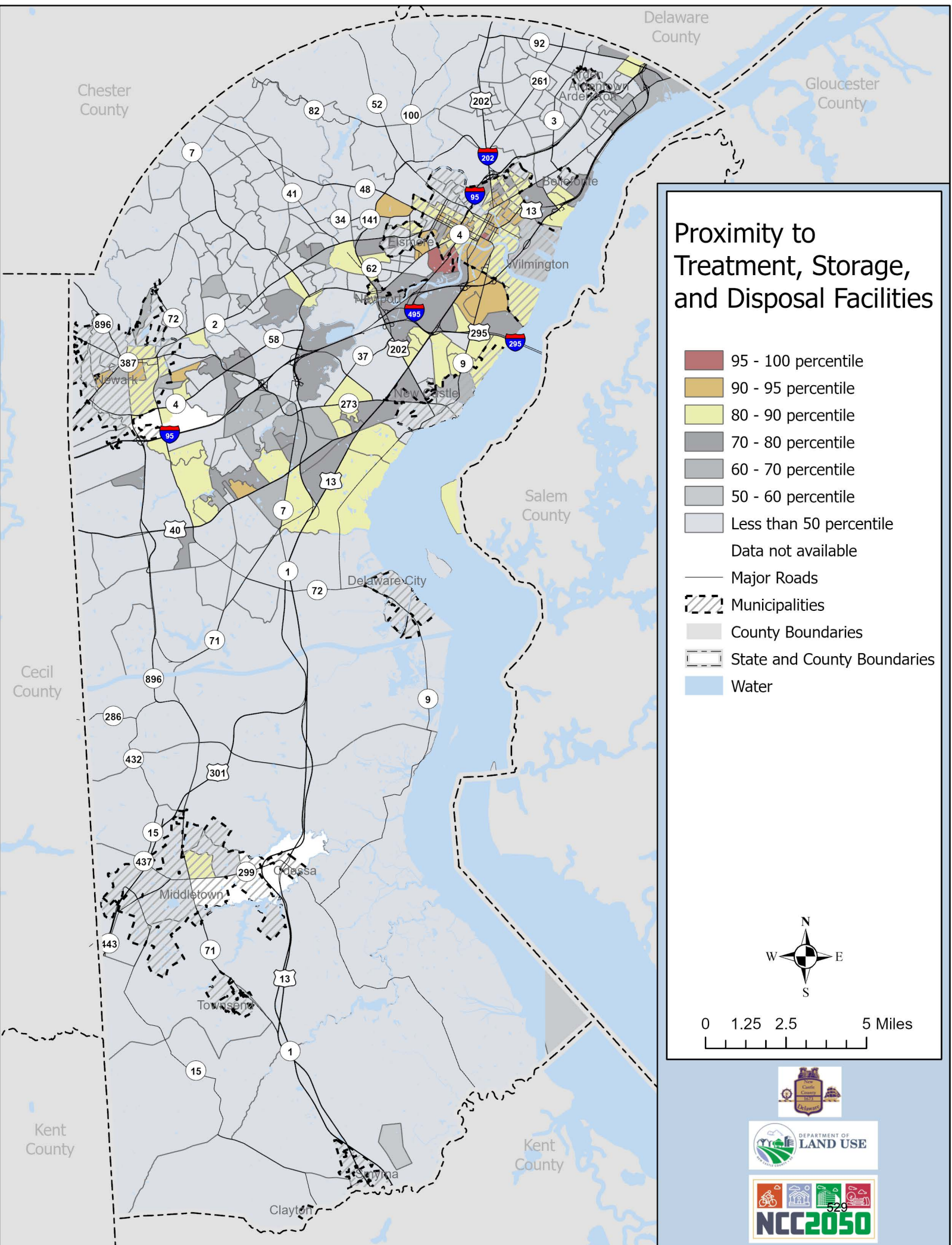












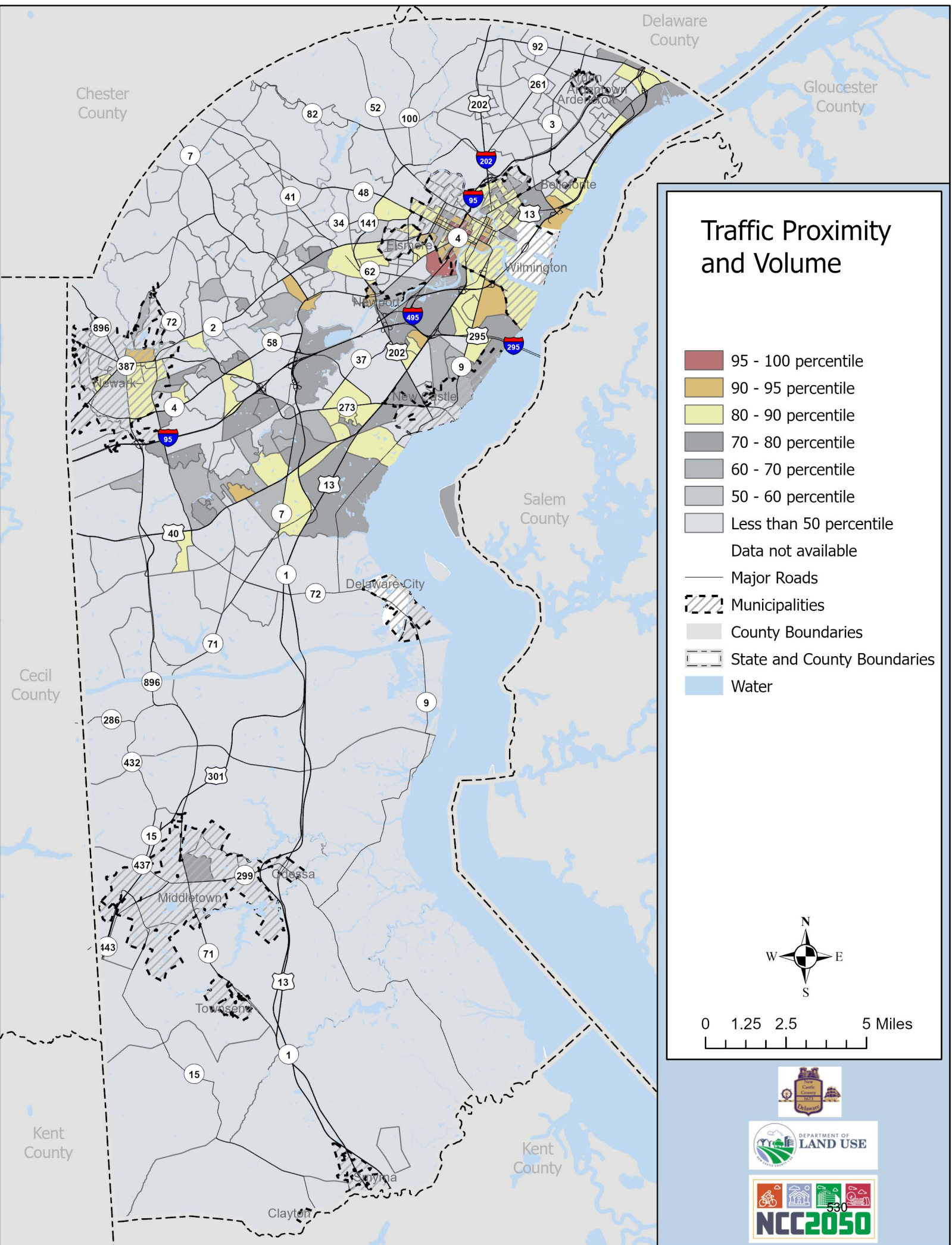
Proximity to Treatment, Storage, and Disposal Facilities

- 95 - 100 percentile
- 90 - 95 percentile
- 80 - 90 percentile
- 70 - 80 percentile
- 60 - 70 percentile
- 50 - 60 percentile
- Less than 50 percentile
- Data not available
- Major Roads
- Municipalities
- County Boundaries
- State and County Boundaries
- Water



0 1.25 2.5 5 Miles





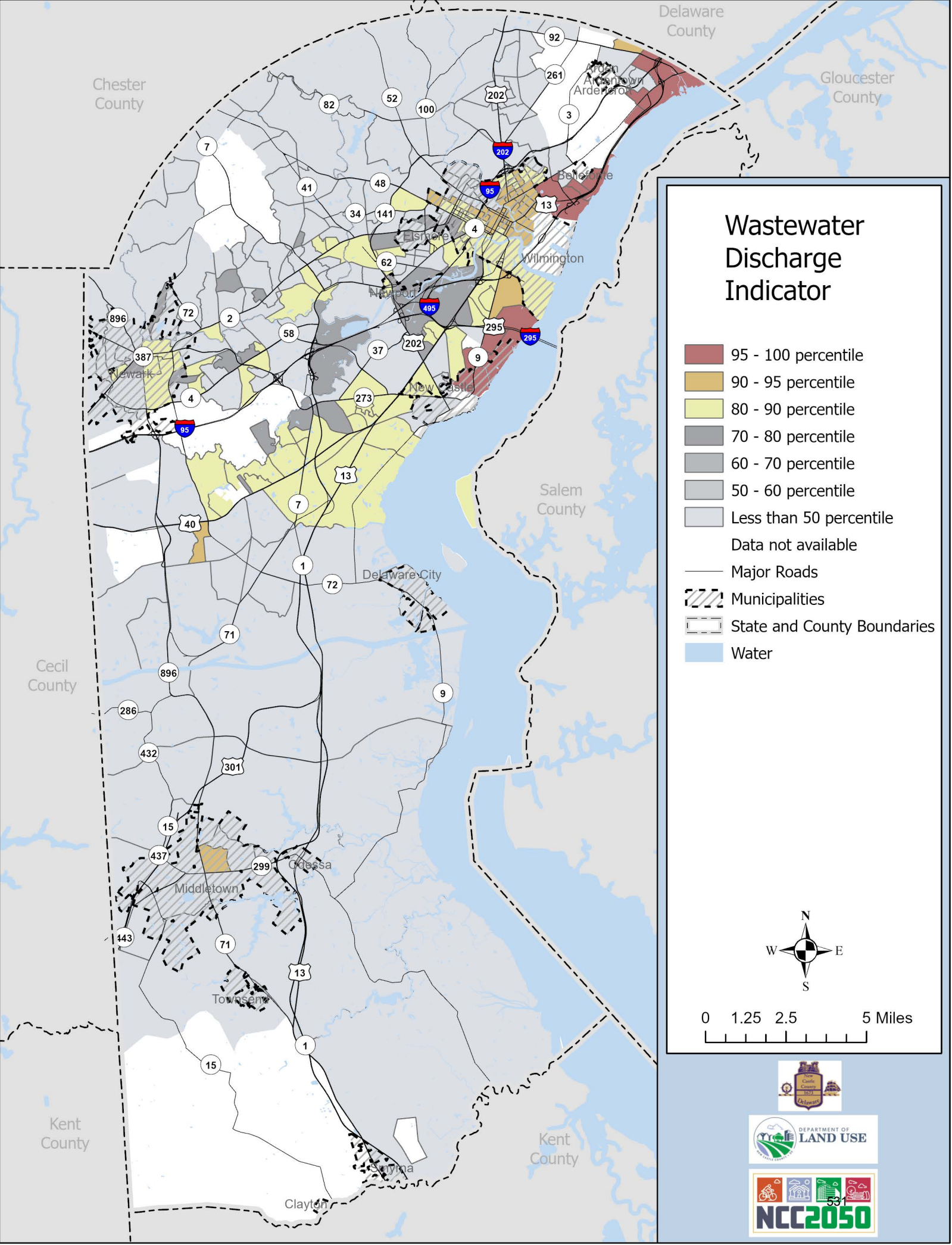
Traffic Proximity and Volume

- 95 - 100 percentile
- 90 - 95 percentile
- 80 - 90 percentile
- 70 - 80 percentile
- 60 - 70 percentile
- 50 - 60 percentile
- Less than 50 percentile
- Data not available
- Major Roads
- Municipalities
- County Boundaries
- State and County Boundaries
- Water



0 1.25 2.5 5 Miles



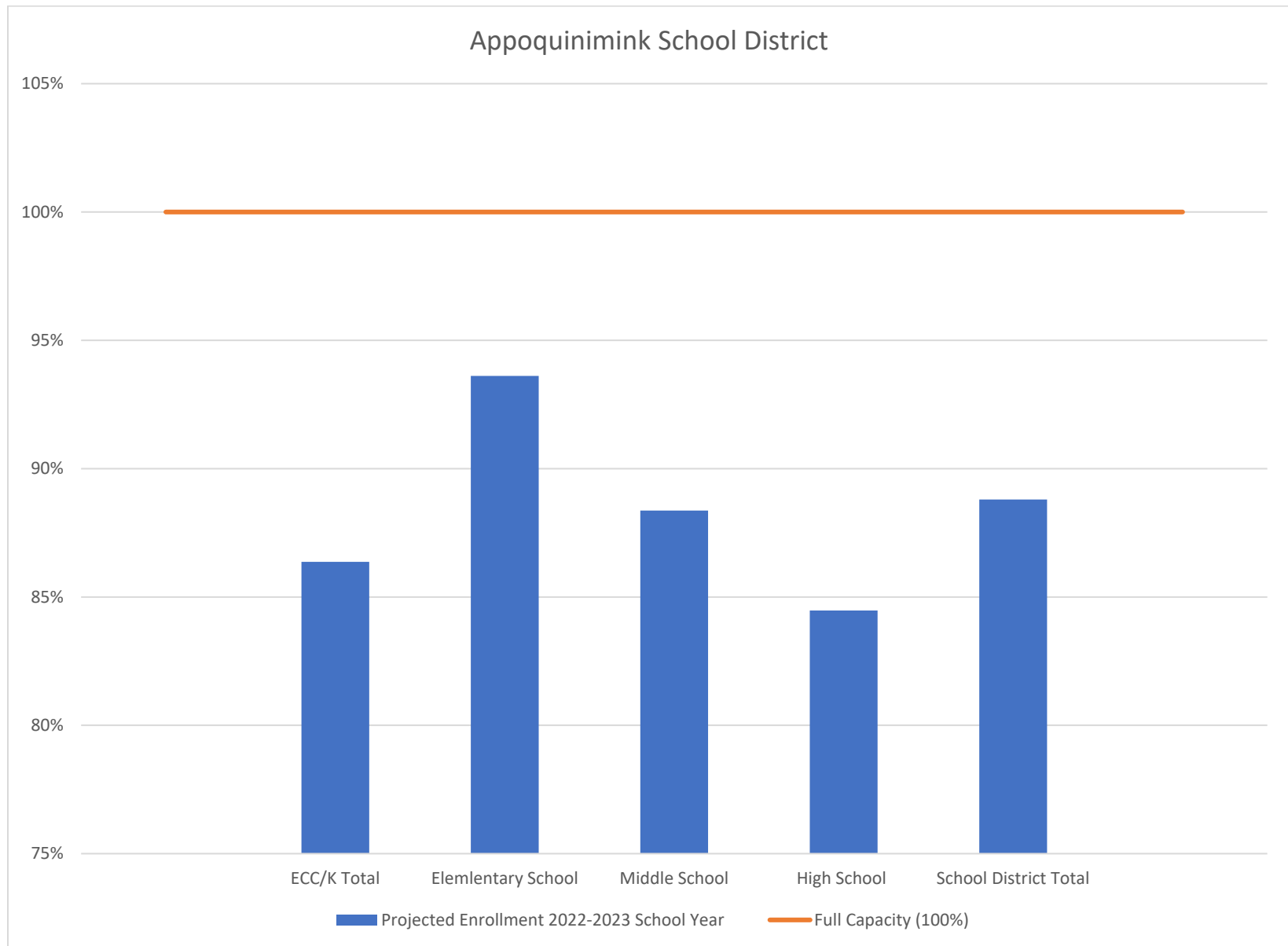


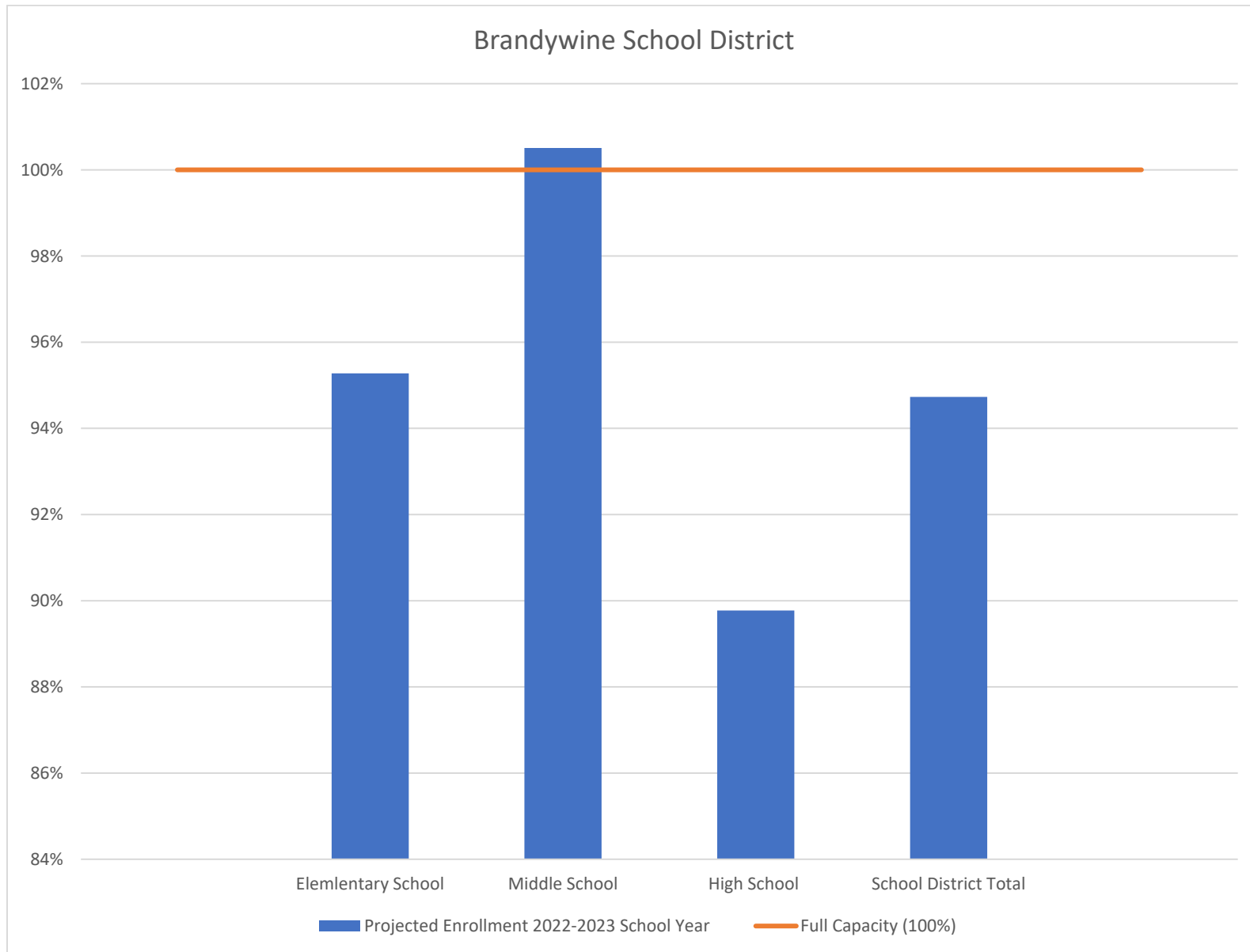
APPENDIX H: _____

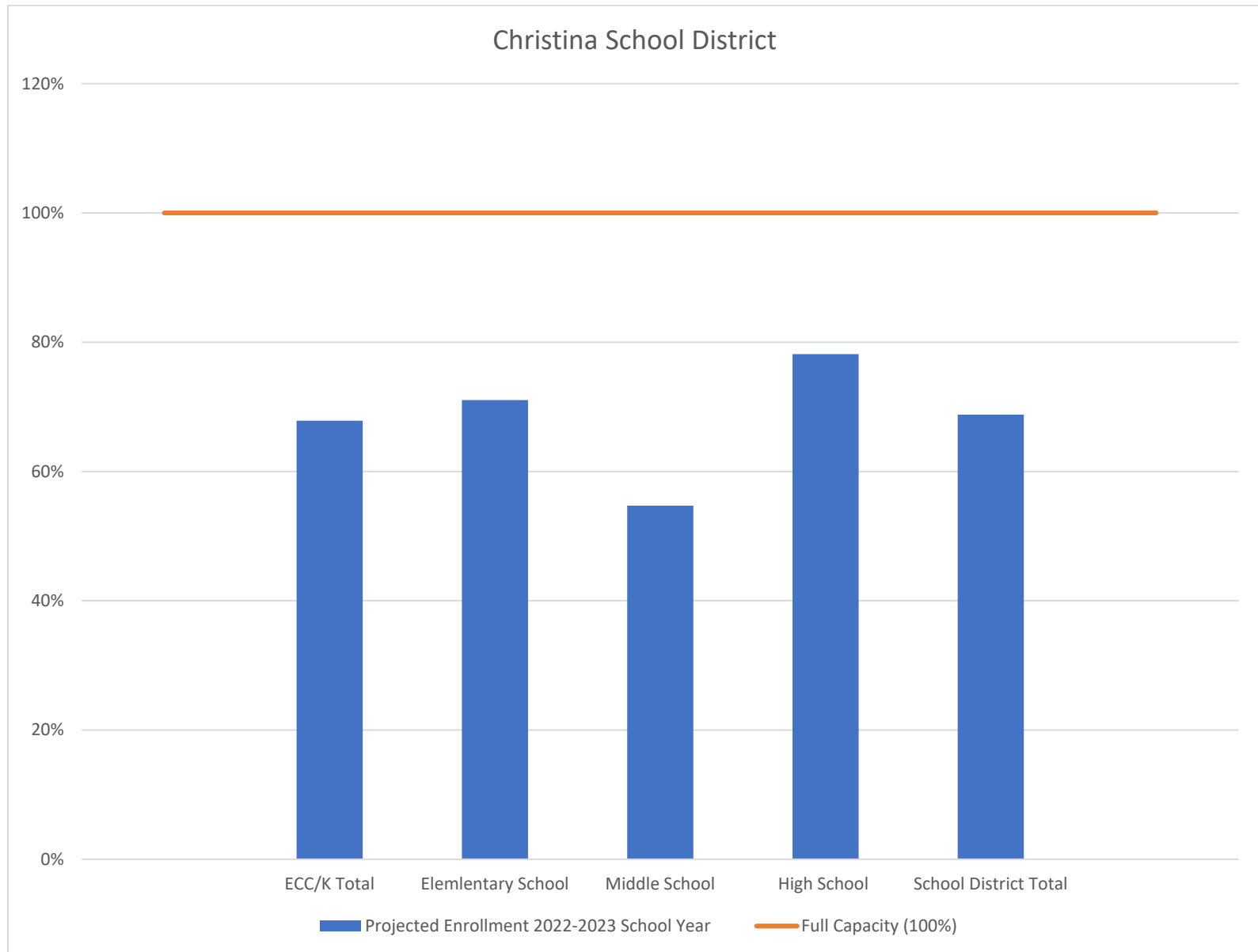
2022-2023 School Enrollment Projections and Capacity

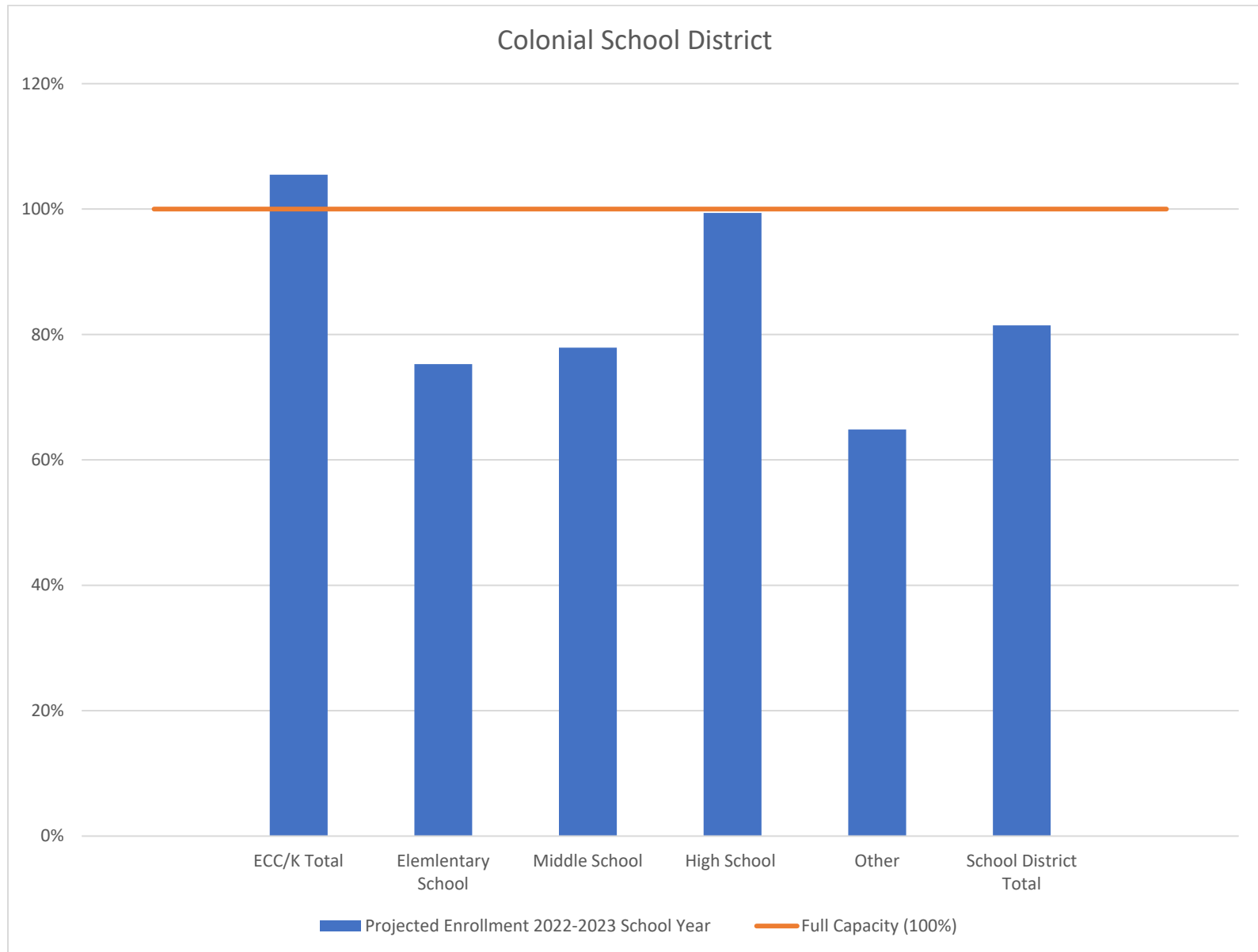
Understanding Projections vs Capacity

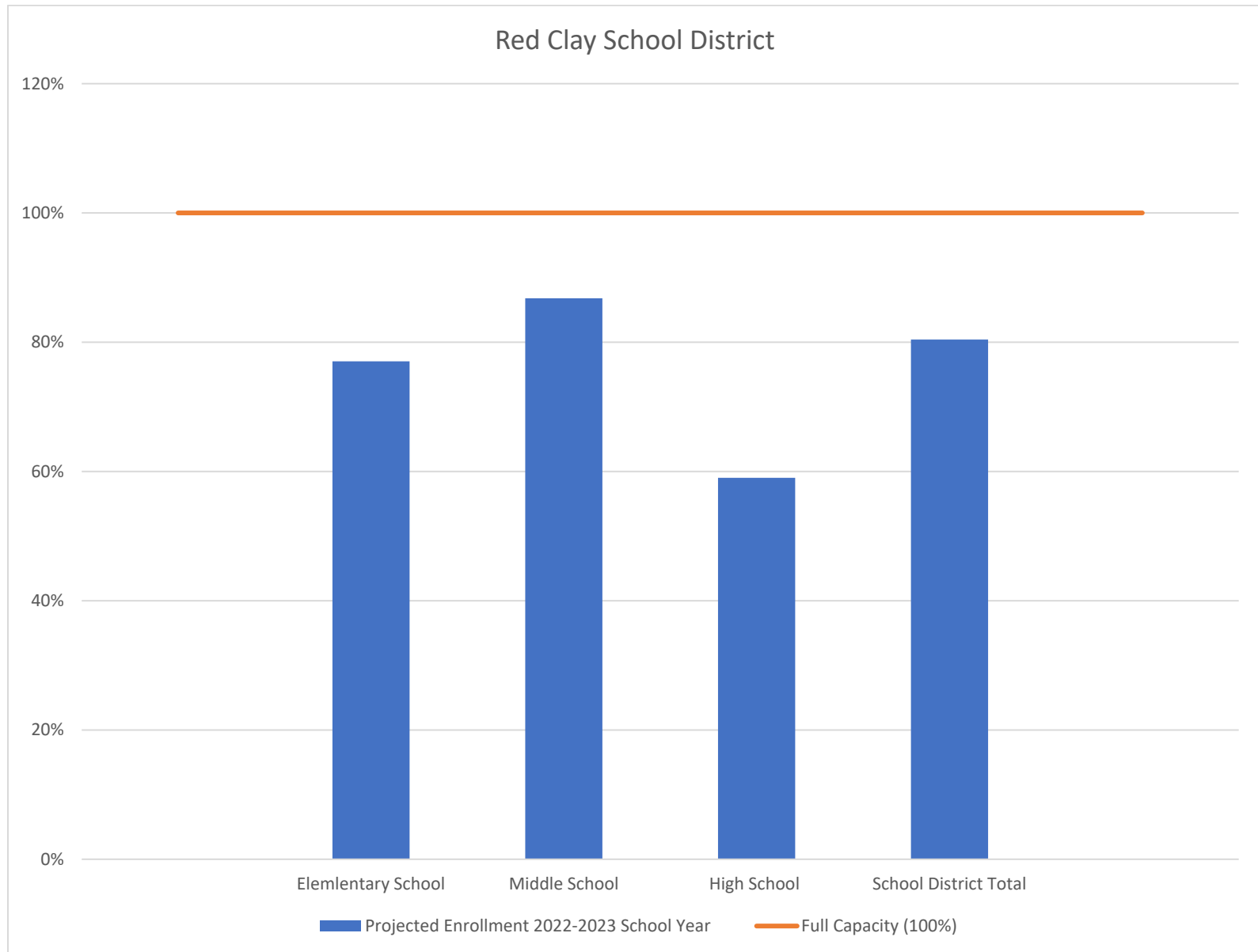
Below are several charts comparing projected individual school enrollment for the 2022-2023 school year and capacity for each school type. These should be looked at as a snapshot and not an indication that there is an excess or dearth of capacity based on one-year projections. There can be substantial fluctuations year to year based on incoming and graduating classes. School infrastructure investment and planning needs to take a long-range approach collaborating projections from the Delaware Population Consortium and the Delaware Department of Education.

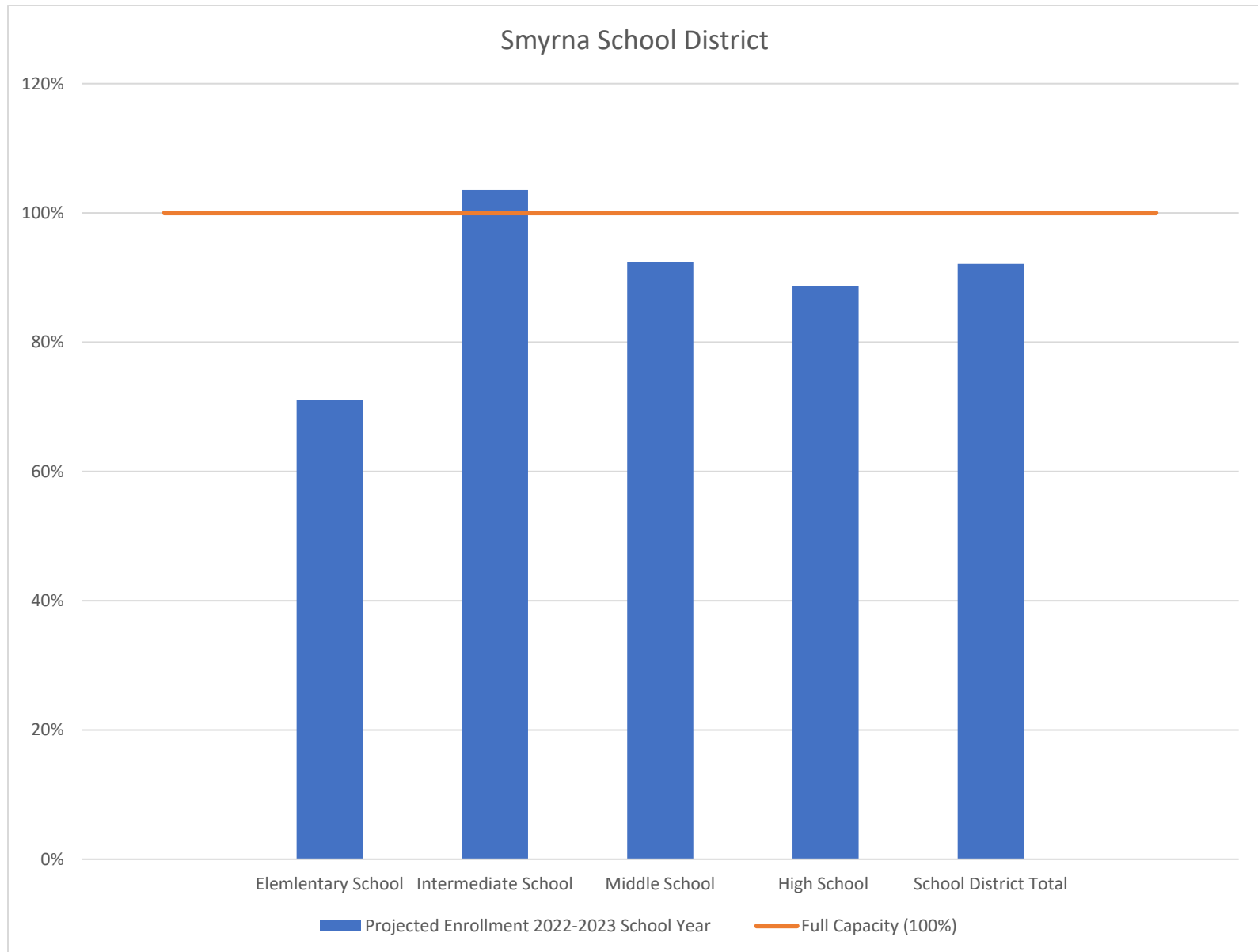












APPENDIX I: _____

Key Wildlife Habitats

Key Wildlife Habitats are either rare within the state and have the potential to harbor a high diversity of Species of Greatest Conservation Need, or they are part of a large wetland complex or forest block that can support an array of plant and animal species across the landscape.

- Key Wildlife Habitat in New Castle County are listed below:

- Beach and Dune Communities
- Black Ash Seepage Swamp
- Coastal Plain Seasonal Pond
- Early Successional Habitat
- Forest Block
- Freshwater Tidal Forested and Scrub-Shrub Wetland
- Mature Forest
- Mixed Broadleaf Freshwater Tidal Marsh
- Non-Tidal Coastal Plain Stream
- Piedmont Stream Valley Wetland
- Riverine Aquatic and Submerged Vegetation
- Spartina High Salt Marsh
- Tuliptree Rich Woods (Coastal Plain variant)
- Unvegetated Intertidal Mudflat
- Wetland Complex

Species of Greatest Conservation Need that exist in New Castle County, listed in the table below, are indicative of the overall diversity and health of the State's wildlife resources. Some may be rare or declining, others may be vital components of certain habitats, and still others may have a significant portion of their population in Delaware.

Scientific Name	Common Name	Taxon	State Rank	State Status	SGC N Tier	Global Rank	Federal Status
<i>Acipenser oxyrinchus</i>	Atlantic Sturgeon	Fish	S2	E	Tier 1	G3T3	E
<i>Glyptemys mühlenbergii</i>	Bog Turtle	Reptile	S1	E	Tier 1	G3	T
<i>Myotis septentrionalis</i>	Northern Long-eared Bat	Mammal	S1	E	Tier 1	G4	T
<i>Acipenser brevirostrum</i>	Shortnose Sturgeon	Fish	S3N	E	Tier 1	G3	E

Atlantic Sturgeon and Shortnose Sturgeon

The Delaware River is utilized by the federally-endangered Atlantic sturgeon (*Acipenser oxyrinchus*) and federally-endangered Shortnose sturgeon (*Acipenser brevirostrum*).

Probability distribution maps suggest that a high concentration area for Atlantic sturgeon exists in New Castle County, and this coincides with substrate appropriate for spawning. Portions of the Delaware River have been identified as significant juvenile Atlantic sturgeon habitat as well. These species are federally protected under the U.S. Endangered Species Act, and the majority of the Delaware River within New Castle County has been classified by the National Marine Fisheries Service as Atlantic Sturgeon Critical Habitat.

Bog Turtle

The bog turtle (*Glyptemmys mühlenbergii*) is a small, semi-aquatic turtle that inhabits freshwater wetland habitats. Due to overall loss of freshwater wetland habitat and illegal collection for pet trade, the U.S. Fish and Wildlife Service listed the northern population as federally threatened in 1997. In Delaware, there are currently only two known locations where bog turtles are reproducing.

Northern Long-eared Bat

The northern long-eared bat (*Myotis septentrionalis*) is known to live in dense forests and often use peeling bark and tree cavities for maternity roosts. Due to population declines largely caused by white nose syndrome, a fungal disease known only to affect bats, this species is now listed as federally threatened under the U.S. Endangered Species Act since 2015.

Additional information regarding the Delaware Wildlife Action Plan at: <https://dnrec.alpha.delaware.gov/fish-wildlife/conservation/wildlife-action-plan/>

APPENDIX J: _____

NCC2050 Acronym Glossary

ACRONYMS

ACS: American Community Survey

ADA: Americans with Disabilities Act

ADT: Average Daily Traffic

ADU: Accessory Dwelling Unit

BLS: Bureau of Labor Statistics

BMPs: Best Management Practices

BOA: Board of Adjustment

CAER: Delaware City Community Awareness & Emergency Response

CAMP: Community Area Master Plan

CARES: Coronavirus Aid, Relief, and Economic Security Act

CAVs: Connected and Automated Vehicles

CCED: Complete Community Enterprise District

C&D: Chesapeake & Delaware Canal

CCTV: Closed Circuit Television

CDBG: Community Development Block Grant

CEMP: Comprehensive Emergency Management Plan

CEQR: California's Environmental Quality Review

CHAD: Center for Historic Architecture and Design

CHNA: Community Health Needs Assessment

CLG: Certified Local Government

CMS: Congestion Management System

COP26: 26th United Nations Climate Change conference

CRFM: Christina River Force Main

CRS: Community Rating System

CTP: Capital Transportation Program

CV: Connected Vehicle

CWA: Clean Water Act

CZA: Coastal Zone Act

DART: Delaware Authority for Regional Transit

DBC: Delaware Bike Council

DCMP: Delaware Coastal Management Program

DDOE: Delaware Department of Education

DelDOT: Delaware Department of Transportation

DEMA: Delaware Emergency Management Agency

DEOP: Delaware Emergency Operations Plan

DHR: Department of Human Resources

DGS: Delaware Geological Survey

DLU: Department of Land Use

DNERR: Delaware National Estuarine Research Reserve

DNREC: [Delaware] Department of Natural Resources and Environmental Control

DPC: Delaware Population Consortium

DPW: Department of Public Works

DRAC: Design Review Advisory Committee

DRBC: Delaware River Basin Commission

DRIP: Delaware Rural Irrigation Program

DRWC: Delaware Water Resources Center

DPP: Delaware Prosperity Partnership

DSHA: Delaware State Housing Authority

DTC: Delaware Transit Corporation

EED: Economic Empowerment District

EDGE: Encouraging Development, Growth, and Expansion grants

EIA: Environmental Impact Analysis

EIA: U.S. Energy Information Administration

EJ: Environmental Justice

ELL: English Language Learners

EMS: Emergency Medical Services

EPA: Environmental Protection Agency

EVs: Electric Vehicles

FCC: Federal Communications Commission

FEMA: Federal Emergency Management Agency

FIRE: Finance, Insurance, Real Estate employment sector

FLUM: Future Land Use Map

FAR: Floor Area Ratio

GBI: Green Building Initiative

GDP: Gross Domestic Product

GFA: Gross Floor Area

GHG: Greenhouse Gases

GIS: Geographic Information System

GPCD: Gallons Per Capita Per Day
GPD: Gallons Per Day
GWDS: [DNREC] Groundwater Discharges Section
HI: Heavy Industrial (Zoning)
HOA: Homeowners' Association
HRB: Historic Review Board
HRSA: Health Resources and Services Administration
HUD: Housing & Urban Development
ICC: International Code Council
ICS: Incident Command System
IMF: International Monetary Fund
IPCC: Intergovernmental Panel on Climate Change
ITS: Intelligent Transportation System
JPA: Joint Planning Area
LEED: Leadership in Energy and Environmental Design
LEPC: Local Emergency Planning Committee
LOS: Level of Service
LRTP: Long-Range Transportation Plan
LTS: Level of Traffic Stress
LU: Land Use
MBPS: Megabytes Per Second
MGD: Million gallons per day
MOU: Memorandum of Understanding

MPDU: Moderately-Priced Dwelling Unit

MPO: Metropolitan Planning Organization

MVA: Market Value Analysis

NAHB: National Association of Home Builders

NC: Neighborhood Conservation [zoning district]

NCAMP: North Claymont Area Master Plan

NCC: New Castle County

NEPA: National Environmental Policy Act

NFIP: National Flood Insurance Program

NHL: National Historic Landmarks Program

NHPA: National Historic Preservation Act

NIMS: National Incident Management System

NPDES: National Pollutant Discharge Elimination System

NPOD: Neighborhood Preservation Overlay District

NPS: National Park Service

NRHP: National Register of Historic Places

NRPA: National Recreation and Park Association

OEM: Office of Emergency Management

OSPC: Office of State Planning Coordination

PCBs: Polychlorinated Biphenyls

PD: Planning District

PIT: Point In Time Count

PLUS: Preliminary Land Use Service

PM: Particulate Matter

PPN: Prioritized Pedestrian Network

PSC: Public Service Commission

QECB: Qualified Energy Conservation Bonds

Q/LOS: Quality/Level of Service

QOZ: Qualified Opportunity Zones

RECs: Renewable Energy Certificates

REP: Radiological Emergency Preparedness

RPATAC: Resource Protection Advisory Committee

RTP: Regional Transportation Plan

SAC: Stakeholder Advisory Committee

SCORP: Statewide Comprehensive Outdoor Recreation Plan

SE: Suburban Estate [zoning district]

SEPTA: Southeastern Pennsylvania Transportation Authority

SERT: State Emergency Response Team

SFHA: Special Flood Hazard Area

SHPO: State Historic Preservation Office

SLR: Sea Level Rise

SNAP: Supplemental Nutrition Assistance Program

SR: Suburban Reserve [zoning district]

SSBCI: State Small Business Credit Initiative

ST: Suburban Transition [zoning district]

STIP: State Transportation Improvement Program

SWAPP: Source Water Assessment and Protection Program

SWDS: [DNREC] Surface Water Discharges Section

TANF: Temporary Assistance for Need Families

TAP: Transportation Alternatives Program

TAZ: Transportation Analysis Zone

TDM: Transportation Demand Management

TDR: Transfer of Development Rights

TIA: Transportation Investment Area

TID: Transportation Improvement District

TMDL: Total Maximum Daily Load

TN: Traditional Neighborhood [zoning district]

TOD: Transit-Oriented Development

UDC: Unified Development Code

UPWP: Unified Planning Work Program

USDA: U.S. Department of Agriculture

USGS: U.S. Geological Survey

VMТ: Vehicle Miles Traveled

WILMAPCO: Wilmington Area Planning Council

WRA: Water Resources Agency

WRPA: Water Resource Protection Areas

WSCC: [Delaware] Water Supply Coordinating Council

WQIPS: Water Quality Improvement Plans

WWTP: Wastewater Treatment Plant

YPB: Youth Planning Board

